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Racial Disparities in Maternal and Infant Health Outcomes in Montgomery County

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Racial Disparities in Maternal and Infant Health Outcomes

OLO Report 2025-7 **Executive Summary** **April 8, 2025**

The phrase, "maternal and infant health" refers to the health of pregnant and birthing people and their babies during pregnancy, childbirth and up to a year after birth. Black and Indigenous people in the United States experience the most adverse maternal and infant health outcomes. Black infants in the U.S. die at more than twice the rate of White infants and more than three times the rate of Asian infants.[1] Compared to White and Latinx women, Black women are also two-to-three times more likely to die from pregnancy-related causes,[2] and experience higher rates of severe maternal morbidity (SMM) and pregnancy-related complications like preterm birth and low birthweight babies.[3] Maternal mortality among Indigenous women occurs at a rate that is two-to-three times higher than for White women.[4]

This OLO report responds to the County Council's request to gather information on the causes of racial disparities in maternal and infant health outcomes, local data on disparities in Montgomery County, communities that have made improvements in racial disparities and factors that have driven those improvements, and whether Montgomery County has such factors in place. This report finds that:

- Black individuals experience considerably worse maternal and infant health outcomes than other birthing people in the County, including the highest rates of SMM, cesarean births, preterm births, low birthweight babies, and fetal and infant deaths. If unaddressed, the County's maternal and infant health outcomes are likely to worsen as the County's population of Black, Indigenous, and other people of color (BIPOC) grows;
- National research shows that racism in and outside of healthcare drives racial disparities in maternal and infant health outcomes, which are larger than income disparities; and
- Because numerous factors drive racial disparities in maternal and infant outcomes, policy experts recommend a broad approach to addressing them.

The Federal and State Maternal and Infant Policy Framework

Multiple federal and state initiatives are aimed at improving perinatal care quality and birth outcomes. However, most initiatives are focused on improving overall outcomes rather than on advancing equity.

Federal Initiatives

- Perinatal Quality Collaboratives (PQCs)
- Alliance for Innovation on Maternal Health (AIM)
- Birthing-Friendly Hospital Designation
- State Maternal Health Innovation Grant
- Center for Maternal and Child Health Medicaid Partnerships (CMMP)

State Initiatives

- Maryland Perinatal Neonatal Quality Collaborative (MDPQC)
- Maternal Health Innovation Program (MDMOM)
- Maryland Patient Safety Center (MPSC)
- Maternal Mortality Review Program (MMR)
- Fetal and Infant Mortality Review Program (FIMR)

[1] Geronimus, Arline, "Weathering: The Extraordinary Stress of Ordinary Life in an Unjust Society," 2023, Chap. 4.
[2] Donna Hoyert, "Maternal Mortality Rates in the United States, 2021," National Center for Health Statistics, (2023).
[3] Annalies Winny and Rachel Bervell, "How Can We Solve the Black Maternal Health Crisis?" Johns Hopkins (2023).
[4] Katy B. Kozhimannil, "Indigenous Maternal Health—A Crisis Demanding Attention," JAMA Health Forum 1, no. 5 (2020).

Promising Initiatives in Other Jurisdictions

Research on reducing racial disparities in maternal and infant health outcomes is promising but not conclusive, and researchers recommend a broad approach. The following approaches have shown promise in reducing racial disparities in maternal and infant health outcomes:

Community-Based Models that Integrate Health and Social Care: *Incorporate some, or all, of the following: a) community partnerships, leadership and advocacy; b) community health workers and home visiting; c) community-based doulas; and d) workforce training.*

- **B'more for Healthy Babies (Baltimore, Maryland), started 2009:** centralized intake system; home visiting; focused outreach by community health workers; community advisory board; hospital system partnership; and policy advocacy.
  Results: From 2009 to 2021, Baltimore's infant mortality rate decreased from 13.5 to 7.5 deaths per 1,000 births, and to 4 deaths per 1,000 births in focus neighborhoods.
- **Cradle Cincinnati (Cincinnati, Ohio), started 2013:** community health workers; healthcare and social services learning collaborative; publishing hospital data and scores; advisory board with representatives from healthcare, public health, social services and the community; policy advocacy; and Queen's Village community for Black women.
  Results: The infant mortality rate in Hamilton County decreased from 10.2 deaths per 1,000 births in 2008-2012 to 5.5 deaths per 1,000 births in 2023. The Black infant mortality rate decreased from 16.5 to 9.0 deaths per 1,000 births.
- **Mamatoto Village (Washington, D.C.), started 2013:** home visiting; lactation support; support during social services appointments; fee-based doula program; and workforce training for community health workers, doulas and lactation specialists.
  Results: Clients' babies had higher gestational ages than a comparison group.

Racially Congruent Midwifery Care and Alternative Birth Settings: *Midwifery care focuses on facilitating birth without medical intervention and emphasizes relationship-building. Alternative birth settings like freestanding birth centers often offer more flexibility than hospitals for midwifery care. BIPOC-led birth centers aim to increase access to racially congruent midwifery services.*

- **The Roots Community Birth Center (Minneapolis, Minnesota):** The only Black-owned birth center in Minnesota and one of only a few to accept Medicaid. Clients shared that RCBC provided racially concordant, trauma-informed care that centered relationships and gave them agency over their birth experience.

Local Data on Racial Disparities in Maternal and Infant Health Outcomes

Maternal Mortality. In Maryland, Black individuals account for 32% of all births but 54% of pregnancy-related deaths. They are also twice as likely to die from pregnancy-related causes than their White counterparts. In 2018-2020, the Black pregnancy-related mortality rate was 42 deaths per 100,000 live births compared to 19.2 deaths per 100,000 births for White .[5] *County-level pregnancy-related mortality rates are unavailable due to the low number of deaths each year.*

[5] Maryland Maternal Mortality Review 2022 Annual Report, Maryland Department of Health

Other Adverse Outcomes. The following table displays percentages of SMM, cesarean births (or C-sections), preterm births, low birthweight babies, and rates of fetal and infant deaths for individuals in Montgomery County by race and ethnicity. Overall, Black individuals experience higher rates of adverse pregnancy-related outcomes than any other group. Latinx individuals experience higher rates of preterm births than both White and Asian individuals.

Perinatal Health Outcome	County	Black	White	Asian	Latinx
SMM (2019-2022)	2.4%	3.2%	1.9%	n/a	n/a
Cesarean births (2012-2021)	34.5%	42.1%	33.2%	34.5%	30.6%
Preterm births (2017-2021)	8.9%	10.1%	7.5%	8.4%	9.8%
Low birthweight (2017-2021)	7.5%	9.8%	5.9%	8.4%	7.1%
Fetal mortality* (2017-2021)	5.4	7.9	4.3	3.5	5.2
Infant mortality^ (2012-2021)	4.9	8.6	3.2	n/a	4.5

*Fetal mortality rate = number of fetal deaths per 1,000 live births plus fetal deaths.

^Infant mortality rate = number of infant deaths per 1,000 live births

Nativity. Native and foreign born Black mothers in the County experience different outcomes. Native born Black mothers are more likely to: a) need a blood transfusion, b) have preterm births, and c) have low birthweight babies. Foreign born Black mothers are more likely to: a) have C-sections, and b) be hospitalized in the ICU during delivery.[6] These outcomes by country of birth are important for the County's efforts to improve maternal and infant health. Currently, the County's maternal and infant health home visiting programs primarily serve immigrant populations.

Maternal Behaviors: Data suggest efforts to improve maternal health by targeting *individual-level behaviors,* like increasing access to healthcare, reducing teen births, improving educational outcomes, and promoting early prenatal care, have *not* reduced racial disparities or improved overall outcomes for Black birthing people.

Drivers of Racial Disparities in Maternal and Infant Health Outcomes

Discussions on what causes racial disparities in maternal and infant health outcomes have often focused on individual behaviors and purported biological differences based on race. However, Black birthing people of all incomes and educational backgrounds experience worse outcomes than White birthing people. Research demonstrates that racism in and outside of healthcare drives these disparities:[7]

Racialized Healthcare

- **Medical education/guidelines** – contemporary medical education and guidelines often reflect inaccurate perceptions of patient race as a biological category. These perceptions stem from pseudoscientific theories about Black bodies developed beginning in the 1700s and 1800s.
- **Provider Bias** – Studies show healthcare professionals exhibit racial bias similar to the general population, which impacts healthcare quality. Providers have been found to stereotype Black birthing people as unintelligent, negligent, intolerant to pain, and overly anxious or dramatic.

[6] CDC WONDER Online Database.

[7] U.S. Commission on Civil Rights, *Racial Disparities in Maternal Health: 2021 Statutory Enforcement Report* (2021), 29.

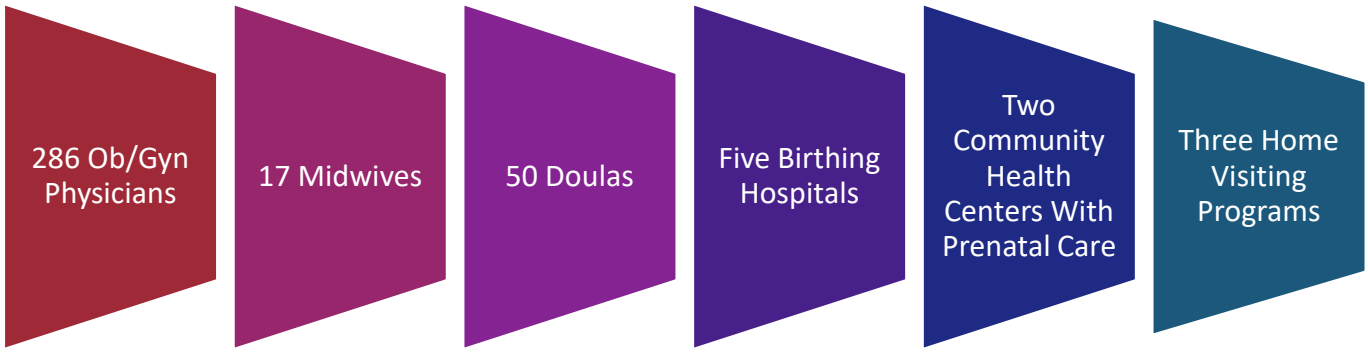
- **Barriers to access** – Medicaid reimburses providers at lower rates than private health insurance or Medicare, making it harder for Black and Latinx birthing people – who disproportionately rely on Medicaid – to find primary care providers who accept it.[8]
- **Workforce disparities** – The underrepresentation of Black providers in healthcare limits racially concordant care for Black birthing people, which studies show improves health outcomes for BIPOC patients.[9]

Racism Beyond Healthcare System

- **Structural Determinants of Health** – Structural determinants of health, such as laws, institutional practices, and social norms, drive the unequal distribution of social determinants of health (SDOH). BIPOC experience more adverse SDOH than White people, leading to unmet health-related social needs. Structural racism is a key factor.
- **Weathering** – "Weathering" refers to the stress-induced biological impact on the body. Evidence suggests that racism causes Black women, regardless of income, to experience weathering faster than White and male counterparts, driving racial disparities in maternal and infant health outcomes.

Perinatal Services and Programs in Montgomery County

Figure 1. Overview of Perinatal Services in Montgomery County



Individual Providers. Figure 1 shows that most maternal healthcare providers in the County are OB/GYN physicians (74%). There is a limited presence of midwives and doulas in the County. OLO found that:

- Council Districts with large BIPOC, especially Black, populations have relatively few providers. For example, District 5 has the highest percentage of Black residents in the County (37% compared to 18% in the County overall) but the second fewest providers (41 of a total 387 providers).
- Midwives attend just 5% of births in the County. White mothers in the County use midwives at over twice the rate of other groups.[10]
- Black registered nurses make up over a third of all registered nurses in the County, presenting an opportunity to diversify the midwifery workforce and increase access to racially congruent care.

County Government Maternal and Infant Health Programs. The County Government offers three home-based case management and educational programs that serve pregnant people, primarily with low-

[8] National Academies, *Ending Unequal Treatment*, 53, 80-81.
[9] Ibid., 186.
[10] Centers for Medicare and Medicaid Services (CMS) National Plan and Provider Enumeration System (NPPES); CDC WONDER Online Database. Data are from Natality Records 2016-2023.

incomes, and their babies: **1) Montgomery Perinatal Program (MPP), 2) Babies Born Healthy (BBH),** and **3) Start More Infants Living Equally (SMILE)**. The following table compares the programs. It shows that MPP has the largest budget and serves, by far, the most clients. Additionally, MPP serves a population that is predominantly Latinx.

Program	MPP	BBH	SMILE
FY25 Budget	$5.2 million	$771,000	$724,000 (FY24 expenditures)
FY24 # of clients	1,624	185	254
FY24 client race/ethnicity	83% Latinx, 7% Black	100% Black from designated zip codes	100% Black
Eligible population	Uninsured or enrolled in Medicaid	Black pregnant and postpartum people enrolled in Medicaid who reside in designated zip codes	Black pregnant people and families of all income levels.
Home visits provided by	Community Health Nurses and Community Health Workers	Community Health Nurses and Community Health Workers	Registered Nurse Case Managers

Key findings about the County's maternal and infant health programs include:

- The statewide expansion of Medicaid has changed MPP's services. The program no longer partners with local hospitals and clinics to provide prenatal care;
- The County's maternal and infant health programs effectively reach Latinx birthing people with low incomes but underserve Black birthing people relative to their needs;
- BBH and MPP participants experience some worse maternal and infant health outcomes compared to comparison groups, while SMILE participants have better infant health outcomes than Countywide rates for Black birthing people. The extent to which these differences reflect participant risk factors and/or program effectiveness is unclear; and
- The County's programs may benefit from incorporating strategies used in other areas, such as community partnerships, Medicaid-funded community health worker services, and community-based doulas.

Birthing Hospitals in Montgomery County: Adventist HealthCare Shady Grove Medical Center • Adventist HealthCare White Oak Medical Center • Holy Cross Silver Spring Hospital • Holy Cross Germantown Hospital • MedStar Montgomery Medical Center

OLO offers the following recommended discussion issues for Council consideration:

1. What can be learned from existing County maternal health program outcomes, and what additional data are needed?
2. Following the recent Medicaid expansion, how could MPP better serve Black birthing people?
3. What opportunities exist to enhance the County's maternal health programs?
4. Can County Government collaborate with County and BIPOC community stakeholders, including birth workers, organizations, and healthcare providers, to expand access to racially congruent midwifery services?

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Introduction

The United States has the highest maternal mortality rate of any high-income country in the world. In 2020, the U.S maternal mortality rate was 23.8 maternal deaths per 100,000 live births, nearly twice that of other similarly wealthy nations.[11] Despite a slight decrease in 2022, the U.S. maternal death rate has more than doubled over the last 30 years.[12] Data reviewed by Maternal Mortality Review Committees in 36 U.S. states show that 80% of pregnancy-related deaths were preventable.[13]

National rates of infant mortality are also exceedingly high. According to the *America's Health Rankings* 2023 Annual Report, the U.S. ranks 33 out of 38 countries who are part of the Organisation for Economic Co-operation and Development (OECD). The U.S. infant mortality rate was 5.4 infant deaths per 1,000 live births in 2021, higher than the OECD average of four deaths per 1,000 births, and nearly six times higher than Japan and Norway, who rank number one at 1.7 deaths per 1,000 births.[14]

Black and Indigenous mothers and babies experience the worst health outcomes. Black infants in the U.S. die at more than twice the rate of White infants and more than three times the rate of Asian infants.[15] Black women are two-to-three times more likely to die from complications of pregnancy or childbirth than both White and Latinx women.[16] They are also more likely to experience severe maternal morbidity (SMM), a term used to describe various life-threatening conditions that can have lasting consequences on health, as well as higher incidences of pregnancy-related complications like preterm birth and low birth weight.[17] Among Indigenous women, the maternal mortality rate is two to three times higher than that for White women.[18]

In Montgomery County, Black birthing people also experience considerably worse maternal and infant health outcomes than other birthing people, including the highest rates of SMM, cesarean births, preterm births, low birthweight babies, and fetal and infant deaths compared with other birthing people in the County.

Discussions on what factors contribute to racial disparities in maternal and infant health outcomes have often centered on individual behaviors and purported biological differences based on race. However, a growing body of research demonstrates that ultimately, racism in and outside of healthcare drives these disparities.[19] Various policy approaches and specific initiatives have shown

[11] WHO maternal mortality rates by country, 2020
[12] Eugene Declercq and Laurie C. Zephyrin, "Maternal Mortality in the United States: A Primer," Commonwealth Fund (2020).
[13] "Four in 5 pregnancy-related deaths in the U.S. are preventable," Centers for Disease Control and Prevention Website Archive. Accessed March 6, 2025.
[14] United Health Foundation, "America's Health Rankings® 2023 Annual Report," accessed April, 2025, 29. 9
[15] Geronimus, Arline, "Weathering: The Extraordinary Stress of Ordinary Life in an Unjust Society," 2023, Chap. 4.
[16] Donna Hoyert, "Maternal Mortality Rates in the United States, 2021," National Center for Health Statistics, (2023).
[17] Annalies Winny and Rachel Bervell, "How Can We Solve the Black Maternal Health Crisis?" Johns Hopkins (2023).
[18] Katy B. Kozhimannil, "Indigenous Maternal Health—A Crisis Demanding Attention," JAMA Health Forum 1, no. 5 (2020).
[19] U.S. Commission on Civil Rights, *Racial Disparities in Maternal Health: 2021 Statutory Enforcement Report* (2021), 29.

promise in improving perinatal outcomes in Black communities, but more research is needed to fully understand their role in reducing racial disparities in maternal and infant health outcomes.

Project Scope and Report Structure. The County Council requested this Office of Legislative Oversight (OLO) report to gather information on the causes of racial disparities in pregnancy-related maternal and infant health outcomes, local data on disparities in Montgomery County, communities that have made improvements in racial disparities and factors that have driven those improvements, and whether Montgomery County has such factors in place. This report contains the following chapters:

- **Chapter 1, Key Terms and Definitions** presents key terms and concepts used throughout the report to describe maternal, fetal, and infant health issues and outcomes, as well as terms related to race, ethnicity, and racial equity;
- **Chapter 2, How Maternal and Infant Health is Measured** explains common metrics used to measure the health of birthing people and babies in the United States and describes the process for collecting and reporting maternal mortality rates nationally;
- **Chapter 3, Drivers of Racial Disparities in Health Outcomes and Birth Outcomes** examines historical and current racial inequities that drive racial disparities in birth outcomes, focusing on disparities between Black and White birthing people;
- **Chapter 4, Maternal and Infant Health Federal and State Policy Landscape** describes the current federal and state maternal and infant health policy landscape, including programs that fund perinatal care services, and initiatives aimed at improving perinatal care quality and reducing racial disparities;
- **Chapter 5, Promising Approaches and Community Initiatives Aimed at Reducing Racial Disparities** describes policy approaches and specific initiatives that have shown promise in improving maternal and infant health outcomes and reducing racial disparities;
- **Chapter 6, Local Data on Racial Disparities in Maternal and Infant Health Outcomes** presents trends in maternal and infant health outcomes in Montgomery County by race and ethnicity;
- **Chapter 7, Perinatal Providers and Services in Montgomery County** describes health care providers, facilities, and services available to birthing people and their families in Montgomery County;
- **Chapter 8, County Government Maternal and Infant Health Programs** describes the three home-based case management and educational programs serving low-income birthing people and their babies administered by the Department of Health and Human Services, Maternal and Child Health Program.
- **Chapter 9, Stakeholder Observations on Perinatal Services and Addressing Racial Disparities** summarizes insights shared by community stakeholders regarding the perinatal services in the County and efforts to reduce racial disparities in maternal and infant health outcomes; and
- **Chapter 10** presents OLO's findings and recommended discussion issues for the Council.

Methodology. OLO staff members Natalia Carrizosa and Chitra Kalyandurg conducted this study with assistance from OLO staff members Dr. Elaine Bonner-Tompkins, Janmarie Peña and Karen Pecoraro. To prepare this report, OLO gathered information through document review, data analysis, literature review, and interviews with staff in County departments and programs, state agencies and departments, local and national nonprofit organizations, policy experts, healthcare providers, and community birth workers.

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Marlysa Gamblin, GamblinConsults
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Chapter 1. Key Terms and Definitions

This chapter presents key terms and definitions used by researchers and public health institutions – like the World Health Organization (WHO), the National Institutes of Health (NIH), and the Centers for Disease Control and Prevention (CDC) – to describe maternal, fetal, and infant health issues and outcomes. This chapter also includes terms OLO uses in this report to describe racial and ethnic groups, racial inequities, and racial disparities.

OLO recognizes that not all people who become pregnant, give birth, and/or receive maternity care identify as women and/or mothers. As such, we use the gender-inclusive terms **"birthing person"** and **"birthing people"** as much as possible in this report. However, we also use the terms "woman," "women," and "maternal" for consistency with the language used in research publications and by public health institutions.

A. Maternal Health Terms

- **Maternal mortality** or **maternal death** is defined by the WHO as the death of a person during pregnancy or within 42 days (six weeks) of the end of pregnancy from any cause related to or exacerbated by the pregnancy, but not from accidental or incidental causes.[20,21]
- **Maternal morbidity** describes any short- or long-term health problems that result from being pregnant and giving birth.[22]
- **Perinatal** is a broad term used to describe the time frame that starts before and ends after the birth of a child. Perinatal can refer to periods ranging from several weeks to up to two years immediately before and after birth.[23]
- **Postpartum** or **postnatal period** begins immediately after childbirth and is generally considered to last between six to eight weeks.
- **Pregnancy-associated death** is defined by the CDC as the death of a person during or within one year of pregnancy, regardless of the cause of death.[24]

[20] "Maternal deaths," The Global Health Observatory, World Health Organization.
[21] "Maternal Morbidity and Mortality," Eunice Kennedy Shriver National Institute of Child Health and Human Development, National Institutes of Health.
[22] Ibid.
[23] Helfner, R.E., *The Perinatal Period, A Window of Opportunity for Enhancing Parent-infant Communication: An Approach to Prevention*, National Library of Medicine.
[24] Maryland Department of Health, *Maryland Maternal Mortality Review, 2022 Annual Report*, Health – General Article §13-1212, [hereinafter "2022 Maryland Maternal Mortality Review"].

- **Pregnancy-related death** is defined by the CDC as the death of a person while pregnant or within one year of pregnancy from any cause related to or aggravated by the pregnancy or its management, excluding accidental or incidental causes.[25]
- **Prenatal** refers to the time before birth when a person is pregnant.
- **Preterm labor** is when labor – the process a pregnant person's body goes through to give birth – begins early, before 37 weeks of pregnancy. Preterm labor can lead to preterm birth (defined in the next section).[26]
- **Severe maternal morbidity (SMM)** is defined by the CDC as unexpected outcomes of labor and delivery that can result in significant short- or long-term health consequences. In other words, SMM refers to potentially life-threatening complications of childbirth.[27,28]

B. Fetal and Infant Health Terms

- **Fetal death** is the unexpected death of a fetus while in the uterus at any time during pregnancy.[29,30]
    - **Miscarriage** or **pregnancy loss** describes a fetal death before the 20th week of pregnancy.
    - **Stillbirth** is a common term used to describe fetal death at or after the 20th week of pregnancy. Still births can occur in the womb, before labor begins, or during labor and delivery.
- **Infant mortality** is the death of an infant before one year of age.[31]
    - **Neonatal mortality** refers to the death of an infant in the first 28 days of life.
    - **Postneonatal mortality** refers to the death of an infant between 28 days and 364 days of life.
- **Low birthweight (LBW)** is defined as weighing less than 2500 grams (5.5 pounds) at birth.[32] Low birth weight can place babies at higher risk for developing serious health problems such as

[25] 2022 Maryland Maternal Mortality Review.
[26] "Preterm labor and preterm birth: Are you at risk?", March of Dimes.
[27] "Severe Maternal Morbidity," Maternal Infant Health, Centers for Disease Control and Prevention.
[28] Snowden, J., Lyndon, A., Peiyi, K., El Ayadi, A., Main, E., and Carmichael, S., *Severe Maternal Morbidity: A Comparison of Definitions and Data Sources*, National Library of Medicine, National Institutes of Health.
[29] Fetal Deaths, National Vital Statistics System, National Center for Health Statistics, Centers for Disease Control and Prevention.
[30] "What is stillbirth?," Eunice Kennedy Shriver National Institute of Child Health and Human Development, National Institutes of Health.
[31] "Infant Mortality," and "Infant death," Centers for Disease Control and Prevention.
[32] "Low birth weight," Nutrition Landscape Information System (NLiS), World Health Organization.

trouble eating, gaining weight, and fighting infection. Preterm birth is one of the primary causes of low birthweight.[33]

- **Preterm birth** is when a pregnant person gives birth early, before 37 weeks of pregnancy. Babies born preterm are at increased risk for developing serious health problems both after birth and later in life.[34]

C. Terms Related to Race, Ethnicity, and Racial Equity

OLO uses the terms Black, White, and Asian to describe individuals in these race categories who do not identify has Latinx, in other words, individuals who do not descend from Latin America. The Latinx category includes all individuals that identify as Latinx, including small numbers of people that also identify as Black, White, or Asian.

- **Black, Indigenous, and Other People of Color:** OLO uses the term Black, Indigenous, and other people of color (BIPOC) to collectively refer to people of color, including Black, Indigenous, Latinx, and Asian people and people of other racial and ethnic groups who do not identify as White. The term BIPOC centers and acknowledges Black and Indigenous people as the groups with the deepest history of racial exclusion and oppression in the United States and who are the most impacted by racial inequities and disparities today;
- **Latinx:** OLO uses the term Latinx as a gender-neutral alternative to Latino or Latina for describing people who descend from Latin America. As described by El Centro at Colorado State University, "Latinx/e pushes beyond gender binaries and acknowledges the intersecting identities" of the diverse community of people who descend from Latin America;[35]
- **Racial Inequities:** OLO uses the term racial inequities to refer to biases at the individual, institutional, and/or structural levels that foster racial disparities; and
- **Racial Disparities:** OLO uses the term racial disparities to refer to differences in outcomes by race and ethnicity.

[33] "Low birthweight," March of Dimes.
[34] "Preterm labor and preterm birth: Are you at risk?", March of Dimes.
[35] "Why Latinx/e?" El Centro, Colorado State University.

Chapter 2. How Maternal and Infant Health is Measured

The World Health Organization describes maternal health as:

> The health of women during pregnancy, childbirth and the postnatal period. Each stage should be a positive experience, ensuring women and their babies reach their full potential for health and well-being.[36]

According to the Healthy People 2030 Maternal, Infant, and Child Health Workgroup, the health of American birthing people, mothers, infants, and children is a critical national priority because "their well-being determines the health of the next generation and can impact future public health challenges for families, communities, and the health care system."[37] In spite of this, the United States ranks poorly among other industrialized nations for its rate of infant death, and ranks the worst for its rate of maternal death.[38] Furthermore, these poor health outcomes are experienced unequally among birthing people and infants by race and ethnicity. Black and American Indian and Alaskan Native women in this country experience a disproportionately larger share of adverse maternal and infant health outcomes.[39]

This chapter provides background for understanding maternal and infant health by describing common metrics used to measure, track, and report maternal, fetal, and infant health outcomes. It is organized as follows:

- **Section A** explains common metrics used to measure the health of birthing people and babies in the United States and introduces national statistics on racial and ethnic disparities in these health outcomes; and
- **Section B** describes the CDC's process for collecting and reporting maternal mortality rates, including recent debate around the agency's approach to collecting mortality data.

A. Maternal, Fetal, and Infant Health Indicators

Research often cites maternal and infant deaths as key indicators of a society's health and well-being. However, mortality is only one measure of health for birthing people and babies in the U.S. The following table lists other common metrics of maternal, fetal, and infant health used by researchers and public health officials:

[36] "Maternal health," World Health Organization.
[37] "Maternal, Infant, and Child Health Workgroup," Healthy People 2023, Office of Disease Prevention and Health Promotion, U.S. Department of Health and Human Services.
[38] Geronimus, Arline, "Weathering: The Extraordinary Stress of Ordinary Life in an Unjust Society," 2023.
[39] White House Blueprint for Addressing the Maternal Health Crisis, June 2022.

Table 2.1. Common Indicators of Maternal, Fetal, and Infant Health:

Indicator	Definition
Birth rate	Number of live births per 1,000 population. Birth rate is calculated by dividing the number of live births in a population in a year by the midyear resident population.[140]
Fetal mortality rate	Number of fetal deaths at 20 weeks of gestation or more per 1,000 live births and fetal deaths.[41]
Infant mortality rate	Number of deaths occurring during the first year of life per 1,000 live births.[1]
Maternal mortality rate	Number of maternal deaths per 100,000 live births during pregnancy or within 42 days of the end of pregnancy, from any cause related to or exacerbated by the pregnancy, excluding accidental or incidental causes.[42]
Neonatal mortality rate	Number of infant deaths before 28 days of life per 1,000 live births.
Postneonatal mortality rate	Number of infant deaths from 28 through 364 days of life per 1,000 live births.
Pregnancy-associated mortality rate	Number of maternal deaths per 100,000 live births during or within one year of pregnancy, regardless of the cause of death.
Pregnancy-related mortality rate	Number of maternal deaths per 100,000 live births during or within one year of pregnancy, from any cause related to or aggravated by the pregnancy or its management, excluding accidental or incidental causes.
Preterm birth rate	Number of live births occurring before 37 completed weeks of gestation per 100 live births within the same period.[43]

1. Maternal Health Indicators

The worldwide standard used to compare maternal deaths globally is the "maternal mortality ratio," or MMR, which is the number of maternal deaths per 100,000 live births. In the United States, official reporting by the National Vital Statistics System (NVSS) refers to this same measure as the "maternal mortality rate."[44] For consistency with domestic reporting, OLO uses the term **maternal mortality rate**

[40] "Rate," National Center for Health Statistics, CDC.
[41] Gregory, E.C.W., Valenzuela, C.P., and Martin, J.A., Fetal Mortality in the United States: Final 2020-2021 and 2021-Provisional 2022, NVSS Vital Statistics Rapid Release, Centers for Disease Control and Prevention, Report No. 32, November 2023.
[42] Hoyert., D.L., Maternal Mortality Rates in the United States, 2022, Health E-Stats, Division of Vital Statistics, National Center for Health Statistics, Centers for Disease Control and Prevention, May 2024.
[43] "Calculations," March of Dimes
[44] Of note, the World Health Organization provides its own distinct definition for "maternal mortality rate." The maternal mortality *rate* (whose denominator is the number of women of reproductive age), reflects not only the risk of maternal

to refer to the risk of maternal death among pregnant and birthing people. Maternal death is identified by information on the death certificate indicating the cause of death and pregnancy status.[45]

The maternal mortality rate is an oft cited but limited statistic. Maternal deaths occur during pregnancy or within 42 days, or six weeks, of the end of pregnancy from causes related to or exacerbated by the pregnancy, but not from accidental or incidental causes. This definition does not account for the many deaths related to or associated with pregnancy that occur *after* 42 days postpartum. To get a more accurate view of deaths among pregnant and birthing people, the CDC began publishing **pregnancy-related** and **pregnancy-associated mortality rates** starting in the 1980s. These expanded definitions include deaths that occur within *one year* of the end of pregnancy. In the case of pregnancy-related deaths, the cause of death cannot be from accidental or incidental causes, whereas pregnancy-associated deaths reflect all causes.[46]

Mortality rates also do not capture the increasing number of individuals who come close to dying for reasons associated with pregnancy. Each year, **severe maternal morbidity (SMM)** – unexpected outcomes of labor and delivery that have significant short- or long-term health impacts – affects tens of thousands of birthing people in the U.S. Data show that SMM is about 70 to 80 times more common than maternal death.[47] In their publication *Severe Maternal Morbidity in the United States: A Primer*, Eugene Declercq and Laurie C. Zephyrin write:

> While maternal deaths in the United States number about 650 to 750 annually, severe maternal morbidity affects approximately 50,000 to 60,000 women each year, and the numbers are increasing.[48]

The most widely used measure of SMM, developed by the CDC, uses International Classification of Disease (ICD) codes and hospital discharge data to identify 21 indicators. These indicators include medical conditions such as heart attack, eclampsia (seizures that are induced by preeclampsia), or

death per pregnancy or birth but also the level of fertility in the population. The maternal mortality *ratio* (whose denominator is the number of live births) does not take fertility levels into account, thus is an indicator of obstetric risk. "Maternal mortality ratio (per 100 000 live births)," World Health Organization.

[45] 2022 Maryland Maternal Mortality Review, pg. 9.

[46] Ibid., pgs. 6-7.

[47] Declercq, E., and Zephyrin, L. *Severe Maternal Morbidity in the United States: A Primer*, Commonwealth Fund, Oct. 2021, [hereinafter "*Severe Maternal Morbidity*, Commonwealth Fund"].

[48] Ibid.

sepsis (the body's toxic response to infection), and in-hospital procedures like blood transfusions, ventilation, or hysterectomy (the surgical removal of all or part of the uterus).[49,50,51]

In addition to tracking cases of SMM, which are identified only at the time of birth, researchers maintain it is important to track **maternal morbidity** generally.[52] Maternal morbidity includes several health conditions that can manifest during pregnancy, at childbirth, and postpartum. According to the National Institute of Child Health and Human Development, some morbidities can last just a short time, while others may develop years after pregnancy and last throughout a person's life. Common examples of maternal morbidity include:[53]

- Hypertensive disorders (i.e., chronic hypertension, preeclampsia-eclampsia, and gestational hypertension);
- Cardiovascular problems (i.e., heart disease and blood vessel problems);
- Diabetes;
- Infections (especially from C-section);
- Blood clots;
- Bleeding or hemorrhage;
- Anemia (low iron in the blood);
- Nausea and vomiting and hyperemesis gravidarum (severe morning sickness); and
- Depression and anxiety.

Data show the risk for morbidity and mortality increases with age.[54,55] According to U.S. Census data, women in the U.S. are waiting longer to have babies – the median age of birthing people rose from 27 in 1990 to 30 in 2019.[56] Individuals of **advanced maternal age**, defined as 35 or older, are more likely to enter pregnancy with conditions like hypertension and diabetes. They are also more likely to experience complications such as preterm birth and delivery by cesarean section.[57] However, research

[49] "Identifying Severe Maternal Morbidity (SMM)," Maternal Infant Health, Centers for Disease Control and Prevention.
[50] Fingar, K.R., Hambrick, M.M., Heslin, K.C., and Moore, J.E., *Trends and Disparities in Delivery Hospitalizations Involving Severe Maternal Morbidity, 2006-2015*, Statistical Brief #243, Healthcare Cost & Utilization Project, Agency for Healthcare Research and Quality.
[51] "What are examples and causes of maternal morbidity and mortality?," Eunice Kennedy Shriver National Institute of Child Health and Human Development, National Institutes of Health [hereinafter "*What are examples and causes of maternal morbidity and mortality?*, NIH"].
[52] *Severe Maternal Morbidity*, Commonwealth Fund
[53] *What are examples and causes of maternal morbidity and mortality?*, NIH
[54] Hoyert., D.L., Maternal Mortality Rates in the United States, 2021, Health E-Stats, Division of Vital Statistics, National Center for Health Statistics, Centers for Disease Control and Prevention, March 2023.
[55] Alford, J.M., Williams, S.N., Oriaku, M.N., White, D., Schwartzman, A., and Jackson, G., *National Hospital Care Survey Demonstration Projects: Severe Maternal Morbidity in Inpatient and Emergency Departments*, National Health Statistics Report, CDC [herein "Alford et al., *Severe Maternal Morbidity in Inpatient and Emergency Departments*"]
[56] Katella, K., "Maternal Mortality Is on the Rise: 8 Things To Know," Yale Medicine, May 22, 2023 [hereinafter "Maternal Mortality Is on the Rise, 2023"]
[57] Alford et al., *Severe Maternal Morbidity in Inpatient and Emergency Departments.*

shows that timely care and intervention for birthing people of all ages can help prevent maternal morbidities or stop cases from worsening into SMM or even death.[58]

The authors of *Severe Maternal Morbidity in the United States: A Primer* observe that measuring maternal morbidity and SMM is challenging because it must account both for comorbidities (other diseases or health conditions that are simultaneously present in an individual), but also the effects of racism, oppression, and systemic inequities on health. As discussed in Chapter 6, this is because adverse maternal and infant health outcomes such as SMM disproportionately affect people of color, especially Black birthing people and babies.

2. Infant Health Indicators

In its *2023 Report Card for the United States*, the March of Dimes, an organization dedicated to improving maternal and infant health and health equity, highlights two key indicators that reflect the state of infant health across the U.S.: the **preterm birth rate**, which is the number of births before 37 weeks of pregnancy per 100 live births within the same period, and the **infant mortality rate**, the number of deaths in the first year of life per 1,000 live births.[59] Both measures are calculated from NVSS data. Tracking preterm birth is important because it is a strong predictor of infant death. Preterm babies are also at greater risk for developing serious short- and long-term health complications.[60]

The March of Dimes also tracks two clinical measures that it considers "important indicators for how the U.S. is supporting the health of birthing people."[61] First, the **percent of low-risk cesarean birth**, tracks "cesarean births for first-time moms, carrying a single baby, positioned head-first, and at least 37 weeks pregnant."[62] Cesarean births, or C-sections, can be life-saving for birthing people who are at high risk for vaginal birth complications or who experience unexpected complications during birth. However, cesarean births place both mother and baby at greater risk for negative outcomes (e.g., infections or blood clots) and data show many women who are at low risk for vaginal delivery complications get medically unnecessary C-sections. Reducing the rate of low-risk cesarean birth can help improve both maternal and infant health outcomes.[63,64,65]

The second clinical measure is the **percent of inadequate prenatal care**, or the "percent of birthing people who received care beginning in the fifth month or later or less than 50% of the appropriate

[58] *Severe Maternal Morbidity*, Commonwealth Fund
[59] "Calculations," March of Dimes.
[60] Galson, S., *Preterm Birth as a Public Health Initiative*, National Library of Medicine, National Institutes of Health.
[61] "2024 March of Dimes Report Card for United States," March of Dimes.
[62] Ibid.
[63] "Low-Risk Cesarean Delivery: Improving Maternal Health by Reducing Low-Risk Cesarean Delivery," Medicaid.gov.
[64] "Healthy Beginnings/Reducing Cesarean Births," Let'sGetHealthCalifornia.gov.
[65] "Reduce cesarean births among low-risk women with no prior births – MICH-06," Healthy People 2030, Office of Disease Prevention and Health Promotion, U.S. Department of Health and Human Services.

number of visits for the infant's gestational age."[66] Early and regular prenatal care has shown to improve the chances of a healthy pregnancy that reaches full-term. Ideally, prenatal appointments should begin in the first trimester (the first 12 weeks) and continue throughout the pregnancy.[67] Regular check-ups not only help medical providers assess the health of both pregnant person and fetus, but they can also help providers catch and treat any emerging health complications early.[68,69]

3. Racial Disparities

It is important to underscore that stark racial and ethnic disparities exist across every measure of maternal, fetal, and infant health discussed in this section. Chapter 6 presents local data on these disparities in more detail, but key national statistics include:

- Black and American Indian and Alaskan Native birthing people are two-to three-times more likely to die of pregnancy-related causes than White birthing people;[70]
- Black women are more than twice as likely as White women to experience SMM. Latinx women are more than one and a half times as likely as White women to experience SMM;[71]
- Black women have the highest share of preterm births and low birthweight babies of any racial or ethnic group in the U.S.;[72]
- Black infants die at nearly two and a half times the rate of White infants;[73] and
- Racial disparities exist even when the data are broken out by age:[74]
    - The maternal mortality rate for Black women ages 25-39 is nearly three times higher than the rates for White and Latinx women of the same age; and
    - The rate for Black women ages 40 and older is two times higher than White women and almost two and a half times higher than Latinx women of the same age.

[66] 2024 March of Dimes Report Card.
[67] Prenatal care checkups typically follow this schedule: once a month during weeks 4 to 28 of pregnancy; twice a month during weeks 28 to 36 of pregnancy; and once a week during weeks 36 to 41 of pregnancy. Individuals with pregnancy complications may have more frequent checkups. "Prenatal care checkups," March of Dimes.
[68] Maternal Mortality Is on the Rise, 2023.
[69] "Prenatal care checkups," March of Dimes.
[70] Burns, A., DeAtley, T., Short, S. *The maternal health of American Indian and Alaskan Native people: a scoping review*, National Library of Medicine, National Institutes of Health, 2022.
[71] *Severe Maternal Morbidity*, Commonwealth Fund.
[72] Hill, L., Rao, A., Artiga, S., and Ranji, U., *Racial Disparities in Maternal and Infant Health: Current Status and Efforts to Address Them*, KFF, October 25, 2024.
[73] Ibid.
[74] Hoyert., D.L., Maternal Mortality Rates in the United States, 2021, Health E-Stats, Division of Vital Statistics, National Center for Health Statistics, Centers for Disease Control and Prevention, March 2023.

B. How Maternal Mortality Data are Collected and Reported

The NVSS, a program of the CDC's National Center for Health Statistics (NCHS), provides the most complete data on births and deaths in the U.S. The NVSS regularly publishes official reports on maternal, fetal, and infant mortality. These data are compiled first at the state and local levels by vital records offices and registrars who are legally responsible for receiving, registering, and issuing certified copies of vital records (e.g., Maryland Department of Health's Vital Statistics Administration). Each vital records jurisdiction in the U.S. reports data directly to NVSS.[75,76]

The authors of *Maternal Mortality in the United States: A Primer* highlight one limitation of this system:

> …the system relies on the quality of data collected locally and the quality-control processes for converting those reports into national data. Documentation and analysis of maternal mortality over time have been hampered by limited funding, changing definitions, and inconsistent reporting by states.[77]

Compared to infant mortality, which is clearly defined as the death of an infant within one year of birth, collecting and analyzing maternal mortality data is more complicated. Maternal death, by definition, occurs during pregnancy, childbirth, or within 42 days of the end of pregnancy from a cause related to or exacerbated by the pregnancy. The terms "related to" and "exacerbated by" create uncertainty; it can often be difficult for a certifier to determine whether pregnancy worsened a preexisting condition (e.g., cancer, or HIV/AIDS) that ultimately led to death. Maternal deaths can be missed if a certifier attributes death to another cause on the death certificate.[78,79]

Pregnancy Checkbox. Research conducted in the 1990s and early 2000s found that the number of maternal deaths was being underestimated.[80] According to the CDC:

> As many as half of all maternal deaths could not be identified through cause of death information provided on death certificates. […] medical certifiers often did not provide enough

[75] "About the National Vital Statistics System," National Center for Health Statistics, Centers for Disease Control and Prevention.
[76] Schwartz, S., The U.S. Vital Statistics System: The Role of State and Local Health Departments.
[77] Declercq, E., and Zephyrin, L., *Maternal Mortality in the United States: A Primer,* The Commonwealth Fund, Data Brief, December 2020 [hereinafter "*Maternal Mortality in the United States: A Primer*, The Commonwealth Fund"]
[78] Saloni Dattani (2024), "The rise in reported maternal mortality rates in the US is largely due to a change in measurement," Published online at OurWorldinData.org.
[79] Emily Oster (2024), "What You Really Need to Know About CDC Maternal Mortality Data," Published online at Parentdata.org [hereinafter "What You Really Need to Know About CDC Maternal Mortality Data"].
[80] Atrash, H., Alexander, S., and Berg, C., *Maternal mortality in developed countries: Not just a concern of the past*, Obstetrics & Gynecology, Volume 86, Issue 4, Part 2, 1995.

information to indicate that a person was pregnant at the time of death or recently pregnant before death.[81]

To correct for this undercounting, the CDC added a "pregnancy checkbox" to death certificates in 2003 (see Figure 2.1 below). The checkbox question allows a certifier to report whether a person was pregnant or had been recently pregnant at the time of death. Specifically, checkbox options two and three help identify maternal deaths, and checkbox option four helps identify pregnancy-related deaths.

Figure 2.1. Pregnancy Checkbox Section on Death Certificates*

IF FEMALE:

- ☐ Not pregnant within past year *(Option 1)*
- ☐ Pregnant at time of death *(Option 2)*
- ☐ Not pregnant, but pregnant within 42 days of death *(Option 3)*
- ☐ Not pregnant, but pregnant 43 days to 1 year before death *(Option 4)*
- ☐ Unknown if pregnant within the past year *(Option 5)*

Source: Maternal Mortality Frequently Asked Questions, Centers for Disease Control and Prevention, National Center for Health Statistics
*Text in parentheses added by OLO.

States adopted the pregnancy checkbox gradually starting in 2003, with full implementation by 2018. Because maternal death data was captured inconsistently during this period, the CDC stopped reporting overall U.S. maternal mortality rates between 2007 and 2017. Also, while the pregnancy checkbox did improve maternal death reporting, the CDC and other researchers found the checkbox was often used incorrectly, resulting in a significant overcount of maternal deaths, especially among people over the age of 45.[82]

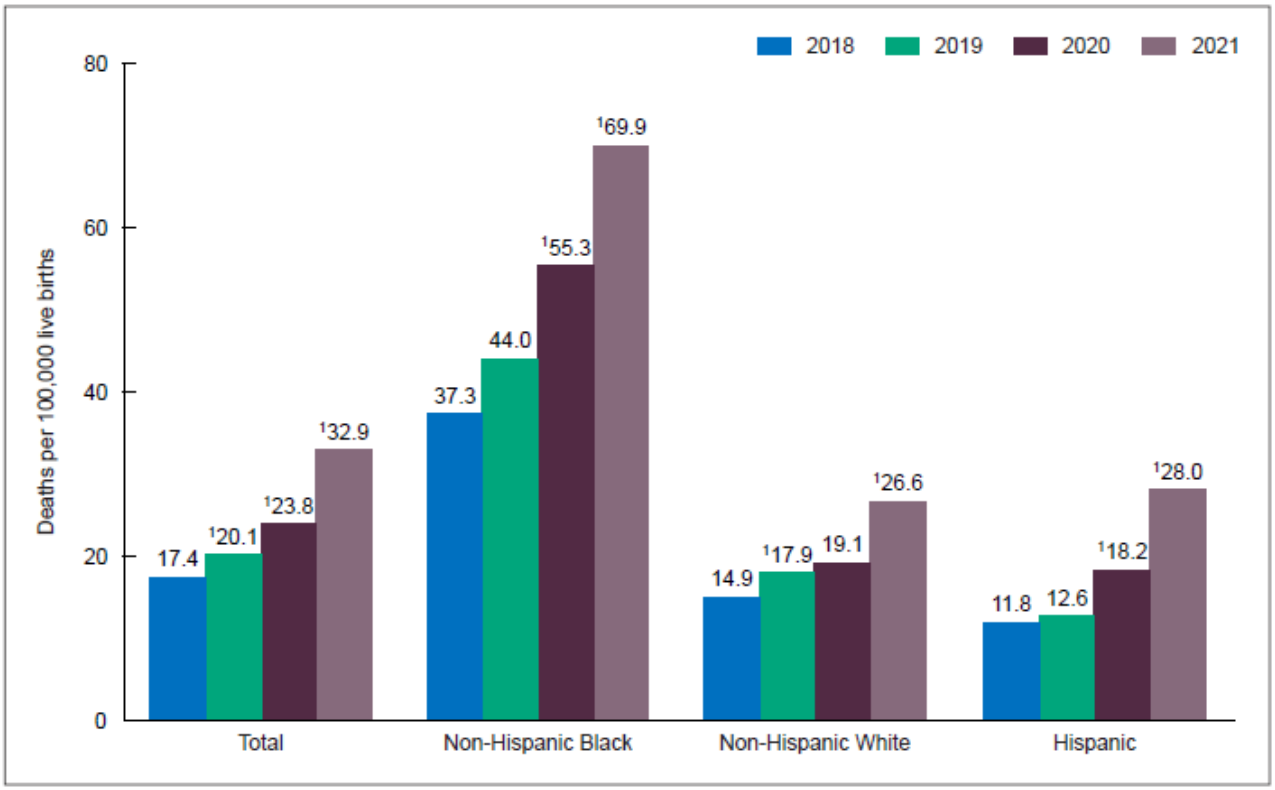
To account for these errors, the CDC made changes to how it codes maternal deaths, including restricting use of the checkbox to people ages 10 to 44. The CDC resumed publication of the national maternal mortality rate starting with 2018 data. They also made clear that the new rates going forward would not be comparable to the rates reported under the old system prior to 2003.[83]

In 2023, the CDC released estimated maternal mortality rates for 2018 through 2021. As the leftmost bars in Figure 2.2 depict, the estimated total maternal mortality rate rose from 17.4 deaths per 100,000 live births in 2018 to 32.9 deaths per 100,000 live births in 2021 – an alarming 89% increase. Even more concerning were the stark racial and ethnic disparities in mortality rates. In each year, rates for Black women were two-to three-times higher compared to those for White and Latinx women.

[81] "What is the history of the pregnancy checkbox?", Frequently Asked Questions, National Center for Health Statistics, CDC.
[82] Ibid.
[83] Hoyert, D.L., and Miniño, A.M., *Maternal mortality in the United States: changes in coding, publication, and data release, 2018*, National Vital Statistics Reports, v. 69, no. 2, Centers for Disease Control and Prevention, 2020.

While rates for Latinx women were comparable to, and sometimes even lower than rates for White women, their risk for maternal death more than doubled between 2018 and 2021.

Figure 2.2. Maternal Mortality Rates by Race and Ethnicity, United States, 2018-2021



[1]Statistically significant increase from previous year ($p < 0.05$).
NOTE: Race groups are single race.

Source: *Maternal Mortality Rates in the United States, 2021*, Health E-Stats, National Center for Health Statistics, March 2023.

Debate Around Increasing Rates. A 2024 study published in the American Journal of Obstetrics and Gynecology (AJOG) argues that the CDC's new approach to collecting mortality data, namely the introduction of the pregnancy checkbox, has resulted in inflated mortality rates. Using an alternative, narrower definition of maternal mortality, the study's authors found rates were much lower and remained stable across two different time periods – 10.2 per 100,000 births from 1999 to 2002 and 10.4 per 100,000 births from 2018 to 2021.[84]

The CDC disagrees with the study's conclusion that the official rate overstates the number of maternal deaths in the country. The agency argues that the researchers' alternative definition results in a

[84] Joseph, K.S. et al., *Maternal mortality in the United States: are the high and rising rates due to changes in obstetrical factors, maternal medical conditions, or maternal mortality surveillance?*, American Journal of Obstetrics & Gynecology, Volume 230, Issue 4, 440.e1 - 440.e13, 2024 [hereinafter "Joseph, K.S. et al., *Maternal mortality in the United States*"]

"substantial undercount" of maternal deaths (the very problem it was trying to correct in the first place with the pregnancy checkbox) and does not give a full picture of maternal mortality in the U.S.[85]

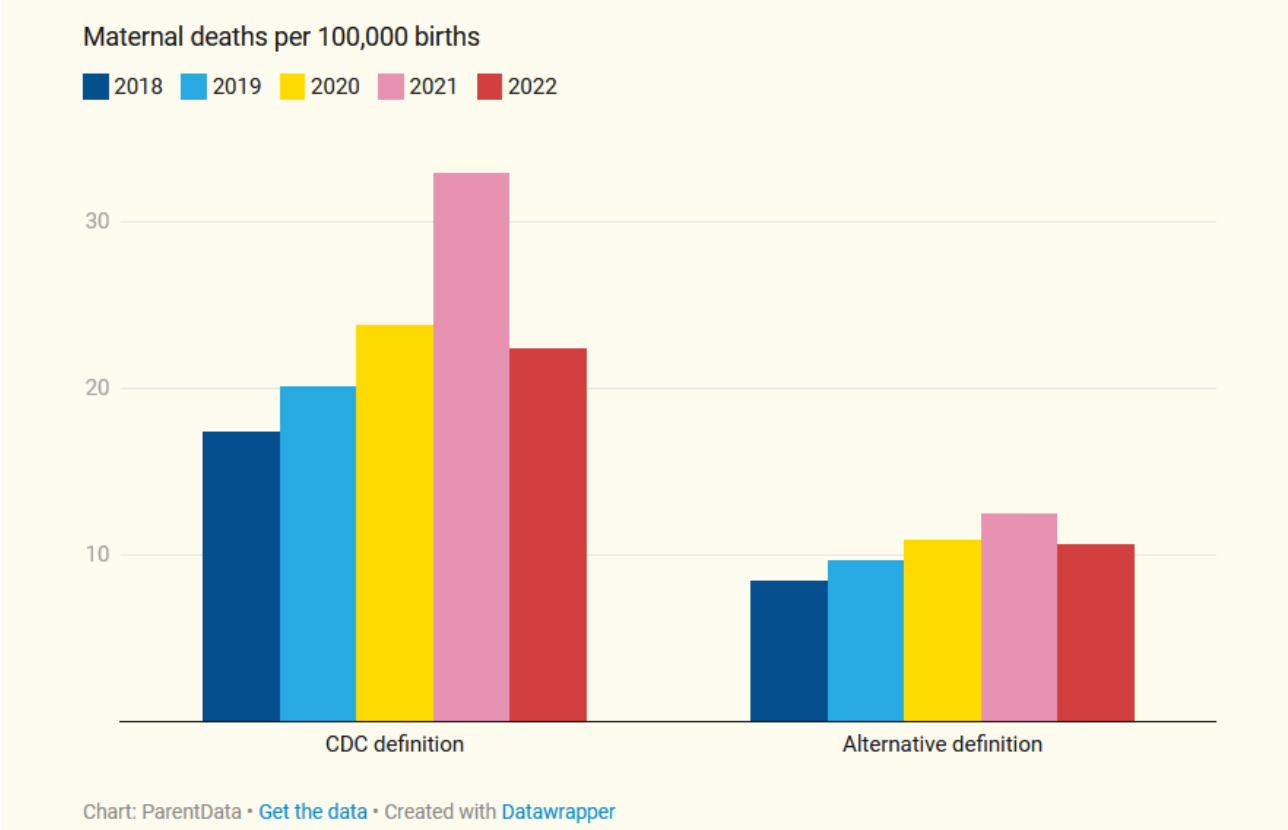
Additionally, independent research by economist Emily Oster observes how the new study cannot be easily compared with the CDC's report. Oster writes:

> What is so striking about the recent CDC report is the change in their estimated mortality rate from 2018 to 2021 – it's the trend over that short period, the 89% increase – that causes an alarm. The new paper does not look at that trend with its alternative definition of mortality. Its analysis combines the 2018 through 2021 data together. […] For this reason, it doesn't make sense to think of this paper as in contrast to the recent CDC data release, which focused on the 2018 to 2021 increase.[86]

Oster uses both the CDC's definition of maternal mortality and the new study's narrower definition to analyze publicly available raw data on U.S. maternal deaths from 2018 to 2021 by year. As Figure 2.3 shows, Oster found that regardless of how narrowly or broadly maternal mortality is defined, both methods show an increase in the U.S. maternal mortality rate – 89% with the CDC definition and 48% with the alternative definition.

[85] Chelsea Cirruzzo and Ben Leonard (March 2024), "CDC disputes study on U.S. maternal death rate," published on Politico.org.
[86] "What You Really Need to Know About CDC Maternal Mortality Data"

Figure 2.3. U.S. Maternal Mortality Rates, CDC Definition and Alternative Definition



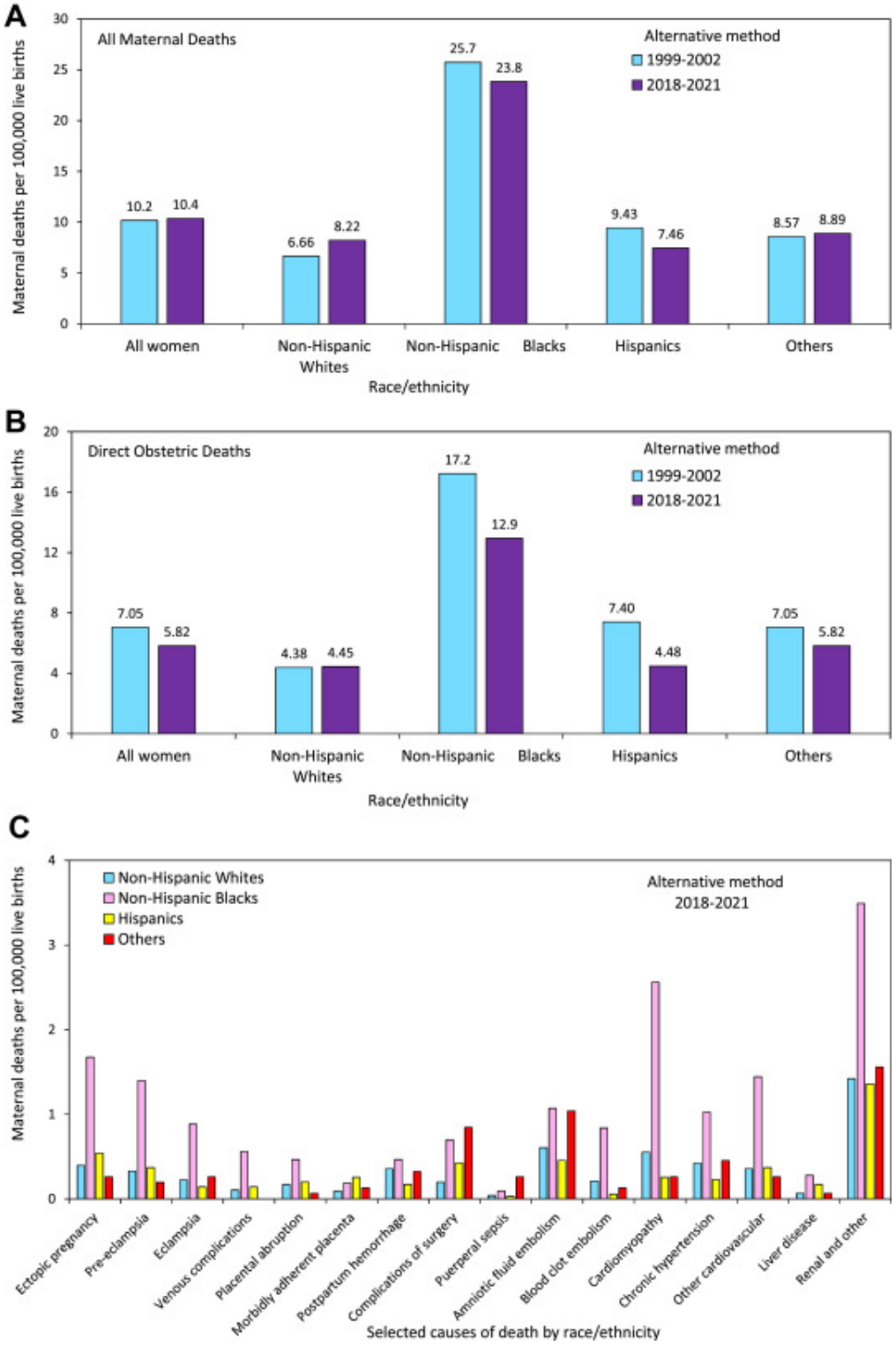
Source: *What You Really Need to Know About CDC Maternal Mortality Data*, ParentData, April 2024

Both Reporting Methods Reveal Racial Disparities. Most importantly, both reporting methods are consistent in showing large racial disparities in mortality rates. As seen in both Figure 2.2 (on page 17) from the CDC's data release, and Figure 2.4 (on page 20) from the AJOG report, mortality rates are disproportionately higher among Black individuals. The authors of the AJOG report also found that Black women have higher rates of maternal death across several causes, including "ectopic pregnancy, hypertensive disorders, embolism, cardiomyopathy, other cardiovascular diseases, and renal and unspecified diseases."[87]

These findings highlight the sheer magnitude of the Black maternal health crisis in the U.S. Regardless of the absolute numbers, Black birthing people are more likely to die from pregnancy-related causes than any other racial or ethnic group in the U.S., and most of these deaths are preventable.[88]

[87] Joseph, K.S. et al., *Maternal mortality in the United States*.
[88] "Four in 5 pregnancy-related deaths in the U.S. are preventable," Centers for Disease Control and Prevention Website Archive. Accessed March 6, 2025.

Figure 2.4. Alternative method for identifying maternal deaths: rates of maternal death and direct obstetrical death by race/ethnicity, United States, 1999–2002 and 2018–2021, and rates of selected causes of maternal death by race/ethnicity, United States, 2018–2021.



Source: Joseph, K.S. et al., *Maternal mortality in the United States*, 2024

Chapter 3. Drivers of Racial Disparities in Health Outcomes and Birth Outcomes

As will be described in Chapter 6, Black birthing people and infants experience the most adverse health outcomes in Montgomery County. What drives racial disparities in maternal and infant health outcomes? Discussions on this topic have often been focused on individual behaviors and purported biological differences based on race. Writer and journalist Linda Villarosa writes about her perspectives during the 1980s and 1990s:

> At the time, I followed the conventional wisdom: that only poor women who lacked knowledge experienced tragic birth outcomes. This reflexive explanation for the death of a baby boiled down to blaming the mother, particularly if she was poor and Black. Was she eating badly, smoking, drinking, using drugs, not taking prenatal vitamins or getting enough rest, afraid to be proactive during prenatal visits, skipping them altogether, too young, or unmarried?[89]

However, as Villarosa points out, Black women of all incomes and educational backgrounds experience worse outcomes than White women. Research demonstrates that racism in and outside of healthcare drives these disparities.[90] This chapter examines historical and current racial inequities that drive racial disparities in birth outcomes, focusing on disparities between Black and White birthing people. The chapter is organized as follows:

- **Section A: History of Racialized Healthcare** describes the history of medical racism in the United States with a focus on reproductive health;
- **Section B: Contemporary Tactics of Racialized Healthcare** examines how contemporary medical racism manifests and its impact, with a focus on maternal and infant health impacts; and
- **Section C: Social and Structural Determinants of Health and Weathering** describes how the roots of racial disparities in birth outcomes extend beyond the healthcare system.

In sum, this chapter shows that racial disparities in maternal and birth outcomes result from three drivers: a legacy of racist pseudoscientific theories that blame Black bodies for racial disparities in health outcomes, contemporary medical racism, and racial disparities in structural determinants of health.

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[89] Linda Villarosa, *Under the Skin: The Hidden Toll of Racism on American Lives and on the Health of Our Nation* (Doubleday, 2022), 72 [hereinafter "Villarosa, *Under the Skin*"].
[90] U.S. Commission on Civil Rights, *Racial Disparities in Maternal Health: 2021 Statutory Enforcement Report* (U.S. Commission on Civil Rights, 2021), 29.

A. History of Racialized Healthcare

In *Medical Apartheid: The Dark History of Medical Experimentation on Black Americans From Colonial Times to the Present,* Harriet Washington describes how, throughout U.S. history, physicians and researchers have forced or coerced Black Americans to be the subjects of nontherapeutic and harmful medical experiments. While White Americans benefited from perfected medical processes and technologies, Black Americans lacked access to similar care. Washington links *iatrophobia*, or fear of medicine, in Black communities, and health disparities by race, with this history:

> Historically, African Americans have been subjected to exploitative, abusive, involuntary experimentation at a rate far higher than other ethnic groups. Thus, although the heightened African American wariness of medical research and institutions reflects a situational hypervigilance, it is neither a *baseless* fear of harm nor a fear of imaginary harm.[91]

Myths about Black bodies – used to justify the economic, sexual, and medical exploitation of Black Americans throughout U.S. history – have persisted within medical institutions and continue to drive racialized medical care, including reproductive healthcare. This section offers an overview of historical medical racism in the United States with a focus on reproductive health.

1. Medical Racism in the Eighteenth and Nineteenth Centuries

During the 1700s and 1800s, Western medical practices were primitive and often did more harm than good. These included the use of toxic "medicines" such as arsenic and mercury, induced vomiting and diarrhea, and bloodletting. Medical and public health advances that emerged in other parts of the world were slow to reach North America, especially the South. In the South, the confluence of the subtropical climate, poor sanitation and a lack of effective public health institutions led to repeated, unchecked epidemics of infectious diseases such as yellow fever, tuberculosis and malaria.[92]

Enslaved Black Americans bore the brunt of disease and of harmful medical treatments in the South. Enslaved people were poorly housed, undernourished and overworked, which predisposed them to severe health outcomes and death. Medical treatments received by enslaved people were not for their benefit but for that of their enslavers, who had a financial interest in ensuring they could work. For example, it was common for slaveholders to accuse enslaved people of feigning illness ("malingering") to avoid work, so some physicians advocated for medical violence (e.g. intentional overdoses of drugs

[91] Harriet Washington, *Medical Apartheid: The Dark History of Medical Experimentation on Black Americans from Colonial Times to the Present* (Vintage Books, 2006), "Introduction: The American Janus of Medicine and Race," Kindle [hereinafter "Washington, *Medical Apartheid*"].
[92] Washington, *Medical Apartheid*, chap. 1.

to cause pain) in order to shock them out of their "performances."[93] In fact, many enslaved people concealed their illnesses to avoid harmful medical treatments.[94]

Physicians purchased or hired enslaved people for conducting experiments that were often violent and brutal. For example:

- In Georgia, during the 1820s and 1830s, Dr. Thomas Hamilton forced John Brown, an enslaved Black man, to sit in a covered pit with burning embers until he fainted, ostensibly for the purposes of developing a remedy for sunstroke. In a subsequent experiment, Hamilton burned the skin on Brown's hands, legs and feet to measure how thick his skin was.[95]
- In Louisiana, in the 1830s, Dr. Francois Marie Prevost performed 37 experimental cesarean sections, of which 30 were conducted on enslaved Black women.[96]
- In Alabama, in the 1840s, Dr. James Marion Sims conducted extremely painful, repeated experimental gynecological surgeries without anesthesia on enslaved women with vaginal fistulas. He became known as the "father of American gynecology" for his work, though he failed to repair several of the women's fistulae.[97]

Physicians and medical schools in the South touted their purported expertise with the bodies of enslaved Black Americans in developing pseudoscientific arguments about biological differences between White and Black bodies. They used these theories to justify the practices of chattel slavery, sexual violence and coercion, and violent medical experimentation on Black bodies. For example, physician-scientists argued that:

- Black people's bodies were better able than White bodies to withstand working conditions in southern plantations including hot weather and tropical diseases.[98]
- Black people were inherently dishonest, lazy, and cognitively inferior, and they needed White people to care for them as though they were animals or children.[99]
- Black people were inherently hypersexual, and Black women tempted slaveholders into sexual relationships; and

[93] Ibid.
[94] Washington, *Medical Apartheid*, chap. 2.
[95] Ibid.
[96] Ibid.
[97] Ibid. A vaginal fistula is an opening in the wall of the vagina that can be a debilitating complication resulting from childbirth.
[98] Christopher Willoughby, *Masters of Health: Racial Science and Slavery in U.S. Medical Schools* (The University of North Carolina Press, 2022), chap. 7, Hoopla.
[99] Washington, *Medical Apartheid*, chap. 2.

- Black people did not experience pain, making them ideal subjects for experimental surgeries without anesthesia.[100]

At the same time, White physicians denigrated healing practices used by enslaved people, including Black midwives, as primitive, and even sought to punish Black people for these practices. Yet, some of their practices were safer and more effective than those used by White physicians:

> Despite their characterization as primitive, African healers first employed citrus juice for scurvy and inoculation for smallpox and other viral illnesses; midwives used African techniques, herbs and medicines so successfully – without dangerous tools of the day, such as forceps – that many white women called them to attend births.[101]

In the nineteenth century, after the abolition of slavery, some medical schools permitted attendance by Black men but would not grant them degrees. Black practitioners were also subjected to false accusations of poisoning patients when negative outcomes occurred.[102]

2. Twentieth Century Segregation and Discrimination Against Black Health Care Practitioners

From the late nineteenth century until the mid-twentieth century, explicitly racist "Jim Crow" laws in the southern U.S. mandated racial segregation in public spaces, including hospitals. In Alabama, for example, the law granted White nurses (typically women) the choice to not treat Black men. In Mississippi, the law required that White patients receive treatment before any Black patients.[103]

Furthermore, discrimination against Black health care practitioners continued into the twentieth century. In 1910, the American Medical Association sponsored the Flexnor Report, which included recommendations to:[104]

- Close most Black medical schools;
- Prohibit Black physicians from practicing without White supervision; and
- Exclude Black physicians from medical specialties and research.

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[100] Ibid.
[101] Washington, *Medical Apartheid*, chap. 1.
[102] National Academies of Sciences, Engineering, and Medicine, *The Impacts of Racism and Bias on Black People Pursuing Careers in Science, Engineering, and Medicine: Proceedings of a Workshop* (The National Academies Press, 2020), chap. 3 [hereinafter "National Academies, *The Impacts of Racism and Bias on Black People Pursuing Careers in Science, Engineering, and Medicine*"].
[103] Kerri L. Hunkele, "Segregation in United States Healthcare: From Reconstruction to Deluxe Jim Crow," *Honors Theses and Capstones 188*, (University of New Hampshire, 2014).
[104] National Academies of Sciences, Engineering, and Medicine, *The Impacts of Racism and Bias on Black People Pursuing Careers in Science, Engineering, and Medicine*, chap. 3

As a result of this report, many hospitals denied Black physicians admitting privileges and barred them from residencies. Further, when Black physicians participated in medical research, their contributions were not acknowledged. The medical establishment also continued to target midwifery to the detriment of Black and Indigenous communities that relied on midwives:

> Physicians proposed many ways to regulate or eliminate the practice of midwifery. Articles emphasized the elite skill of the physician, attributing high infant and maternal mortality to the practices of the "ignorant, half-trained, often malicious midwife." The specter of the "ignorant" midwife led to strict licensing requirements and intense stigma that severely limited access to reproductive care for many women, especially within Black and Indigenous communities.[105]

In response to Jim Crow laws and the consequences of the Flexnor Report, a group of Black physicians started a movement that led to the establishment of 118 Black hospitals throughout the U.S. However, these hospitals struggled financially during the Great Depression. Furthermore, after the Supreme Court's 1954 *Brown v. Board of Education* decision spurred the end of segregated health care, most remaining historically Black hospitals eventually closed.

Black Health Care Practitioners in Montgomery County in the Jim Crow Era

The Montgomery County Historical Society's periodical, *The Montgomery County Story*, has published detailed profiles of two Black health care practitioners that served Montgomery County residents in the Jim Crow era. The first is Emma Jones, a midwife who lived in Gibson Grove – an African American community in Cabin John – during the early twentieth century. From 1896 to 1901, Jones also served as housekeeper, seamstress and numerous other roles for Clara Barton, founder of the American Red Cross. Though Barton and Jones had a close relationship, a descendant of Jones notes she kept her work as a midwife a secret from Barton.[106]

The second is Webster Sewell, a physician who graduated from the Howard University College of Medicine in 1930. Sewell established a clinic in Norbeck that served low-income people, often for free. Montgomery County's medical association denied him membership on the basis of his race. However, he went on to serve as medical officer for the County's Black schools and was the first Black nominee to the Board of Education in 1952. Sewell's wife Doris served as an educator and administrator in D.C. public schools and played an integral role in running the Norbeck clinic. They received patients who experienced discrimination and were denied care at Montgomery General Hospital, which often relegated Black patients to wait in the basement. In 1959, Sewell was imprisoned for four months and stripped of his medical license for providing abortion care to a White woman.[107]

[105] Ben Maldonado, Jamie Marsella, Abigail Higgins, and Sarah Richardson, "Malicious Midwives, Fruitful Vines, and Bearded Women — Sex, Gender, and Medical Expertise in the *Journal*," *The New England Journal of Medicine* 390, no. 21 (2024).
[106] L. Paige Whitley, "The Nurse and the Midwife: The Story of Clara Barton and Emma Jones of Gibson Grove," *The Montgomery County Story* 65, no. 1 (2022).
[107] Teresa B. Lachin, "Webster Sewell and the Struggle for Equal Care," *The Montgomery County Story* 64, no. 1 (2021).

3. Eugenics in the Twentieth Century

In the antebellum period, or the period before the U.S. Civil War, slaveholders profited when enslaved Black girls and women had children. White physicians' assertions that Black people were inherently hypersexual served to justify sexual violence towards girls and women and childbearing from an early age. In contrast, the eugenics movement of the twentieth century demonized Black sexuality and reproduction as roots of social dysfunction.

Eugenics refers to a pseudoscientific movement that asserts social ills can be eliminated by stopping people with "bad" genetic profiles from reproducing. The eugenics movement in the U.S. inspired the eugenics or "racial hygiene" movement in Germany, where it was used by the Nazi regime to justify forced sterilizations and mass murder. In the U.S., the eugenics movement in the first half of the twentieth century encouraged reproduction among wealthy, highly educated people and discouraged reproduction among people with low incomes, immigrants, Black people, and people with disabilities. Eugenics denigrated Black Americans, and Black women specifically, in similar ways as did antebellum White physicians:

> African Americans were roundly disparaged by eugenic theory as scientists continued to seek and find wide physiologic evidence of black inferiority. In a refinement of earlier scientific racism, eugenics was appropriated to label black women as sexually indiscriminate and as bad mothers who were constrained by biology to give birth to defective children.[108]

Eugenicists worked to reduce fertility among Black Americans in two ways:

- Compulsory surgical sterilizations; and
- Targeted and coercive administration of contraceptives to Black communities.

Starting in 1907, states began to pass compulsory sterilization laws that applied to "the feebleminded, those on welfare, or those with genetic defects."[109] These laws disproportionately impacted Black women. Physicians also conducted illegal sterilizations without women's consent and often without their knowledge. Forced sterilization was known as a "Mississippi appendectomy" in the South. However, it occurred throughout the U.S. For example, in upstate New York in the 1960s and 1970s, social workers conducted late night raids of welfare recipients' homes, who were disproportionately Black women working in low-wage jobs. If a man were found in the woman's house, the social workers required them to undergo sterilization to continue receiving aid.[110]

After the first birth control pill was approved by the FDA in 1960, Planned Parenthood clinics, school-based clinics and other clinics disproportionately administered the drug to Black and Latinx women. While large percentages of Black women chose to access contraceptives, many also recognized the

[108] Washington, *Medical Apartheid*, chap. 8.
[109] Ibid.
[110] Ibid.

racism underlying the push to distribute them in their communities. In the 1990s, the administration of Norplant, a surgically implanted contraceptive, to disproportionately Black women in South Carolina receiving government assistance and disproportionately Black adolescents in Baltimore City Public Schools raised concerns about coercion and lack of informed consent.[111]

Unintended Pregnancy, Birth Outcomes and Contraception

Unintended pregnancy refers to unplanned, mistimed or unwanted pregnancies. Observational studies have linked unintended pregnancy with adverse maternal and infant health outcomes, including maternal depression, maternal experience of violence, preterm birth, and low birthweight.[112] However, some studies find that unintended pregnancy is not associated with certain negative outcomes, such as preterm births and low birthweight, if the study controls for confounding factors such as maternal demographics and risk factors (e.g., smoking or low levels of social support).[113]

Data from the National Survey of Family Growth (NSFG), a CDC survey, indicate that 42% of all pregnancies in 2019 were unintended. The data show significant racial disparities in rates of unintended pregnancy, with 63 unintended pregnancies occurring among non-Latinx Black people for every 1,000 women compared with 39 unintended pregnancies among Latinx people for every 1,000 women and 28 unintended pregnancies among non-Latinx White people for every 1,000 women.[114]

Notably, these figures do not capture geographical variation in rates of unintended pregnancy. Additionally, the NSFG asks respondents to answer questions about pregnancy intention retrospectively (often years since the pregnancy occurred), and researchers find that perceptions about past intentions change over time.[115]

[111] Ibid. and Marcella Howell, Jessica Pinckney, and Lexi White, "Contraceptive Equity for Black Women," In Our Own Voice: National Black Women's Reproductive Justice Agenda (2020).
[112] Heidi D. Nelson, Blair G. Darney, Katherine Ahrens, et al., "Associations of Unintended Pregnancy With Maternal and Infant Health Outcomes," *JAMA* 328, no. 17 (2022).
[113] See Aileen M. Gariepy, Lisbet S. Lundsberg, Marilyn Stolar, Nancy L. Stanwood, Kimberly A. Yonkers, "Are pregnancy planning and timing associated with preterm or small for gestational age births?" *Fertility and Sterility* 104, no. 6 (2015); Kathryn Kost and Laura Lindberg, "Pregnancy Intentions, Maternal Behaviors, and Infant Health: Investigating Relationships With New Measures and Propensity Score Analysis," *Demography* 52, no. 1 (2015); and Aileen Gariepy, Lisbet S. Lundsberg, Nicole Vilardo, Nancy Stanwood, Kimberly Yonkers, Eleanor B. Schwarz, "Pregnancy context and women's health-related quality of life," *Contraception* 95, no. 5.
[114] Lauren M. Rossen, Brady E. Hamilton, Joyce C. Abma, Elizabeth C. W. Gregory, and Vladislav Beresovsky, "Updated methodology to estimate overall and unintended pregnancy rates in the United States," Vital Health and Statistics Series 2, no. 201 (2023).
[115] Corinne H. Rocca, Mark Wilson, Minjeong Jeon, and Diana Foster, "Stability of Retrospective Pregnancy Intention Reporting among Women with Unwanted Pregnancies in the United States," Maternal and Child Health Journal 23 (2019).

Finally, some experts note that many people have mixed feelings about whether or not they want to become pregnant, for example if they face financial insecurity. Describing pregnancies as either intended or unintended may not accurately capture those pregnancies where the pregnant person was ambivalent about having a baby prior to the pregnancy.[116]

Studies show that Black women are less likely than White women to use contraception. Furthermore, both Black and Latinx women who use contraception are more likely than White women to use condoms, which is a relatively unreliable form of contraception.[117] Researchers identify several inequities that may drive racial disparities in unintended pregnancy, including:

- Lack of access to reliable forms of contraception;
- Medical mistrust;[118]
- Misinformation or lack of information on contraception; and
- Racial discrimination by family planning providers.[119]

4. The Criminalization of Pregnancy with the War on Drugs

In 1985, *The New England Journal of Medicine* published a study by Dr. Ira Chasnoff based on 23 births suggesting that cocaine use during pregnancy might be associated with miscarriage and neurological impacts in infants.[120] Chasnoff described the findings as "preliminary" and called for larger studies on the topic. A 1991 meta-analysis later found significant methodological flaws in the body of research on babies exposed to cocaine in the womb, including a lack of controlling for environmental factors such as poor nutrition and housing conditions.[121]

Nonetheless, the media and other researchers presented Chasnoff's 1985 study as conclusive and grossly exaggerated and distorted the findings. Newspapers and magazines published stories - almost exclusively featuring Black families - focusing on babies who had purportedly been harmed in the

[116] Abigail R.A. Aiken, Sonya Borrero, Lisa S. Callegari, and Christine Dehlendorf, "Rethinking the Pregnancy Planning Paradigm: Unintended Conceptions or Unrepresentative Concepts?" *Perspectives on Sexual and Reproductive Health* 48, no. 3 (2016).
[117] Christine Dehlendorf, Seo Young Park, Chetachi A. Emeremni, Diane Comer, Kathryn Vincett, and Sonya Borrero, "Racial/ethnic disparities in contraceptive use: variation by age and women's reproductive experiences," *American Journal of Obstetrics and Gynecology* 210, no. 6 (2014).
[118] Kiana Cox, "Most Black Americans Believe U.S. Institutions Were Designed To Hold Black People Back," Pew Research Center (2024), 35-40.
[119] Roberta A. Downing, Thomas A. LaVeist, and Heather E. Bullock, "Intersections of Ethnicity and Social Class in Provider Advice Regarding Reproductive Health," *American Journal of Public Health* 97, no. 10 (2007); and Debra Kalmuss, Andrew R. Davidson, Linda F. Cushman, Stephen Heartwell and Marvin Rulin, "Determinants of Early Implant Discontinuation Among Low-Income Women," Perspectives on Sexual and Reproductive Health 28, no. 6 (1996).
[120] Ira J. Chasnoff, William J. Burns, Sidney H. Schnoll, and Kayreen A. Burns, "Cocaine Use in Pregnancy," The New England Journal of Medicine 313, no. 11 (1985).
[121] Washington, *Medical Apartheid*, chap. 8.

womb because their mothers smoked crack cocaine. A 1989 *Washington Post* column by Charles Krauthammer echoed eugenicists' racist theories, stating: "The inner-city crack epidemic is now giving birth to the newest horror: a bio-under-class, a generation of physically damaged cocaine babies whose biological inferiority is stamped at birth."[122] Newspapers like the *Washington Post*, the *St. Louis Dispatch* and the *San Diego Union-Tribune* published claims that "crack babies" would become a threat to society as they grew older.[123]

The media's racialized focus on exaggerated claims about "crack babies" has been a driving force behind criminal prosecutions of pregnant users of illicit drugs that have disproportionately targeted Black women.

For example, one study found that across 44 states, the District of Columbia and some federal jurisdictions, Black women accounted for 52% of 368 prosecutions, often related to drug use, from 1973 to 2005.[124] In 2001, in *Ferguson v. City of Charleston,* the Supreme Court found that the Medical University of South Carolina's (MUSC) involuntary drug testing program for pregnant women voluntarily seeking prenatal care violated the Fourth Amendment to the U.S. Constitution. As a result of this drug testing program, 40 women, 39 of whom were Black, were arrested and in some cases had to endure childbirth while shackled to hospital beds.[125]

Current research affirms that substance use, including cocaine use, during pregnancy is harmful to babies.[126] However, studies have found no significant difference by race or ethnicity in the percentages of pregnant people who use illicit drugs.[127] Recent research indicates Black pregnant patients continue to be more likely to receive drug testing during labor and delivery than White pregnant patients.[128]

[122] Charles Krauthammer, "Children of Cocaine," *Washington Post*, July 30, 1989.
[123] Washington, *Medical Apartheid*, chap. 8.
[124] Lynn M. Paltrow and Jeanne Flavin, "Arrests of and Forced Interventions on Pregnant Women in the United States, 1973–2005: Implications for Women's Legal Status and Public Health," *Journal of Health Politics, Policy and Law* 38, no. 2 (2013).
[125] Washington, *Medical Apartheid*, chap. 8; and Ferguson v. Charleston, 532 U.S. 67 (2001).
[126] Emily J Ross, Devon L Graham, Kelli M Money and Gregg D Stanwood, "Developmental Consequences of Fetal Exposure to Drugs: What We Know and What We Still Must Learn," *Neuropsychopharmacology* 40 (2015).
[127] Washington, *Medical Apartheid*, chap. 8.
[128] Marian Jarlenski, Jay Shroff, Mishka Terplan, Sarah C. M. Roberts, Brittany Brown-Podgorski, and Elizabeth E. Krans, "Association of Race With Urine Toxicology Testing Among Pregnant Patients During Labor and Delivery," *JAMA Health Forum* 4, no. 4 (2023).

Maternal and Infant Health Inequities Impacting Indigenous Peoples in the United States

In the United States, the federal government recognizes 574 different tribes, and over 5.2 million people identify as Indigenous. According to the U.S. Census Bureau, in Montgomery County, approximately 7,600 people identify their race as "American Indian or Alaska Native," of which about 6,400 identify their ethnicity as Hispanic or Latinx (these figures do not include those that identify with more than one race).[129]

While this report centers Black birthing people in its review racial disparities in maternal and infant health outcomes, it is important to note that Indigenous birthing people also experience inequities in healthcare and beyond. Maternal mortality among Indigenous mothers occurs at a rate that is two to three times higher than that for White mothers.[130] The U.S. Centers for Disease Control and Prevention (CDC) writes:

> *American Indian and Alaska Native people experience disparities in pregnancy-related death and other maternal health conditions. Ongoing and historical trauma—due to colonization, genocide, forced migration, and cultural erasure—contribute to health inequities. Due to ongoing and historical trauma, American Indian and Alaska Native people are more likely to have underlying chronic health conditions and experience sexual or interpersonal violence. American Indian and Alaska Native people often experience discrimination or racism. They also often face systemic barriers to care, including higher rates of poverty and longer distances to quality health care services.*[131]

B. Contemporary Tactics of Racialized Healthcare

In 2003, the National Academies of Sciences, Engineering and Medicine ("National Academies"), published *Unequal Treatment: Confronting Racial and Ethnic Disparities in Health Care*. The report was published in response to a request from Congress to examine health care disparities by race and ethnicity and evaluate the quality of health care provided to BIPOC. This report found:

> A large body of published research reveals that racial and ethnic [minoritized populations] experience a lower quality of health services, and are less likely to receive even routine medical procedures than are white Americans. Relative to whites, African Americans—and in some cases, Hispanics—are less likely to receive appropriate cardiac medication (e.g., Herholz et al., 1996) or to undergo coronary artery bypass surgery (e.g., Ayanian et al., 1993; Hannan et al., 1999; Johnson et al., 1993; Petersen et al., 2002), are less likely to receive peritoneal dialysis and kidney transplantation (e.g., Epstein et al., 2000; Barker-Cummings et al., 1995; Gaylin et

[129] U.S. Census Bureau, "Hispanic or Latino Origin by Race," American Community Survey 1 Year Estimates, Table B03002 (2023).
[130] Katy B. Kozhimannil, "Indigenous Maternal Health—A Crisis Demanding Attention," JAMA Health Forum 1, no. 5 (2020).
[131] U.S. Centers for Disease Control and Prevention, "Disparities and Resilience Among American Indian and Alaska Native Women Who Are Pregnant or Postpartum," HEAR HER Campaign (2024).

> al., 1993), and are likely to receive a lower quality of basic clinical services (Ayanian et al., 1999) such as intensive care (Williams et al., 1995), even when variations in such factors as insurance status, income, age, co-morbid conditions, and symptom expression are taken into account. Significantly, these differences are associated with greater mortality among African American patients (Peterson et al., 1997; Bach et al., 1999).[132]

In 2024, the National Academies published a new report that examines current racial and ethnic disparities in health care, the inequities that drive disparities, and the extent to which progress has been made in closing gaps since the publication of *Unequal Treatment* in 2003. The 2024 report asserts:

> In the 2 decades, progress has been made in generating awareness, conducting research that documents inequities, passing legislation and creating policies with positive intent, and narrowing gaps in some health care inequities for some populations some of the time. However, no sustained trend shows year after year that inequity gaps have narrowed across racially and ethnically minoritized groups.[133]

This section describes the following four ways that contemporary medical racism manifests:

1. Medical education and guidelines that improperly treat race as biological;
2. Discriminatory treatment resulting from provider bias and stereotypes;
3. Underrepresentation of BIPOC in the healthcare workforce; and
4. Barriers to healthcare access based on insurance coverage status and provider availability.

1. Medical Education and Practices that Improperly Treat Race as Biological

As described on page 23, scientists have historically espoused false, racist theories about biological differences between Black and White bodies. In contrast, today, scientists concur that race is a social construct. According to a 2023 National Academies report, "race makes for a poor proxy of human biological variation."[134] Yet, the report notes:

> [T]he misconception that human beings can be naturally divided into biologically distinguishable races has been extremely resilient and has become embedded in scientific research, medical practice and technologies, and formal education. Many elements of racial thinking, including

[132] Institute of Medicine (US) Committee on Understanding and Eliminating Racial and Ethnic Disparities in Health Care, *Unequal Treatment: Confronting Racial and Ethnic Disparities in Health Care*, Brian D. Smedley, Adrienne Y. Stith, and Alan R. Nelson, editors (National Academies Press, 2003), 2-3 [hereinafter National Academies, *Unequal Treatment*].
[133] National Academies of Sciences, Engineering, and Medicine, *Ending Unequal Treatment: Strategies to Achieve Equitable Health Care and Optimal Health for All* (The National Academies Press, 2024), 1-2 [hereinafter National Academies, *Ending Unequal Treatment*].
[134] National Academies of Sciences, Engineering, and Medicine, *Using Population Descriptors in Genetics and Genomics Research: A New Framework for an Evolving Field* (The National Academies Press, 2023), 76 [hereinafter National Academies, *Using Population Descriptors in Genetics and Genomics Research*].

> essentialism and biological determinism, have influenced modern thinking around human genetics, to the marginalization of some peoples and the benefit of others.[135]

Researchers note that contemporary medical education and practices often reflect inaccurate perceptions of patient race as a biological category rather than a social construct. A 2021 analysis of one U.S. medical school's curricular content identified the following five domains in which educators promoted misrepresentations of race and race-based data:[136]

- **Imprecise labels**, such as referring to a Nigerian patient as "African American";
- **Lack of context** when teaching about disease burden, such as failing to discuss residential segregation as context for the higher prevalence of asthma in Black communities;
- **Improperly linking disease to race**, such as suggesting sickle cell disease only affects Black people, rather than people with ancestry from areas with historically high levels of malaria;[137]
- **Pathologizing race**, such as highlighting disease burden only in marginalized racial or ethnic groups; and
- **Race-based clinical guidelines**, such as teaching medical students to use different drugs for hypertension in Black patients, without discussing literature that questions this practice.

The last item, race-based clinical guidelines, has been a focus of racial equity efforts in recent years. For example, from 1999 to 2021, a common metric for measuring kidney function – the estimated glomerular filtration rate or eGFR – was adjusted for Black or African American patients, making them less likely to receive referrals for specialists and treatment, including kidney transplants. In 2021, a joint task force of the National Kidney Foundation and the American Society of Nephrology released a new race-free eGFR calculation.[138] The American Kidney Fund explains:

> The eGFR calculation accounts for biological factors like age, sex, and body weight. In the past, race has also been used in the calculation. This was based on research studies which found that people who identified as Black or African American can have higher levels of creatinine in their blood. It was thought that this was due to differences in muscle mass.
>
> We now understand that race is a social concept, meaning it was created by people as a system to classify individuals rather than reflect biology. The inclusion of race in the eGFR calculation

[135] Ibid., 1.
[136] Christina Amutah, Kaliya Greenidge, Adjoa Mante et al., "Misrepresenting Race — The Role of Medical Schools in Propagating Physician Bias," *New England Journal of Medicine* 384, no. 9 (2021).
[137] The sickle cell gene is most common in populations from sub-Saharan Africa, the Middle East and India. See Wellcome Trust, "Global map of the sickle cell gene confirms the 'malaria hypothesis'," 2010.
[138] American Kidney Fund, "eGFR Test Change: Removal of Race from the Calculation," 2025.

doesn't consider the ancestral diversity among Black people or individuals who self-identify as being of mixed racial background.[139]

In the context of pregnancy and childbirth, organizations that develop clinical guidelines recently acknowledged improper uses of race in guidelines regarding vaginal birth after cesarean section, preeclampsia risk, and the cutoff for diagnosis of anemia during pregnancy. The following table describes each of these guidelines and recent changes to them.

Race-Based Clinical Guidelines Related to Pregnancy Care and Childbirth

Guideline	Description	Change
The Maternal-Fetal Medicine Unit's (MFMU) Vaginal Birth After C-Section (VBAC) Success Calculator[140]	The VBAC Success Calculator estimates the odds a patient can have a successful vaginal birth (following a C-section during a previous birth). From 2007 to 2021, the calculator used race and ethnicity as one of six risk factors, resulting in lower success odds for Black and Latina pregnant people and thereby increasing the likelihood they would be recommended for a C-section.	In 2021, MFMU released a revised VBAC Success Calculator that replaces the race and ethnicity risk factor with "chronic hypertension requiring treatment."
U.S. Preventative Services Taskforce (USPSTF) and American College of Obstetricians and Gynecologists (ACOG) Preeclampsia Risk Factors[141]	In 2014, the USPSTF (and later ACOG) released recommendations for use of low-dose aspirin in pregnant people at risk of preeclampsia and listed "African American race" as one of the risk factors, which implies race is a biological category.	In 2021, USPSTF and ACOG kept "African American Race" as a risk factor but revised the wording in their recommendations to clarify that Black race is a proxy for racism and inequities.

[139] Ibid.
[140] Patrick D. Thornton, "VBAC calculator 2.0: Recent evidence," *Birth: Issues in Perinatal Care* 50, no. 1 (2023).
[141] Erinma P. Ukoha. Michael E. Snavely, Monica U. Hahn, Jody E. Steinauer MD, Allison S. Bryant MD, "Toward the elimination of race-based medicine: replace race with racism as preeclampsia risk factor," *American Journal of Obstetrics and Gynecology* 227, no. 4 (2022).

Guideline	Description	Change
ACOG Definition of Iron-Deficiency Anemia[142]	In 2008, ACOG recommended a lower hemoglobin threshold for anemia treatment for Black pregnant people based on concerns about overtreatment. This race-based guideline potentially placed Black pregnant people at higher risk for complications during childbirth and postpartum.[143]	In 2021, ACOG revised its guideline to eliminate the separate hemoglobin criterion for Black pregnant people.

2. Discriminatory Treatment Resulting from Provider Bias and Stereotypes

The term "bias" refers to a positive or negative evaluation of a group. *Implicit bias* is an unconscious mental process that leads to automatic associations and reactions. *Explicit bias* refers to consciously endorsed beliefs, preferences, and attitudes. Both implicit and explicit bias can result in discrimination based on race, ethnicity, gender, disability, or other characteristics. *Stereotypes*, or attributes associated with a group that are not necessarily positive or negative, are related to bias and can also contribute to discrimination.[144] Research demonstrates that health care professionals exhibit levels of bias similar to those in the general population.[145] For example, a 2000 survey showed that physicians perceived Black patients (compared with White patients) as:

- Less intelligent;
- Less likely to adhere to treatment regimens; and
- More likely to engage in risky behaviors.[146]

Many recent studies use the Implicit Association Test (IAT), which is a computerized test that asks participants to quickly categorize pictures, names, or words into opposing categories, to measure bias. A 2015 review of 15 studies that examined implicit racial or ethnic bias among U.S. health care providers states 14 of those studies found low to moderate levels of bias against BIPOC. Studies included in the review also found associations between provider bias and quality of care. In particular,

[142] Michelle Cohen Marill, "Rethinking Race In Medicine: ACOG Removes A Race-Based Cutoff For Anemia In Pregnancy," *Health Affairs Blog*, August 19, 2021 [hereinafter Cohen Marill, "Rethinking Race in Medicine"].
[143] Pregnant people with anemia who do not receive treatment for anemia may be more likely to require blood transfusions during delivery or experience preeclampsia, C-sections, preterm birth and/or maternal death. See Cohen Marill, "Rethinking Race in Medicine."
[144] Monica Vela, Amarachi I. Erondu, Nichole A. Smith, Monica E. Peek, James N. Woodruff, and Marshall H. Chin, "Eliminating Explicit and Implicit Biases in Health Care: Evidence and Research Needs," *Annual Review of Public Health* 43 (2022).
[145] Chloë FitzGerald and Samia Hurst, "Implicit bias in healthcare professionals: a systematic review," *BMC Medical Ethics* 18 (2017).
[146] Michelle van Ryn and Jane Burke, "The effect of patient race and socio-economic status on physicians' perceptions of patients," *Social Science & Medicine* 50, no. 6 (2000).

Black patients reported poorer treatment by physicians that exhibited higher levels of anti-Black bias.[147] Similarly, a separate 2016 study found that White medical students and residents who subscribed to false beliefs about Black bodies were more likely to inaccurately rate the pain of Black patients as lower than White patients in mock medical cases.[148]

Racialized and Gendered Bias and Stereotypes by Providers During Pregnancy and Childbirth. Several studies have documented the experiences of pregnant or birthing people and their families with racial bias and stereotypes by providers.[149] In a 2023 study, researchers conducted in-depth semi-structured interviews regarding traumatic birth experiences with Black, Latinx and Asian women who gave birth in the U.S. Through these interviews, researchers identified the following four intersecting themes of providers' racialized and gendered biases and stereotypes of birthing people of color:[150]

- Uneducated, unintelligent or uninformed;
- Negligent;
- Tolerant or intolerant to pain; and
- Dramatic and unreasonably anxious.

Examples of how these themes manifested during the participants' birth experiences include:

- Black, Latina and Asian mothers reported that providers dismissed their concerns, questions or preferences and treated them as though they were unintelligent and uninformed;
- A nurse asked a Black mother, "Don't you want to bond with your baby?" when the mother, feeling unwell, asked her to take the baby (the mother lost consciousness shortly afterwards);
- A Latinx mother reported her provider asked her how many fathers her children had and did not believe her when she said her husband was their father;
- Black and Latinx mothers were treated as "superbodies" that did not need assistance or pain relief, including one Black mother whose nurse refused her pain medication after a C-section;

[147] William J. Hall, Mimi V .Chapman, Kent M. Lee, et al., "Implicit Racial/Ethnic Bias Among Health Care Professionals and Its Influence on Health Care Outcomes: A Systematic Review," *American Journal of Public Health* 105, no. 12 (2015).
[148] Kelly M. Hoffman, Sophie Trawalter, Jordan R. Axt, and M. Norman Oliver, "Racial bias in pain assessment and treatment recommendations, and false beliefs about biological differences between blacks and whites," *Proceedings of the National Academy of Sciences* 113, no. 16 (2016).
[149] See: Brittany N. Edwards, Monica R. McLemore, Kimberly Baltzell, Allen Hodgkin, Olga Nunez, Linda S. Franck, "What about the men? Perinatal experiences of men of color whose partners were at risk for preterm birth, a qualitative study," *BMC Pregnancy and Childbirt*h 20 (2020); Dána-Ain Davis, "Obstetric Racism: The Racial Politics of Pregnancy, Labor, and Birthing," *Medical Anthropology* 38, no. 7 (2019); and Monica R. McLemore, Molly R. Altman, Norlissa Cooper, Shanell Williams, Larry Rand, and Linda Franck, "Health care experiences of pregnant, birthing and postnatal women of color at risk for preterm birth," *Social Science & Medicine* 201 (2018).
[150] Amelia Dmowska, Priya Fielding-Singh, Jodi Halpern, and Ndola Prata, "The intersection of traumatic childbirth and obstetric racism: A qualitative study," *Birth: Issues in Perinatal Care* 51, no. 1 (2024).

- An Asian mother reported feeling coerced into receiving an epidural because the nurse said she was not "strong enough" to handle labor pain;
- A Black mother's provider told her to stop screaming during contractions, accusing her of being overly dramatic; and
- A Black mother who was experiencing symptoms of a pulmonary embolism, which is life-threatening, reported a nurse dismissed her symptoms twice, describing them as "just anxiety," before the mother finally received treatment.

Furthermore, in their interviews, women reported that their experiences as the targets of provider bias and stereotypes during their traumatic birth experiences harmed their mental health in the long-term, reduced their trust in health care, and made them less likely to want to have more children.

Medical Mistreatment During Pregnancy Care and Childbirth

Recently, researchers have studied medical mistreatment of pregnant and birthing women in the United States. In extreme cases, providers have forced birthing women to undergo unconsented medical procedures such as C-sections, episiotomies, and induction of labor. Some people have reported being physically restrained, sexually assaulted or verbally abused. More commonly, providers have coerced women into consenting to unwanted treatment using judicial intervention, child welfare interventions, threats to withhold treatment or refuse to treat the patient, and manipulative presentation of information about risks.[151]

Drivers of provider mistreatment of pregnant people include financial incentives (e.g. increased insurance reimbursement for C-sections), liability concerns and provider bias. Impacts of mistreatment include physical harms associated with unnecessary procedures, emotional trauma, and difficulties with the transition to motherhood with potential negative impacts on the baby.[152]

Research indicates that medical mistreatment impacts pregnant women of all races. However, BIPOC women experience the highest rates of mistreatment.[153] A 2023 CDC analysis of a non-representative survey of 2,407 mothers found that one in five respondents experienced mistreatment during maternity care. Black, Latinx and multiracial respondents reported higher rates of mistreatment (28%-30%) than Asian and White respondents (15%-19%). Furthermore, 29% of respondents reported provider discrimination (on the basis of age, weight, income, race or ethnicity, or other factors). Black, multiracial and Hispanic respondents reported discrimination at the highest rates (37%-40%).[154]

[151] Elizabeth Kukura, "Obstetric Violence," *Georgetown Law Journal* 106 (2018).
[152] Ibid.
[153] Saraswathi Vedam, Kathrin Stoll, Tanya Khemet Taiwo et al., "The Giving Voice to Mothers study: inequity and mistreatment during pregnancy and childbirth in the United States," *Reproductive Health* 16 (2019).
[154] Yousra A. Mohamoud, Elizabeth Cassidy, Erika Fuchs, et al., "Vital Signs: Maternity Care Experiences — United States, April 2023," *Maternity and Mortality Weekly Report* 72, no. 35 (2023).

3. Underrepresentation of BIPOC in the healthcare workforce

Studies demonstrate that racially concordant care, meaning care from providers whose race or ethnicity matches that of the patient, can improve health outcomes for Black, Latino and Asian patients.[155] However, Black, Latinx, Indigenous and Hawaiian and Pacific Islander providers are underrepresented in clinical health professions nationally. Between 2003 and 2019, there were no significant changes in the racial or ethnic distribution of medical school graduates. Black, Latinx, Indigenous and Hawaiian and Pacific Islander providers also remain underrepresented among nurses and physician assistants nationally.[156]

A review of 13 articles identified the following barriers to accessing medical school for Black students:[157]

- Financial/socioeconomic burdens;
- Lack of access to preparatory materials and academic enrichment programs;
- Lack of exposure to the medical field;
- Poor mentorship/advising experiences;
- Systemic and interpersonal racism; and
- Limited support systems.

Regarding the perinatal care workforce specifically, studies have found that Black and Latinx individuals are underrepresented in obstetrics and gynecology residencies (postgraduate training programs for doctors), though data suggest the disparities are lower in obstetrics and gynecology than in other fields.[158] It is also notable that the midwifery workforce in the U.S. is 85% White,[159] which is particularly notable given the traditions of Black and Indigenous midwives in the U.S. and the history of efforts to suppress their work as described above.

[155] National Academies*, Ending Unequal Treatment*, 186.
[156] Ibid., 180-181, 185
[157] Abbas Rattani, Zoha Mian, Shagayeg Farahani, Margaret Ridge, Theodore Uzamere, and Moazzum Bajwa, "A systematic review of barriers to pursuing careers in medicine among Black premedical students," *Journal of the National Medical Association* 116, no. 2 (2024).
[158] Claudia L. López, Machelle D. Wilson, Melody Y. Hou, and Melissa J. Chen, "Racial and Ethnic Diversity Among Obstetrics and Gynecology, Surgical, and Nonsurgical Residents in the US From 2014 to 2019," JAMA Network Open 4 , no. 5 (2021).
[159] United States Government Accountability Office, "GAO-23-105861, Midwives: Information on Births, Workforce, and Midwifery Education," (2023).

4. Barriers to Access to Care Based on Insurance Coverage Status and Provider Availability

In the U.S., access to health services for most people is highly dependent on an individual's health insurance coverage status, meaning whether a person has private health insurance, has public coverage through programs such as Medicare or Medicaid, or is uninsured. Black and Latinx individuals are more likely than White individuals to be uninsured or enrolled in Medicaid and to report difficulties with affording health care costs (see page 40 for information on structural determinants of health and structural racism, which impact these barriers to access for BIPOC).[160]

The third-party insurer or government entity that pays for services is often referred to as the "payer." Public payers reimburse medical providers at lower rates than private health insurance plans.[161] In particular, Medicaid, the program for low-income individuals that disproportionately serves Black and Latinx populations, reimburses providers at lower rates than private health insurance or Medicare.[162] According to the National Academies' 2024 *Ending Unequal Treatment* report:

> …the systematically higher representation of minoritized populations in lower-reimbursement health care, particularly in Medicaid, is a historical incentive to provide unequal treatment. Even though out-of-pocket costs are lower in Medicaid than in private insurance, the amount that providers receive is much lower, often for providing care in more challenging circumstances and to less-resourced patients.[163]

Studies show that these inequities have significant impacts on access to care. For example, individuals that rely on Medicaid often experience difficulties finding a primary care practice that accepts Medicaid. They also experience difficulties with scheduling appointments when they have found a practice.

Overall, BIPOC are less likely than White people to have a usual source of primary care, and BIPOC that do have a usual source are more likely than White people to report a hospital or facility as that source rather than an individual clinician (having a consistent clinician is associated with better care). Shortages of primary care providers in neighborhoods with predominantly BIPOC residents exacerbate these challenges.[164] Notably, for pregnant people, difficulties identifying and obtaining care from a primary care provider such as a midwife or obstetrician reduce their access to timely prenatal care and

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[160] Lunna Lopes, Alex Montero, Marley Presiado, and Liz Hamel, "Americans' Challenges with Health Care Costs," KFF (2024); and Centers for Medicare & Medicaid Services, "Race and ethnicity of the national Medicaid and CHIP population in 2019."

[161] Eric Lopez, Tricia Neuman, Gretchen Jacobson, and Larry Levitt, "How Much More Than Medicare Do Private Insurers Pay? A Review of the Literature | KFF," KFF (2020).

[162] "Medicaid-to-Medicare Fee Index | KFF," and Centers for Medicare & Medicaid Services, "Race and ethnicity of the national Medicaid and CHIP population in 2019."

[163] National Academies, *Ending Unequal Treatment*, 53.

[164] National Academies, *Ending Unequal Treatment*, 80-81.

limit their ability to build trust with their provider.[165] Some studies have also identified medical mistrust among certain populations, including racially and ethnically minoritized populations, as a barrier to accessing care. The National Academies' 2024 *Ending Unequal Treatment* report notes:

> Even when [services] are accessible, individuals make different decisions about whether and the degree to which they seek and engage with care. …Medical mistrust is an important [social determinant of health] shaping engagement across the health service continuum. It is rooted in historical hierarchies and relationships between systemic structures, institutions, and communities and individuals associated with lived experiences of discrimination, bias, and harm among racially and ethnically minoritized communities and other marginalized groups, including LGBTQ individuals and people who use drugs.[166]

The Roles of Income and Maternal Age on Maternal and Infant Health Outcomes

In maternal and infant health, maternal age is a significant risk factor. One study from the National Bureau of Economic Research (NBER) notes that pregnant mothers with the highest incomes are older, on average, than those with the lowest incomes.[167] As a result, parents at the highest end of the income distribution have babies with lower birthweights and higher rates of preterm birth than those at the lowest end of the income distribution, who are younger. Those in the middle of the income distribution have babies with higher birthweights and experience lower rates of preterm birth than birthing people from both the lowest and highest income families.

Similarly, rates of severe pregnancy and childbirth complications are the highest for persons at the lowest and highest ends of the income distribution (and lowest for those in the middle). However, when studies control for maternal age (meaning that they compare outcomes for birthing people of the same age across different income levels), they find that lower incomes are associated with worse outcomes.

Furthermore, higher incomes are highly protective from the worst outcomes: maternal and infant mortality. Although they are older, mothers at the highest end of the income distribution are three times less likely to die compared with mothers at the lowest end of the income distribution.

[165] Joia Crear-Perry, Rosaly Correa-de-Araujo, Tamara Lewis Johnson, Monica R McLemore, Elizabeth Neilson, and Maeve Wallace, "Social and Structural Determinants of Health Inequities in Maternal Health," Journal of Women's Health 30, no. 2 (2021).
[166] National Academies, *Ending Unequal Treatment*, 193.
[167] Claire Cain Miller, Sarah Kliff, and Larry Buchanan, "Childbirth is Deadlier for Black Families Even When They're Rich, Expansive Study Finds," *New York Times*, February 12, 2023, and Kate Kennedy-Moulton, Sarah Miller, Petra Persson, Maya Rossin-Slater, Laura Wherry, and Gloria Aldana, "Maternal and Infant Health Inequality: New Evidence from Linked Administrative Data," NBER Working Paper No. 30693 November 2022, Revised September 2023.

Similarly, the NBER study also finds:

> …despite having the riskiest pregnancies…and the worst birth outcomes, women in the top ventile of the income distribution nevertheless give birth to babies who are the least likely to die. This finding suggests that pregnancies carried by women at the top of the income distribution are not only the riskiest, but also the most protected.[168]

In sum, low incomes and high maternal age are two factors that are each separately associated with worse maternal and infant health outcomes. In addition, higher incomes offer significant protection from maternal and infant mortality even though higher income pregnant people are also older, on average, than lower income pregnant people.

That being said, the NBER study emphasizes that disparities by race are significantly larger than those by income, noting that, "Across all parental income levels, Black infants and mothers have much worse health than their non-Hispanic white counterparts."[169] Maternal and infant mortality rates for Black mothers at the highest end of the income distribution are similar to those for White birthing people at the lowest end of the income distribution. Black mothers with the lowest incomes experience the highest rates of maternal and infant mortality.

C. Social and Structural Determinants of Health and Weathering

Medical racism is a key driver of racial disparities in maternal and infant health outcomes. Disparities also have roots outside of the healthcare system. Researchers often highlight racial disparities in the social determinants of health (SDOH) – defined as "the conditions in the environments which people are born, live, learn, work, play, worship, and age"[170] – as drivers of disparities in health outcomes. More recently, researchers have emphasized *structural* determinants of health – in other words, high-level factors such as laws, institutional practices, and social norms that drive the distribution of social determinants of health – as the causes of disparities in SDOH. Structural determinants of health include structural racism.

Additionally, over the past two decades, researchers led by Arline Geronimus have examined "weathering," which refers to the biological impact of stress on the human body. Evidence suggests that racism causes Black individuals to experience weathering at a faster rate than White individuals, and that weathering is a significant driver of racial disparities in maternal and infant health outcomes. This section summarizes the research on the roles of structural and social determinants of health and weathering on racial disparities in maternal and infant health outcomes.

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[168] Kate Kennedy-Moulton, Sarah Miller, Petra Persson, Maya Rossin-Slater, Laura Wherry, and Gloria Aldana, "Maternal and Infant Health Inequality: New Evidence from Linked Administrative Data," NBER Working Paper No. 30693 November 2022, Revised September 2023.

[169] Ibid.

[170] National Academies, *Ending Unequal Treatment*, 51.

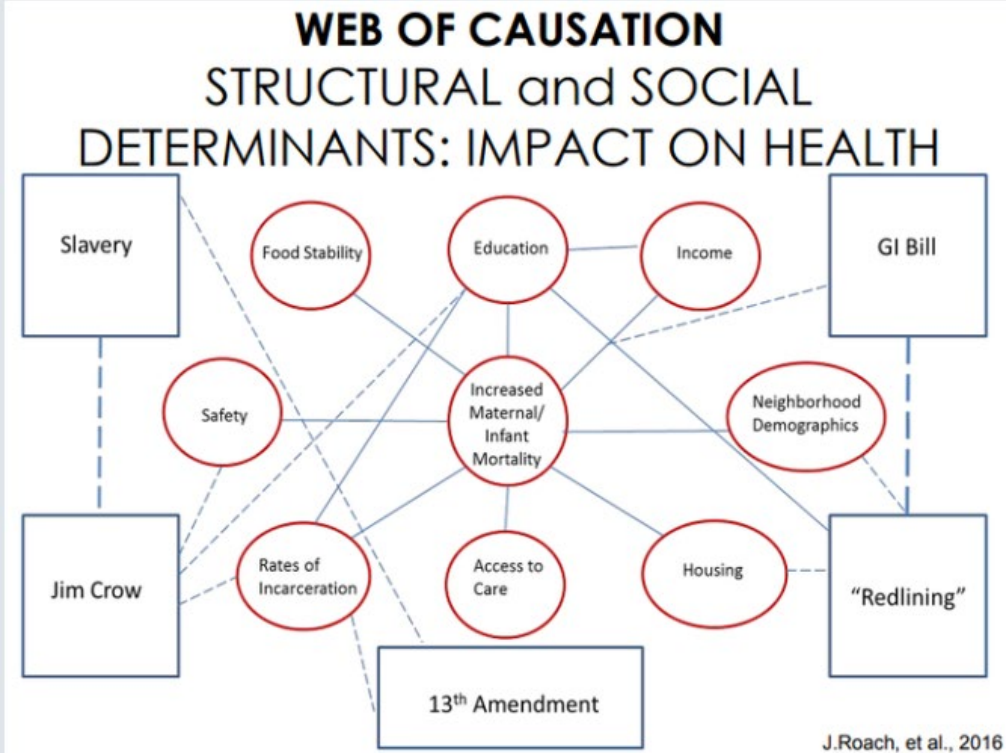
1. Social and Structural Determinants of Health

Social determinants of health or SDOH are non-medical factors that influence health outcomes, or "the conditions in the environments which people are born, live, learn, work, play, worship, and age."[171] SDOH are unequally distributed by race and ethnicity, with BIPOC experiencing, on average, more adverse SDOH than White people. Adverse SDOH result in unmet health-related social needs (HRSN). Examples of HRSN are employment, housing, nutrition, safety, transportation, and affordable utilities.

Structural determinants of health are the factors that drive the distribution of SDOH. For example, the Anti-Drug Abuse Act of 1986 mandated harsher sentences for the use of crack cocaine, more commonly used in Black communities, compared to those for use of the powder cocaine more common in White communities. This resulted in mass incarceration in Black communities that in turn limited people's employment opportunities and thereby caused housing and food insecurity as well as violence in those communities. The Anti-Drug Abuse Act of 1986 is therefore an example of a structural determinant of health that continues to negatively impact SDOH in Black communities.

The exhibit below is a theoretical framework developed by Jessica Roach, cofounder and CEO of Restoring Our Own Through Transformation (ROOTT), a reproductive justice organization (see page 60 for a description of the reproductive justice movement). It displays examples of structural determinants of health (in the blue boxes) that influence SDOH (in the red boxes), which in turn impact rates of maternal and infant mortality. The display includes historical systems, laws, and policies that continue to impact BIPOC today. The examples of *structural determinants of health* listed in the display are also elements of *structural racism* –historical, cultural, institutional, and interpersonal policies or practices that routinely advantage White people while producing cumulative and chronic adverse outcomes for People of Color.

[171] Ibid.



Source: Roach J. ROOTT's theoretical framework of the web of causation between structural and social determinants of health and wellness—2016. Restoring Our Own Through Transformation (ROOTT), 2016. Available at: Policy & Advocacy — ROOTT

Family and medical leave policies in the U.S. illustrate the impact of structural determinants of health on maternal and infant health specifically. Parental access to paid time off from work during the first months of a child's life is associated with improved health outcomes, including a lower likelihood of the baby having a low birthweight, fewer infant deaths, higher rates of breastfeeding, and longer parental lifespan.[172] The U.S. is the only member of the Organisation for Economic Cooperation and Development (OECD), an intergovernmental organization of 38 member countries with high income economies, that does not entitle birthing people to paid maternity leave.

In the U.S., the federal Family and Medical Leave Act (FMLA) entitles about 60% of private sector workers to 12 weeks of *unpaid* leave to care for a newborn, adopted child, or a family member, or to attend to their own serious medical condition. FMLA eligibility requirements disproportionately exclude Black, Indigenous, Latinx and multiracial workers.[173] Moreover, because FMLA provides only for unpaid leave, a large portion of workers are unable to afford to use FMLA leave. Some workers receive paid family and medical leave benefits from their employers. However, Black and Latinx workers are underrepresented in jobs with these benefits due to occupational segregation resulting

[172] Adam Burtle and Stephen Bezruchka, "Population Health and Paid Parental Leave: What the United States Can Learn from Two Decades of Research," *Healthcare* 4, no. 2 (2016).
[173] Julia M. Goodman, Dawn M. Richardson, William H. Dow, "Racial and Ethnic Inequities in Paid Family and Medical Leave: United States, 2011 and 2017–2018," *American Journal Of Public Health* 112, no. 7 (2022).

from structural inequities.[174] One 2021 analysis found that, among racial and gender groups, Black working women had the highest unmet need for family and medical leave and the highest likelihood of struggling to make ends meet when they did take FMLA leave.[175]

2. Weathering

In 1992, public health researcher Arline Geronimus observed that infants born to adolescent Black mothers had a survival *advantage* over infants born to older Black mothers. This pattern differed from that of White mothers, whose babies had the best outcomes when the mother was in her mid-twenties, rather than when the mother was in her teens. Geronimus proposed the following "weathering" hypothesis: "the health of African American women may begin to deteriorate in early adulthood as a physical consequence of cumulative socioeconomic disadvantage."[176]

To test this hypothesis, Geronimus and her colleagues examined health survey data on "allostatic load," which represents the physiological burden imposed by stress and can be measured using a set of bio-markers.[177] In 2006, they published research showing that both poor and non-poor Black women had higher probabilities of having high allostatic load scores (indicative of a higher burden of stress) compared to their male and White counterparts. Their higher allostatic loads were not explained by racial differences in poverty.[178] Geronimus has since described evidence of accelerated weathering in other marginalized populations, including White communities in Appalachia and Detroit. In her 2023 book, Geronimus explains:

> Mothers who enter pregnancy with chronic diseases of weathering, in particular hypertension and other cardiovascular diseases, are at elevated risk of adverse outcomes. If a woman is hypertensive when she becomes pregnant, or develops hypertension during her pregnancy, she has an increased risk of developing life-threatening conditions including preeclampsia (high blood pressure with liver or kidney damage in mid- to late pregnancy), eclampsia (when a pregnant woman with preeclampsia experiences seizures or lapses into a coma), stroke, and labor complications. High blood pressure in the mother also compromises the fetus's access to oxygen and nutrients, retarding its growth. That, combined with the fact that the best hope of saving a mother with preeclampsia from developing eclampsia is to deliver the child, even if premature, increase a baby's risk of being a fetal death, stillbirth, or born preterm or low birth

[174] Ibid.
[175] Shetal Vohra-Gupta, Yeonwoo Kim, and Catherine Cubbin, "Systemic Racism and the Family Medical Leave Act (FMLA): Using Critical Race Theory to Build Equitable Family Leave Policies," *Journal of Racial and Ethnic Health Disparities* 8 (2021).
[176] Geronimus, Arline T. "THE WEATHERING HYPOTHESIS AND THE HEALTH OF AFRICAN-AMERICAN WOMEN AND INFANTS: EVIDENCE AND SPECULATIONS." *Ethnicity & Disease* 2, no. 3 (1992).
[177] Bio-markers that can be used to measure allostatic load include blood pressure, body mass index, glycated hemoglobin, albumin, creatinine clearance, triglycerides, C-reactive protein, homocysteine, and total cholesterol.
[178] Arline T. Geronimus, Margaret Hicken, Danya Keene, and John Bound, "'Weathering' and Age Patterns of Allostatic Load Scores Among Blacks and Whites in the United States," *American Journal of Public Health* 96, no. 5 (2006).

> weight. Rates of preeclampsia in the US have been rising over the past three decades, and there appears to be a further jump in preeclampsia rates since the pandemic.[179]

As indicated previously, Geronimus' initial hypothesis in 1992 theorized that "socioeconomic disadvantage" was the cause of accelerated weathering among Black women. However, Geronimus' and others' subsequent research indicates that high income Black women also experience accelerated weathering. In fact, in her 2023 book, Geronimus highlights research showing that Black individuals who demonstrate characteristics like taking personal responsibility, "grit," and resilience – characteristics that help many people overcome adversity in American society and attain higher incomes – experience *increased* weathering. For example, she describes a set of studies that followed a sample of Black youth in rural Georgia:

> Those who had exhibited higher levels of self-control as disadvantaged youth had higher blood pressure, more body fat, and higher levels of the stress hormone cortisol, compared to peers who were more impetuous and less upwardly mobile. They also found that those who attended college had worse physical health than their similarly disadvantaged peers who did not attend college.[180]

Another study that examined data from a national survey found that White college graduates had a lower probability of having metabolic syndrome compared with their less educated White peers. However, for Black and Latino adults, being college educated *increased* the risk of metabolic syndrome.

Consistent with the concept of structural determinants of health described above, Geronimus' and her colleagues' research suggests that structural racism and racial discrimination have direct ties to the worse maternal and infant health outcomes experienced by Black birthing people compared with White birthing people.

[179] Arline T. Geronimus, *Weathering: The Extraordinary Stress of Ordinary Life in an Unjust Society* (Little, Brown Spark 2023), Kindle, chap. 4.
[180] Ibid. chap. 7.

Chapter 4. Maternal and Infant Health Federal and State Policy Landscape

In the U.S., the federal and state governments jointly administer four major programs that fund perinatal care and related services: Medicaid, the Children's Health Insurance Program, the Title V Maternal and Child Health Services Block Grant, and the Special Supplemental Nutrition Program for Women, Infants and Children.

Additionally, in recent years, federal and state governments have established a variety of initiatives aimed at improving perinatal care quality and improving maternal and infant health outcomes. Some initiatives have specific components that target racial equity in maternal and infant health. However, most initiatives are aimed at improving overall outcomes rather than on advancing equity.

This chapter describes the current federal and state maternal and infant health policy landscape. It is organized as follows:

- **Section A** outlines joint federal and state programs that fund perinatal care and related services;
- **Section B** describes federal initiatives aimed at improving perinatal care quality; and
- **Section C** summarizes the State of Maryland's initiatives aimed at improving perinatal care quality and reducing racial disparities.

A. Joint Federal and State Programs that Fund Perinatal Care and Related Services

This section describes four major joint federal and state programs that serve pregnant and birthing people and their babies:

- Medicaid;
- The Children's Health Insurance Program (CHIP);
- The Title V Maternal and Child Health (MCH) Services Block Grant; and
- Special Supplemental Nutrition Program for Women, Infants, and Children (WIC).

The federal government and states jointly fund the programs. The federal government establishes program parameters, and states operate the programs. This section includes information specific to Maryland for each program.

Medicaid and the Children's Health Insurance Program (CHIP). Medicaid and the related Children's Health Insurance Program (CHIP) are the two primary public medical assistance programs for low-income populations in the U.S. These programs are jointly funded by the federal government and the

states. They are means-tested, meaning that individuals must have low incomes and few assets to enroll. Some states administer Medicaid and CHIP as a single program, and some administer each program separately. Maryland primarily operates Medicaid and CHIP as a single program.[181]

Medicaid was signed into federal law in 1965. In order to participate, states agree to conform to requirements established in federal law as well as issuances of the U.S. Department of Health and Human Services that relate to provider reimbursement, eligibility standards, and the quality and scope of medical services. Federal law defines population groups that states are required to cover as well as groups that are optional to cover. Congress created CHIP in 1997. CHIP provides medical assistance to uninsured children whose families earn too much money to qualify for Medicaid.

Eligibility rules for state Medicaid and CHIP programs are complex. In Maryland, in most cases, to enroll in Medicaid an individual must meet income limits and either:

- hold U.S. citizenship; or
- hold a qualified non-citizen status (e.g. permanent residency or asylum/refugee status) for at least five years.

The table below lists the income limits for Maryland's Medicaid program (which includes its CHIP program) for major population categories. It does not represent an exhaustive list of all coverage groups and their requirements. Income limits are established as a percentage of the Federal Poverty Level or FPL, which is updated annually and varies by family size.

Table 4.1. Maryland Medicaid Income Limits for Major Population Groups

Population Group	Income Limit as Percentage of FPL	Income Limit for Family of Three Based on 2024 FPL
Children	322%	$83,140
Pregnant People*	264%	$68,165
Parents	138%	$35,632
Childless Adults	138%	$35,632
Seniors and People with Disabilities	74%	$19,107

Source: KFF, "Medicaid in Maryland," (2024).
*Pregnant people with incomes between 138% and 264% FPL are eligible until 12 months postpartum.

[181] In 2023, Maryland created a separate CHIP program specifically to cover certain pregnant people who are ineligible for Medicaid due to their immigration status. However, Maryland still refers to the coverage of this group as "Medicaid", even though the federal funding is from the CHIP program. See Maryland Department of Health, "Maryland Medicaid House Bill 1080 (Healthy Babies Equity Act) Overview," (2023).

Prior to 2022, pregnant people in Maryland who did not qualify for Medicaid due to their immigration status could receive some coverage through Medicaid for emergency medical services and for labor and delivery. However, in 2022, the Maryland General Assembly enacted House Bill 1080, known as the Healthy Babies Equity Act. This law expanded coverage for pregnant people regardless of immigration status. The Maryland Department of Health implemented the coverage expansion in July 2023. Individuals in this category are now eligible for comprehensive medical coverage from conception through four months postpartum. Retroactive coverage is available for up to three months prior to application.[182]

In Maryland, most Medicaid enrollees must receive medical services via a Managed Care Organization (MCO), which is an organization that provides services via a defined network of providers. All MCOs cover basic health services including:[183]

- Visits to the doctor, including regular check-ups;
- Child check-ups including immunizations;
- Prescription drugs;
- X-ray and lab services;
- Urgent care center services;
- Emergency services;
- Hospital services;
- Well woman care;
- Pregnancy care, labor and delivery, and postpartum care;
- Family planning and birth control; and
- Dental care.

The Maryland Medicaid program also encompasses the following maternal and infant health initiatives for Medicaid enrollees:[184]

- Maryland Prenatal Risk Assessment. A requirement to assess risk for infant and maternal mortality during the first prenatal visit for pregnant Medicaid enrollees and refer as appropriate to programs such as those listed below and community-based services.[185]
- MOM. Enhanced case management services for pregnant people with an opioid use disorder or a history of one.

[182] Maryland Department of Health, "Maryland Medicaid House Bill 1080 (Healthy Babies Equity Act) Overview," (2023).
[183] Maryland Department of Health, "HealthChoice: Maryland's Medicaid Managed Care Program," (2024).
[184] Maryland Department of Health, "Maryland Medicaid Maternal and Child Health Programs," accessed April 2024.
[185] Maryland Department of Health, "The Maryland Prenatal Risk Assessment (MPRA)," accessed April 2024.

- Home Visiting Services. Prenatal home visits, postpartum home visits, and infant home visits that may include health screenings, health and child development education, breastfeeding support, and referrals to community resources.[186]
- Doula Program. The Doula Program, created in 2022, allows doulas with a state-approved certification to receive reimbursement from Medicaid for doula services for Medicaid enrollees. Doulas provide physical, emotional and informational support to birthing parents through prenatal visits, attending the birth, and postpartum visits.[187] As noted in Chapter 9, OLO heard feedback that doulas in Montgomery County are not able to accept Medicaid because of low reimbursement rates.
- Healthy Steps Services. This program funds child development specialists that attend health care visits to offer resources, and support breastfeeding, self-care and mental health for families with children under age four.
- Centering Pregnancy. Group-based prenatal and postpartum care that serves as an alternative to traditional one-on-one visits with medical providers.

Federal law prohibits the use of federal funds to cover abortion care except in cases of rape, incest or endangerment of the pregnant person's life. However, states may use state funds to cover abortion care for Medicaid enrollees. In 2022, the Maryland General Assembly enacted House Bill 937, known as the Abortion Care Access Act, which requires the state's Medicaid program to cover abortion care.[188]

Title V Maternal and Child Health (MCH) Services Block Grant. The Maternal and Child Health Services Block grant supports state-led efforts to improve public health systems for pregnant and birthing parents, children, and their families. States must match federal Title V funding, and Title V funding for direct health care services, enabling services such as care coordination, and public health services and systems (for example, newborn safe sleep education).

In Maryland, the Maternal and Child Health Bureau and the Office of Children and Youth with Specific Health Care Needs, both within the Prevention and Health Promotion Administration (PHPA) of the Maryland Department of Health, jointly administer Title V funding. Title V funding supports the following activities in Maryland:[189]

[186] Maryland Department of Health, *Medicaid Home Visiting Services Program Manual* (2024).
[187] See Maryland Department of Health, "Maternal and Child Health Services Title V Block Grant Maryland FY 2025 Application / FY 2023 Annual Report," (2024), 50, for information on recent changes to the doula program to increase access
[188] Planned Parenthood Advocates for DC, Maryland and NoVA, "In Historic Vote, Maryland Legislature Protects and Expands Abortion Access For Millions," April 12, 2022.
[189]Maryland Department of Health, "Maternal and Child Health Services Title V Block Grant Maryland FY 2025 Application / FY 2023 Annual Report," (2024), 10.

- State child, fetal and infant, and maternal mortality review teams;
- Public health staff, including epidemiologists and more than 55 staff at local health departments;
- The Office of Children and Youth with Specific Health Care Needs care coordination program and the payer of last resort program for children with specific health care needs;
- Maternal and child health services provided by local health departments including immunizations, home birth certification, perinatal care coordination and lead case management;
- School health services and asthma home visits;
- Child health system improvement and infant mortality reduction in Baltimore City (B'more for Healthy Babies Initiative); and
- Home visiting in certain jurisdictions with braided funding from additional federal funding streams.

Maryland's match funding for Title V includes funding for Babies Born Healthy, a care coordination program established in 2007. Its goals are to reduce infant mortality, improve birth outcomes and reduce racial disparities. Babies Born Healthy provides funds to seven jurisdictions in Maryland with the highest infant mortality rates and highest racial disparities in infant mortality, including Montgomery County. Care coordination services focus on tobacco cessation, substance use prevention and treatment, prenatal care, long-acting reversible contraception and other site-specific strategies based on local data.[190] Chapter 8 of this report includes a detailed description of the Babies Born Healthy program in Montgomery County.

Special Supplemental Nutrition Program for Women, Infants, and Children (WIC). The U.S. Department of Agriculture administers the Special Supplemental Nutrition Program for Women, Infants and Children, known as WIC, in partnership with states. WIC provides food, nutrition guidance, breastfeeding support, and referrals for other services. In Maryland, pregnant people with household incomes up to 185% of the federal poverty level (or about $48,000 for a family of three in 2024) are eligible throughout pregnancy and up to one year after the baby's birth (or six months if not breastfeeding). Children are eligible up to age five.[191]

[190] Maryland Department of Health, "Maternal and Child Health Services Title V Block Grant Maryland FY 2025 Application / FY 2023 Annual Report," (2024), 17.
[191] Maryland Department of Health, "WIC Maryland: Income Guidelines Effective July 1, 2024."

Momnibus Bills

In 2019, U.S. Congresswomen Lauren Underwood (IL-14) and Alma Adams (NC-12) launched the Black Maternal Health Caucus (BMHC) to solve the nation's maternal health crisis. To this end, the BMHC introduced a package of 13 bills collectively known as the Momnibus Act. The bills aim to:[192]

1. Create a task force focused on social determinants of health impacting maternal health and establish a Social Determinants of Maternal Health Fund;
2. Extend eligibility for WIC to 24 months for postpartum and breastfeeding people;
3. Establish grant funding for community-based organizations working to advance maternal health equity, for bias, racism and discrimination trainings for maternal health workers, and to establish Respectful Maternity Care Compliance[193] programs in hospitals;
4. Increase funding to improve maternal health care for veterans;
5. Add funding to increase and diversify the maternal health workforce;
6. Add funding to improve maternal health data collection and research;
7. Establish grants for local initiatives to support people with behavioral health disorders during and after pregnancy and to expand and diversify the maternal behavioral healthcare workforce;
8. Create financial incentives to end shackling of incarcerated pregnant people, add funding for support services for incarcerated pregnant people, and commission a study on maternal mortality and maternal morbidity among incarcerated people;
9. Promote digital tools for maternal health including tools for telehealth, collaborative learning, and capacity building in maternal health and commission a study on the use of technology in maternity care;
10. Establish a payment model demonstration project aimed at addressing clinical and non-clinical factors to incentivize optimal and equitable birth outcomes;
11. Add funding for federal programs that address maternal and infant health risks during public health emergencies and for data collection and reporting during public health emergencies and create a task force on safe and respectful maternity care during public health emergencies.
12. Add funding for community-based programs, health professional schools and NIH to address, provide training and conduct research on reducing levels of and exposure to climate change-related risks for moms and babies; and

[192] United States House of Representatives Black Maternal Health Caucus, "The Momnibus Act: The Solution to America's Maternal Health Crisis," accessed April, 2025.

[193] See Amy G. Cantor, Rebecca M. Jungbauer, Andrea C. Skelly, "Executive Summary," *Respectful Maternity Care: Dissemination and Implementation of Perinatal Safety Culture To Improve Equitable Maternal Healthcare Delivery and Outcomes* (Agency for Healthcare Research and Quality, 2024).

13. Add funding for a national awareness campaign to promote maternal vaccinations.

Although Congress has not enacted the full Momnibus package, the BMHC reports that Congress has enacted $200 million in funding through the appropriations process towards Momnibus and other maternal health programs during the 2023 and 2024 fiscal years.[194]

B. Federal Initiatives Aimed at Improving Perinatal Care Quality

This section describes five federal initiatives aimed at improving maternal and infant health outcomes by improving the quality of perinatal care:

- CDC Perinatal Quality Collaboratives (PQC) Program;
- HRSA Alliance for Innovation on Maternal Health (AIM);
- Birthing-Friendly Hospital Designation;
- State Maternal Health Innovation Grant; and
- The Center for Maternal and Child Health Medicaid Partnerships (CMMP).

CDC Perinatal Quality Collaboratives Program. In 2011, the Centers for Disease Control and Prevention (CDC) began funding Perinatal Quality Collaboratives (PQCs), which are state or regional networks that use quality improvement strategies to improve maternal and infant health outcomes by implementing evidence-informed clinical practices and processes. For example, in Illinois, the ILPQC sought to reduce pregnancy complications arising from high blood pressure. The ILPQC worked with hospitals across the state to help them implement evidence-based practice guidelines and collect data to track implementation.[195]

In 2016, the CDC and the March of Dimes launched the National Network of Perinatal Quality Collaboratives (NNPQC) to provide technical support for the PQCs. The National Institute for Children's Health Quality (NICHQ) is the coordinating center for the NNPQC. The NICHQ advises state PQCs and provides technical assistance regarding quality improvement methods that can improve maternal and infant health outcomes.

A recent Government Accountability Office (GAO) report about federal maternal health initiatives notes the following area for improvement in the CDC's PQC program:

> The CDC program has both long- and near-term goals, but the near-term goals lack quantitative targets, such as targets specifying the anticipated number of facilities participating in the

[194] United States House of Representatives Black Maternal Health Caucus, "Appropriations Wins," accessed April, 2025.
[195] U.S. Centers for Disease Control and Prevention, "PQC Impacts: Reducing Pregnancy Complications From High Blood Pressure," (2024).

Perinatal Quality Collaborative program. Establishing such targets would allow CDC to assess the program's progress to help improve maternal health outcomes.[196]

HRSA Alliance for Innovation on Maternal Health (AIM). In 2014, the Health Resources and Services Administration (HRSA) launched the Alliance for Innovation on Maternal Health (AIM) program. The AIM program supports state-based program teams (in many cases, these same teams also receive PQC funding from the CDC) that work to increase access to safe, reliable and quality care to address maternal mortality and severe maternal morbidity.

In particular, the AIM program develops "patient safety bundles" and helps birthing facilities to implement them. Patient safety bundles are sets of evidence-based or recommended practices for reducing maternal mortality and severe maternal morbidity. Each patient safety bundle targets a particular cause of preventable mortalities and morbidities. Current patient safety bundles target the following conditions:[197]

- obstetric hemorrhage;
- severe hypertension;
- perinatal mental health conditions;
- postpartum discharge transition;
- sepsis in obstetric care;
- safe reduction of primary cesarean birth;
- substance use disorder; and
- cardiac conditions.

Birthing-Friendly Hospital Designation. In 2023, the Centers for Medicare & Medicaid Services (CMS) launched the "Birthing-Friendly" hospital designation. Hospitals can receive this designation by participating in a statewide or national perinatal quality improvement collaborative program and implementing evidence-based quality interventions to improve maternal health.[198]

State Maternal Health Innovation Grant. In 2023, HRSA launched the State Maternal Health Innovation (MHI) program. Through this program, HRSA provides funding to public health organizations, universities, community-based organizations and other groups to implement new strategies to improve maternal health. Examples of strategies funded under this program include:[199]

- Early identification and treatment of hypertension;

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[196] United States Government Accountability Office, "Maternal Health: HHS Should Improve Assessment of Efforts to Address Worsening Outcomes," GAO Highlights (2024).
[197] Alliance for Innovation on Maternal Health, "Patient Safety Bundles," accessed April 2025.
[198] U.S. Centers for Medicare & Medicaid Services, "Birthing-Friendly Hospitals and Health Systems," accessed April, 2025.
[199] U.S. Department of Health and Human Services, "HRSA Awards Nearly $19 Million to Help States Improve Maternal Health," (2024).

- Mobile simulation trainings for maternal health care providers; and
- Improving Emergency Medical Services responses to patients with substance use disorder.

The Center for Maternal and Child Health Medicaid Partnerships (CMMP). In 2024, HRSA awarded an annual $2 million cooperative agreement to Altarum to manage the Center for Maternal and Child Health Medicaid Partnerships (CMMP). The CMMP is a new program aimed at supporting collaboration among state Medicaid, CHIP and Title V programs in the areas of maternal and child health.

White House Blueprint for Addressing the Maternal Health Crisis

In June 2022, the White House released its *Blueprint for Addressing the Maternal Health Crisis*. This document identified the following five priority goals:

1. *Increase Access to and Coverage of Comprehensive High-Quality Maternal Health Services, Including Behavioral Health Services;*
2. *Ensure Those Giving Birth are Heard and are Decision Makers in Accountable Systems of Care;*
3. *Advance Data Collection, Standardization, Harmonization, Transparency, and Research;*
4. *Expand and Diversify the Perinatal Workforce; and*
5. *Strengthen Economic and Social Supports for People Before, During, and After Pregnancy.*[200]

In February of 2024, the Government Accountability Office (GAO) released a report highlighting worsening maternal health outcomes during the COVID-19 pandemic. The report notes:

> The *White House Blueprint for Addressing the Maternal Health Crisis* was released in June 2022 in response to worsening outcomes and disparities. It highlights specific federal actions and outlines long-term goals for improving maternal health. HHS offices intend to develop a strategy for assessing the performance of these long-term goals. However, as of September 2023, HHS had not indicated whether the strategy will include key practices, such as establishing near-term goals and performance measures, to track the performance of their efforts. Doing so would allow HHS to better assess its efforts to improve maternal health.[201]

[200] The White House, "White House Blueprint for Addressing the Maternal Health Crisis," (2022).
[201] United States Government Accountability Office, "Maternal Health: HHS Should Improve Assessment of Efforts to Address Worsening Outcomes," GAO Highlights (2024).

C. State of Maryland Initiatives Aimed at Improving Perinatal Care Quality and Reducing Racial Disparities

The State of Maryland supports several initiatives, some also supported by federal programs described above, aimed at improving perinatal care quality and reducing racial disparities. This section describes the following initiatives:

- Maryland Perinatal Neonatal Quality Collaborative (MDPQC);
- Maryland Maternal Health Innovation Program (MDMOM);
- Maryland Patient Safety Center (MPSC) Perinatal Safety Work;
- Maternal Mortality Review Program (MMR); and
- Fetal and Infant Mortality Review Program (FIMR).

Maryland Perinatal Neonatal Quality Collaborative. Health Quality Innovators (HQI) manages the Maryland Perinatal Neonatal Quality Collaborative (MDPQC), through which hospitals, perinatal care providers, neonatal care providers, community organizations, and public health professionals collaborate to improve safety and equity for Maryland families. In particular, the MDPQC works with hospitals to implement AIM patient safety bundles (see page 52) and other evidence-based practices using quality improvement strategies. Past initiatives include:

- AIM Severe Hypertension in Pregnancy Patient Safety Bundle; and
- MDPQC Neonatal Antibiotic Stewardship Bundle.

Current initiatives include:

- AIM Obstetric Hemorrhage Patient Safety Bundle;
- MDPQC Neonatal Hypoglycemia Initiative; and
- MDPQC Substance Use Initiative.

Maryland Maternal Health Innovation Program (MDMOM2.0). Through the Maternal Health Innovation Program, known as MDMOM, the Maryland Department of Health (MDH), Johns Hopkins University, and the Maryland Patient Safety Center collaborate to promote innovation in data collection and analysis, resource availability and hospital and community care. The following describes MDMOM program areas:

- Hospital Initiative. Interventions to improve systems of care in Maryland hospitals, including the Maternal Health Equity Toolkit and Community of Learning.
- Maternal Morbidity Surveillance. Case identification, clinical review, and analysis of severe maternal morbidity at the hospital and state-level to identify strategies to improve service delivery and quality of care for pregnant and postpartum women.

- Telehealth Initiatives. Efforts to improve blood pressure monitoring for patients with or at risk of severe hypertension during pregnancy or postpartum, including distribution of blood pressure monitors and cuffs and education to patients for self-monitoring.
- Prevention of Perinatal Depression. Training for home visitors, community nurses and other maternal health providers to allow them to implement Northwestern University's Mothers and Babies Program aimed at helping pregnant people and parents to manage stress and prevent postpartum depression.
- Resource Map Development. Development of an interactive map featuring birthing hospitals, doula and birth worker services, home visiting programs, WIC clinics, lactation support, and other maternal health resources.
- Provider Support Bundle. Support for hospital staff after a severe maternal event including a workshop on trauma-responsive leadership and education on recognizing and responding to signs of emotional distress.

Maryland Patient Safety Center (MPSC) Perinatal Safety Work. In 2003, the Maryland General Assembly established the Maryland Patient Safety Center (MPSC), which works with healthcare providers, patients and families to improve patient safety and promote equity. Its current efforts related to perinatal safety include:

- Perinatal Safety Series. A series of webinars aimed highlighting emerging patient safety issues and needs in emergency departments.
- Perinatal Safety Fellowship. A yearlong fellowship for perinatal professionals that helps them design, implement, evaluate, and disseminate a quality improvement project with the goal of improving outcomes and reducing disparities at their site.
- B.I.R.T.H. Equity. A partnership with the Maryland Hospital Association to develop educational tools for non-obstetric providers aimed at reducing severe maternal morbidity among Black birthing people by helping providers and patients identify early warning signs and recognize and mitigate biases.
- Count the Kicks Partnership. MPSC's partnership with Count the Kicks, a still-birth prevention program that educates pregnant people about the importance of tracking fetal movements in the third trimester of pregnancy.

Implicit Bias Training Requirements for Health Care Professionals in Maryland

During the 2021 Legislative Session, the Maryland General Assembly enacted a requirement for all licensed health care professionals to attest to their completion of an implicit bias training program. The program must be approved by their licensing board as a condition of license renewal after April 1, 2022. This is a one-time requirement, meaning that after a licensee has renewed their license once with the attestation after April 1, 2022, the requirement does not apply to subsequent renewals.[202]

An example of an implicit bias training program that meets this requirement is the 60-minute "Introduction to Unconscious Bias and Microaggressions," course offered by Johns Hopkins University that is described as follows:

> This course will increase awareness of unconscious bias and microaggressions, provide participants with strategies for responding to microaggressions, and mitigate bias in everyday life, the workplace, and in clinical care in an effort to reduce health and health care disparities and promote health equity.[203]

Chapter 5 includes information on the research on the impacts of implicit bias trainings.

Maternal Mortality Review Program. In 2000, the Maryland General Assembly established the Maryland Maternal Mortality Review Program. Through this program, the Maryland Department of Health (MDH) identifies all cases of maternal death among Maryland residents from any cause during pregnancy and up to one year after the conclusion of the pregnancy. A group of clinical and public health experts and community representatives from across the state form the Maternal Mortality Review Team, which reviews each case of maternal death to identify opportunities to prevent future deaths.[204] Chapter 6 includes data from this program.

Fetal and Infant Mortality Review Program. In 1997, Maryland established its Fetal and Infant Mortality Review Program (FIMR). Through the FIMR Program, teams in seven jurisdictions with the highest fetal and infant mortality rates (including Montgomery County) review fetal and infant deaths in Maryland to better understand the issues associated with fetal and infant mortality and morbidity. Based on the insights gathered from case reviews, FIMR teams develop and work in partnership with stakeholders to implement recommendations aimed at improving outcomes.[205]

[202] Maryland Department of Health, "Implicit Bias Training for Healthcare Professionals," accessed April, 2025.
[203] Institute for Johns Hopkins Nursing, "Introduction to Unconscious Bias and Microaggressions," accessed April, 2025.
[204] Maryland Department of Health, "Maternal Mortality Review (MMR) Program," accessed April, 2025.
[205] Maryland Department of Health, "Fetal and Infant Mortality Review (FIMR) Program," accessed April, 2025.

Maryland Department of Health Women's Health Action Plan

In May of 2024, MDH released its Women's Health Action Plan. The plan identifies six key goals. Each goal has several MDH actions associated with it. The six goals are as follows:[206]

1. Protect reproductive rights and expand access to reproductive health services, including abortion care.
2. Advance birth equity, with a focus on Black maternal and infant health, through the perinatal continuum.
3. Support behavioral health needs across the life course.
4. Improve access to comprehensive high-quality somatic services through the life course.
5. Increase place-based and community-centered approaches to promote health and prevent diseases.
6. Expand, support and diversify the perinatal workforce.

[206] Maryland Department of Health, "Women's Health Action Plan," (2024).

Chapter 5. Promising Approaches and Community Initiatives Aimed at Reducing Racial Disparities

Chapter 3 identifies historical and contemporary roots of racial disparities in maternal and infant health outcomes within and outside of the healthcare system. It describes the following inequities that drive racial disparities:

- A legacy of racist pseudoscientific theories that blame Black bodies for racial disparities in health outcomes;
- Contemporary medical racism; and
- Racial disparities in structural determinants of health.

This chapter describes policy approaches and specific initiatives that have shown promise in improving maternal and infant health outcomes and reducing racial disparities. Because numerous factors drive racial disparities in maternal and infant outcomes, policy experts recommend a broad approach to addressing them. Additionally, most strategies described in this section are backed by promising evidence, but more research is needed to fully understand their role in reducing racial disparities in maternal and infant health outcomes. This chapter is organized as follows:

- **Section A** examines four categories of approaches for reducing racial disparities in maternal and infant health outcomes; and
- **Section B** highlights specific initiatives and programs that have shown promise in improving maternal and infant health outcomes in Black communities.

A. Approaches for Reducing Racial Disparities in Maternal and Infant Health Outcomes

This section describes approaches and expert recommendations backed by promising evidence for reducing racial disparities in maternal and infant health outcomes. Specifically, this section describes:

- Community-Based Models that Integrate Health and Social Care;
- Racially Congruent Midwifery Care and Alternative Birth Settings;
- Racially Equitable Paid Family Leave Systems; and
- Anti-Bias and Shared Decision-Making Training for Healthcare Providers.

1. Community-Based Models that Integrate Health and Social Care

Section B of this chapter includes descriptions of specific community-based initiatives that have shown promise in measurably improving maternal and infant health outcomes in Black communities. These initiatives employ several research-supported tools for addressing inequities in social determinants of health, or SDOH (which, as noted in Chapter 3, are ultimately driven by structural factors). These tools include:

- **Community partnerships, leadership and advocacy.** Partnerships between healthcare systems and community leaders and/or community-based organizations have shown promise in improving health equity. Community members understand the needs of their own communities and can build trust between health care providers and community members. For example, the governing boards of federally qualified health centers must include members that represent the community they serve and influence the design and implementation of services.[207] Integrated collaboration between health systems and community-based organizations have shown promise by going beyond a traditional referral model to help both health care and social service providers to address community members' medical and nonmedical needs.[208]

  Two of the promising initiatives highlighted in Section C below, B'more for Healthy Babies and Cradle Cincinnati, include advisory boards with community members on them as well as policy advocacy. Two other highlighted organizations, Mamatoto Village and Commonsense Childbirth, were founded and are led by Black women in their communities.

- **Community health workers and home visiting**. A growing body of research demonstrates that community health workers (CHW) are an effective policy tool for addressing inequities in SDOH, including medical mistrust. CHWs are public health workers that serve in their own communities and can conduct outreach, home visits, health and nutrition education, informal counseling, care coordination, referrals to health and human services programs, and advocacy for individuals and the community.

  CHWs use their lived experiences and cultural knowledge to establish trust with the people they serve. They act as liaisons or intermediaries between the community and health and/or social services. Some CHWs are "generalists" who offer support for a variety of health needs, and others specialize in an area, such as maternal health.[209] Many states' Medicaid programs reimburse CHW services, allowing programs to provide CHW services at no cost to community members.

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[207] National Academies, *Ending Unequal Treatment*, 217.
[208] Jenny Wagner, Stuart Henderson, Theresa J. Hoeft, Melissa Gosdin & Ladson Hinton, "Moving beyond referrals to strengthen late-life depression care: a qualitative examination of primary care clinic and community-based organization partnerships," *BMC Health Services Research* 22 (2022).
[209] National Academies, *Ending Unequal Treatment*, 182-183, 194; and Chloe Bakst, Jennifer E. Moore, Karen E. George, and Karen Shea, "Community-Based Maternal Support Services: The Role of Doulas and Community Health Workers in Medicaid," Institute for Medicaid Innovation (2020).

- **Community-based doulas**. Doulas support birthing people before, during, and after labor and delivery. Specific doula services include explaining medical procedures, breastfeeding support, physical comfort measures during labor, education on coping skills, infant care, and promoting self-advocacy. One study found the presence of a doula reduces the risk of cesarean section by 39%. Community-based doulas, like CHWs, are members of the communities where they serve, and may provide expanded support services like home visits, social services referrals, and care coordination. Although some states' Medicaid programs allow reimbursement for doula services, community-based doula programs find the reimbursement rates are not sufficient to cover the costs of the expanded supports that they offer.[210]
- **Workforce training**. Both Mamatoto Village and Commonsense Childbirth, two community organizations highlighted in Section C below, have training programs to develop the workforce of Black perinatal workers.

Reproductive Justice

Chapter 3 of this report describes how prior to the U.S. Civil War, White physicians' pseudoscientific assertions that Black people were inherently hypersexual served to justify sexual violence towards girls and women, and childbearing from an early age. In the early twentieth century, the eugenics movement demonized Black sexuality and reproduction as roots of social dysfunction. In the later twentieth century, exaggerated and racist claims about "crack babies" drove criminal prosecutions that disproportionately accused Black mothers of illicit drug use (studies have found no significant difference by race or ethnicity in percentages of pregnant people who use illicit drugs).

In the 1990s, BIPOC feminists developed the Reproductive Justice movement to address concerns about the mainstream, White feminist approach to reproductive rights. White feminists' approach to reproductive rights focuses on access to contraception and abortion, which fails to address reproductive injustices experienced by Black and other women of color.[211] Loretta Ross, cofounder of SisterSong and Women of Color Reproductive Justice Collective, writes:

> The Reproductive Justice framework analyzes how the ability of any woman to determine her own reproductive destiny is linked directly to the conditions in her community—and these conditions are not just a matter of individual choice and access. Reproductive Justice addresses the social reality of inequality, specifically, the inequality of opportunities that we have to control our reproductive destiny.

[210] Chloe Bakst, Jennifer E. Moore, Karen E. George, and Karen Shea, "Community-Based Maternal Support Services: The Role of Doulas and Community Health Workers in Medicaid," Institute for Medicaid Innovation (2020).
[211] Tracy Morison, "Reproductive justice: A radical framework for researching sexual and reproductive issues in psychology," *Social and Personality Psychology Compass* 15, no. 6 (2021).

> Moving beyond a demand for privacy and respect for individual decision making to include the social supports necessary for our individual decisions to be optimally realized, this framework also includes obligations from our government for protecting women's human rights. Our options for making choices have to be safe, affordable and accessible, three minimal cornerstones of government support for all individual life decisions.[212]

In 2023, a group of over 50 Black women's organizations and Reproductive Justice advocates released the 2023 Black Reproductive Justice Policy Agenda, which offers the following recommended solutions regarding maternal health and pregnancy care:

- *Establish a Federal Office of Sexual and Reproductive Health and Wellbeing.*
- *Increase funding for doulas and midwifery care in federal health care programs.*
- *Support and fund an epidemiological infrastructure that accurately tabulates morbidity and mortality across all states and U.S. territories.*
- *Require states to extend comprehensive, holistic maternity and newborn care for a minimum of one-year postpartum.*
- *Implement monthly financial supplements or universal incomes for low-income pregnant people.*
- *Remove cost-sharing for preconception care; labor-, delivery-, and pregnancy-related labs; mental health; and postpartum visits.*
- *End coercive, non-consensual drug testing and criminalization of substance use for patients, including pregnant people.*
- *Pass the Black Maternal Health Momnibus Act.*[213]

2. Racially Congruent Midwifery Care and Alternative Birth Settings

In the U.S., physicians (commonly obstetricians) attend nearly 9 out of 10 births, and 98% of births occur in hospitals.[214] In other wealthy countries, most births also occur in hospitals, but midwives significantly outnumber obstetricians. These countries experience better birth outcomes compared with the U.S., including lower rates of maternal and infant mortality, and have lower maternal health

[212] Loretta Ross, "What is Reproductive Justice," *Reproductive Justice Briefing Book: A Primer on Reproductive Justice and Social Change*, accessed April 2025.
[213] "Executive Summary," *Reimagining Policy: In Pursuit of Black Reproductive Justice*, accessed April, 2025.
[214] United States Government Accountability Office, "Midwives: Information on Births, Workforce, and Midwifery Education," GAO-23-105861 (2023), 8 [hereinafter GAO, "Midwives"]; and Marian MacDorman and Eugene Declercq, "Trends and State Variations in Out-of-Hospital Births in the United States, 2004-2017," *Birth: Issues in Perinatal Care* 46, no. 2 (2018).

costs. The U.S. also has fewer maternal health providers overall (including both obstetricians and midwives) relative to its population compared with other wealthy countries.[215]

Obstetrics and Midwifery. The table below describes basic characteristics of obstetricians and two categories of midwives. It shows that obstetricians and midwives differ from each other in their educational backgrounds and the settings in which they practice.

Table 5.1. Characteristics of Obstetricians and Midwives

	Obstetricians	Certified Nurse Midwives and Certified Midwives*	Certified Professional Midwives
Certifying Organization(s)	American Osteopathic Board of Obstetrics and Gynecology / American Board of Obstetrics and Gynecology	American Midwifery Certification Board	North American Registry of Midwives
Degree Requirements	Doctor of Medicine (MD) or Doctor of Osteopathic Medicine (DO)	Nursing or other bachelor's degree and master's degree in midwifery	High school diploma or equivalent
Care provided	Pregnancy, labor and delivery, and postpartum care, including surgical procedures.[216]	Women's healthcare across the lifespan including pregnancy, labor and delivery, and postpartum care.	Pregnancy, labor and delivery, and postpartum care.
Birth Setting	Hospital births	Primarily hospital but may also attend births in homes and freestanding birth centers	Home and birth center births
Medicaid Coverage	All states	All states*	13 states**

* Certified midwives, who meet the same credentialing requirements as certified nurse midwives but are not licensed nurses, were recognized in 11 states, including Maryland, and the District of Columbia at the time of writing.[217]
**Medicaid pays lower rates for birth center and home births compared with hospital births.

[215] Roosa Tikkanen, Munira Z. Gunja, Molly FitzGerald, and Laurie C. Zephyrin, "Maternal Mortality and Maternity Care in the United States Compared to 10 Other Developed Countries," The Commonwealth Fund Issue Briefs (2020); and Dorothy Shaw, Jeanne-Marie Guise, Neel Shah, et al., "Drivers of maternity care in high-income countries: can health systems support woman-centred care?" *The Lancet* 388, no. 10057 (2016).
[216] Many obstetricians are also practicing gynecologists, who diagnose and treat diseases of the female reproductive system from puberty through menopause (see Cleveland Clinic, "Gynecologist.")
[217] "Certified Midwife Credential," American College of Nurse-Midwives website, accessed April, 2025.

In addition to the differences described in the table above, obstetrics and midwifery each offer distinct approaches to pregnancy, labor and delivery, and postpartum care:[218]

- **Midwifery** focuses on facilitating *physiologic birth*, which refers to birth without medical intervention, and emphasizes relationship-building.
- **Obstetrics** has traditionally focused on monitoring for and treating medical conditions and complications that arise during pregnancy, childbirth and the postpartum period.

Midwifery and obstetrics are not isolated from one another. For example, if a pregnant or birthing person develops a complication that lies outside a midwife's scope of practice, a midwife may transfer care to an obstetrician or other physician.[219] Conversely, obstetricians and other physicians are increasingly working to incorporate aspects of the midwifery model of care into their practices.[220]

Research shows that individuals that receive midwifery care from a midwife they know are less likely to undergo medical procedures with potential harms, like cesarean sections, episiotomies, or the use of forceps, than those that receive other types of maternity care. They are also more likely to report positive pregnancy, labor, and postpartum experiences, and this model of care is less expensive than other models.[221] Overall, researchers find that midwifery care is comparable or superior to care by an obstetrician for individuals with healthy pregnancies.[222]

Alternative Birth Settings. As noted above, 98% of births in the U.S. occur in hospitals. However, over the past two decades, the share of "out-of-hospital" births (births that occur in homes or in freestanding birth centers) has increased significantly, with the largest increase in out-of-hospital births occurring among White women.[223] Freestanding birth centers are medical facilities that typically provide prenatal and postpartum care as well as labor and delivery services using a midwifery model of care. Additionally, some hospitals have "birth centers" that are designed to be compatible with the midwifery model of care and physiologic birth.

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[218] Institute for Medicaid Innovation, *Improving Maternal Health Access, Coverage, and Outcomes in Medicaid A Resource for State Medicaid Agencies and Medicaid Managed Care Organizations*, (2020) [hereinafter IMI, *Improving Maternal Health*]
[219] GAO, "Midwives,"4.
[220] IMI, *Improving Maternal Health*, 21
[221] Jane Sandall, Cristina Fernandez Turienzo, Declan Devane, et al., "Are midwife continuity of care models versus other models of care for childbearing women better for women and their babies?" *Cochrane Evidence Synthesis and Methods* (2024).
[222] Roosa Tikkanen, Munira Z. Gunja, Molly FitzGerald, and Laurie C. Zephyrin, "Maternal Mortality and Maternity Care in the United States Compared to 10 Other Developed Countries," The Commonwealth Fund Issue Briefs (2020)
[223] National Academies of Sciences, Engineering, and Medicine, *Birth Settings in America: Outcomes, Quality, Access, and Choice* (2020), 32-33 [hereinafter National Academies, *Birth Settings in America*]

In the U.S., birth settings impact types of care that birthing people receive. For example, providers in out-of-hospital settings like freestanding birth centers and homes **do not**:

- Use medications to ripen the cervix (Cervidil) or augment labor (Pitocin) or provide epidural anesthesia; or
- Provide C-sections or blood transfusions.

On the other hand, providers in out-of-hospital settings typically **do**:

- Use structured intermittent auscultation to monitor the fetus, which allows the mother to move freely, in contrast to continuous electronic fetal monitoring which is standard practice in most hospitals;[224]
- Offer nonmedical interventions that are not always available in hospital settings, such as birthing balls and birthing tubs and nitrous oxide and acupressure for managing pain.

If a woman who is laboring at home or in a freestanding birth center requires medical interventions not available in those settings, they must be transported by car or ambulance to a hospital.[225]

Comparing outcomes across birth settings is challenging because of the differences between the birthing people that choose hospital vs out-of-hospital births and the small number of out-of-hospital births. A National Academies report on birth settings finds:

> In the United States, home, birth center, and hospital birth settings each offer risks and benefits to the childbearing woman and the newborn. While no setting is risk free, these risks may be modifiable within each setting and across settings.
>
> …
>
> A lack of data and the relatively small number of home and birth center births prevent exploration of the relationship between birth settings and maternal mortality and severe maternal morbidity.[226]

Of note, insurers typically reimburse birth centers at lower rates than hospitals for labor and delivery services, and Medicaid pays the lowest rates. In addition, if a patient must be transferred to a hospital

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[224] Continuous electronic fetal monitoring is standard practice in many hospitals in order to screen for problems with the fetus, including impending fetal death during labor. Though it is not considered best practice for low-risk labor, hospitals choose continuous electronic fetal monitoring because it allows nursing staff to monitor multiple patients from a central location and to address physician oversight concerns. However, in most cases electronic fetal monitoring restricts the movements of the birthing person and cannot be used under water. Midwives delivering babies in homes or freestanding birth centers can have more flexibility to use another type of fetal monitoring, called structured intermittent auscultation, which has the benefits of allowing the birthing person to move around and is associated with lower rates of cesarean section. See James J. Arnold and Breanna L. Gawrys, "Intrapartum Fetal Monitoring ," *American Family Physician* 102, no. 3 (2020).

[225] National Academies, *Birth Settings in America*, 45-64.

[226] Ibid., 258.

from a birth center before the baby is born, birth centers may receive little or no compensation.[227] The American Journal of Managed Care reports:

> To be sure, some birth centers can make money by offering care to private-pay clients who can afford out-of-pocket costs of thousands of dollars for a custom-tailored birth experience. But birth centers with a commitment to taking clients from a range of socioeconomic backgrounds and that have a mission to contribute toward greater equity in childbirth struggle to make ends meet.[228]

Benefits of racially congruent midwifery care in a birth center. The Commonwealth Center describes[229] how efforts to establish BIPOC-led birth centers in the U.S. are growing, many inspired by Jennie Joseph's Commonsense Childbirth practice, described on page 72. The Roots Community Birth Center (RCBC) in North Minneapolis is the only Black-owned birth center in Minnesota and is one of few birth centers in the state that welcomes publicly insured patients. Page 73 includes a detailed description of RCBC. A study that conducted focus groups and interviews with Black RCBC clients identified the following themes regarding why they chose RCBC and how they described their birth experiences:[230]

- **Agency**. Clients expressed a need for control and autonomy during prenatal care and childbirth, with some sharing that having agency increased their self-esteem. A client shared that being allowed to bring in her own cultural and spiritual items to the birth center allowed her to feel "safe."
- **Addressing Communal and Individual Trauma**. Clients shared that the care provided at RCBC reflected an awareness of communal and individual trauma of Black birthing people, so clients did not have to "spell it out" to them.
- **Relationship-Centered Racially Concordant Care**. Clients cited strong and supportive relationships with their clinicians and the importance of having racially concordant care: "For many respondents, having a Black woman provider meant not only that they would be truly seen and acknowledged by their clinician, but also that they would be loved and taken care of."

Racial inequities in midwifery workforce. As noted in Chapter 3, the medical establishment in the U.S. has a history of denigrating and suppressing the work of Black and Indigenous midwives. Today, the

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[227] Katy B. Kozhimannil, "Impossible Math: Financing a Freestanding Birth Center and Supporting Health Equity," American Journal of Managed Care website (2019).
[228] Ibid.
[229] Sarah Klein and Laurie C. Zephyrin, "A Community-Led Approach to Transforming Maternity Care," The Commonwealth Fund (2024).
[230] J'Mag Karbeah, Rachel Hardeman, Numi Katz, Dimpho Orionzi, and Katy Backes Kozhimannil, "From a Place of Love: The Experiences of Birthing in a Black-Owned Culturally-Centered Community Birth Center," *Journal of Health Disparities Research and Practice* 15, no. 2 (2022).

midwifery workforce in the U.S. is disproportionately White.[231] An Urban Institute study identified several barriers faced by Black midwives:

> In interviews with Black obstetricians, labor and delivery nurses, and midwives, we found that Black midwives face systemic challenges to entering the professional maternal health workforce, including a lack of funding, mentorship, and support.
>
> The Black midwives we interviewed voiced concerns about the lack of midwifery training programs at historically Black colleges and universities. Forced to pursue their studies at predominantly white institutions, they lacked access to diverse faculty and preceptors and had difficulty finding racially concordant mentors. This also led to the few Black professors available being pressured to advise the many Black students and other students of color who sought their support, creating an unsustainable workload.
>
> The difficulties continue as midwives transition into active practice. Interviewees in our research described going to midwifery school hoping to work within their communities and outside of hospital settings, but many faced financial barriers to providing out-of-hospital care, including requiring physician supervision or collaborative agreements to practice. Several interviewees experienced challenges navigating Medicaid, which aligns with existing findings that inadequate Medicaid reimbursement is a barrier to serving patients with low incomes and incentivizes birthing people to seek hospital births instead of paying out-of-pocket for birthing care.[232]

Approaches for Promoting Culturally Congruent Midwifery Care. The Urban Institute offers the following recommendations for addressing barriers faced by Black midwives to increase access to culturally congruent midwifery care for Black birthing people:[233]

- Support birth centers with grants and other sources of funding;
- Advocate for increased insurance reimbursement for home and birth center care; and
- Develop public awareness campaigns about midwifery and out-of-hospital care.

3. Racially Equitable Paid Family Leave Systems

Parental leave refers to time off work that parents can take for the birth, adoption or foster care placement of a new child. Research shows that paid parental leave is associated with lower rates of infant mortality, low birthweight, and preterm birth, fewer maternal and infant rehospitalizations, and increased attendance at postpartum and pediatric health care visits. However, in the U.S., only one in

[231] GAO, "Midwives," 15.
[232] Lauren Fung and Leandra Lacy, "A Look at the Past, Present, and Future of Black Midwifery in the United States," *Urban Wire* (Urban Institute, 2023).
[233] Ibid.

four workers has access to paid parental leave from their employers. Moreover, Black, Latinx, and Asian women are significantly less likely to have access to paid leave than White women.[234]

The Family and Medical Leave Act (FMLA) is a federal law that offers workers access to 12 weeks of job-protected unpaid parental (and other) leave. However, due to eligibility criteria related to employer size, length of employment, and hours worked, only half of working parents are eligible to take the leave. In addition, because it is unpaid, many workers who are eligible cannot afford to use it.[235]

Some states have established statewide paid family and medical leave systems that include parental leave and medical leave (for a worker's own disability or to care for a family member). Most states fund these systems with payroll taxes, and the systems vary in the number of weeks of paid leave available, the percentage of a worker's wages that are paid during leave, and weekly payment caps. However, research suggests that parents with lower incomes are less likely to use paid leave systems due to lack of awareness and low wage replacement rates.[236] Child Trends offers the following recommendations for establishing equitable paid family leave systems:[237]

- Use inclusive definitions of workers and families in eligibility rules;
- Offer wage replacement of 80% or more of wages to ensure workers with lower incomes can use leave or consider using a progressive approach that offers workers with lower incomes a larger percentage;
- Provide at least 12 weeks of leave;
- Incorporate job protections into paid family leave systems;
- Make participation by employers mandatory and do not require that employees pay benefits back; and
- Work with state and community partners to raise awareness of the system and help families enroll.

4. Anti-Bias and Shared Decision Making Training for Healthcare Providers

In recent years, anti-bias interventions or unconscious bias trainings (UBTs) have been a focus of efforts to reduce provider bias in healthcare delivery. However, in *Ending Unequal Treatment*, the

[234] Julianna Carlson, Katy Falletta, and Kate Steber, "Recommendations for Creating Equitable and Inclusive Paid Family Leave Policies " Child Trends Research Brief (2023).
[235] Ibid.
[236] Prenatal-to-3 Policy Impact Center, "Prenatal-to-3 policy clearinghouse evidence review: Paid family leave," ER 03C.1022, Peabody College of Education and Human Development, Vanderbilt University (2022).
[237] Julianna Carlson, Katy Falletta, and Kate Steber, "Recommendations for Creating Equitable and Inclusive Paid Family Leave Policies " Child Trends Research Brief (2023).

National Academies note that most UBTs have not been shown to measurably decrease bias in healthcare delivery:

> Anti-bias interventions can result in short-term increases in awareness about provider bias and increases in provider engagement regarding establishing egalitarian goals for care delivery, but few result in behavior changes that can address interpersonal and institutional racism.[238]

Ending Unequal Treatment describes examples of anti-bias interventions that have shown promise in research studies. It highlights interventions based on Transformative Learning Theory (TLT), which involves engaging learners in a "disorienting" experience (e.g. taking an implicit association test), engaging in critical reflection and dialogue about that experience, and then using role play or simulations to help learners to develop skills and change their behaviors.[239] However, data on long-term changes in bias or behavior are not yet available.

Interventions that train healthcare providers on shared decision making and on delivery of culturally tailored services have shown effectiveness in improving outcomes for patients with diabetes, hypertension and depression.[240] Shared decision making refers to a process in which clinicians and patients discuss available evidence and individuals' personal beliefs and values to weigh options for making clinical decisions. However, researchers have identified barriers to meaningfully incorporating shared decision making into perinatal care in hospital settings in the U.S.:

> In busy, understaffed hospital settings, specific obstacles, including lack of continuity of care, variation in hospital culture, lack of policy and procedure, and lack of consensus about what shared decision making is and how it should be implemented, may hinder these discussions between patients and perinatal nurses.[241]

B. Promising Community Initiatives

This section highlights community initiatives and organizations that employ promising strategies for improving maternal and infant health outcomes in Black communities, including community health workers, community leadership and partnerships, community-based doulas, and racially congruent midwifery.

[238] National Academies, *Ending Unequal Treatment*, 189.
[239] Javeed Sukhera, Christopher J. Watling, and Cristina Gonzalez, "Implicit Bias in Health Professions: From Recognition to Transformation," *Academic Medicine* 95, no. 5 (2020).
[240] National Academies, *Ending Unequal Treatment*, 189.
[241] Rachel Blankstein Breman, Alex Waddell, and Vanessa Watkins, "Shared Decision Making in Perinatal Care," *Journal of Obstetric, Gynecologic & Neonatal Nursing* 53, no. 2 (2024).

1. B'more for Healthy Babies (Baltimore, Maryland)

In 2009, the City of Baltimore Health Department created B'more for Healthy Babies (BHB) in partnership with the Family League of Baltimore City and HealthCare Access Maryland (HCAM). The primary goals of the program are to reduce infant mortality and to reduce the Black-White disparity in infant mortality in Baltimore. The program's components include:

- A centralized intake system for services for pregnant Medicaid members in Baltimore;
- A home visiting program for expectant parents and parents with young children;
- Group prenatal education, grief support, and nutrition and fitness classes;
- Behavioral health screenings and public awareness campaigns;
- Training and funding for CHWs to provide focused outreach and services in three Baltimore neighborhoods;
- A Community Advisory Board (CAB) composed of community members that informs BHB's strategic priorities;
- A Steering Committee led by the Baltimore City Health Commissioner and the vice president of the largest delivery hospital in Baltimore; and
- Policy advocacy for mandatory education on infant safe sleep, implicit bias training requirements for perinatal healthcare workers, and maternal mortality review at the local level.

Since the creation of BHB in 2009 to 2021, the infant mortality rate in Baltimore decreased from 13.5 to 7.5 deaths per 1,000 live births. In two neighborhoods that received focused outreach and services, the Black-White disparity in infant mortality disappeared and the rate was 4 deaths per 1,000 live births in 2019. Data during this time period also show large decreases in sleep-related infant deaths, teen births (including the overall rate and the Black-White disparity) and smoking during pregnancy as well as increases in breastfeeding rates.[242]

2. Cradle Cincinnati (Cincinnati, Ohio)

Cradle Cincinnati (CC) is an initiative of the Cincinnati Children's Hospital Medical Center and UC Health (University of Cincinnati) that aims to reduce the infant mortality rate in Hamilton County, Ohio. Components of CC include:

- Community health workers that connect families to baby items, stable housing, breastfeeding support, mental health care, and other resources and services;

[242] Anne Morris Reid, Janet Heinrich, Helen Mittmann, and Jennifer Trott, "Improving Maternal and Infant Health Through Multisector, Community-Driven Partnerships," The Commonwealth Fund (2024) [hereinafter Reid et al, "Improving Maternal and Infant Health."]

- Cincinnati Learning Collaborative, a network of healthcare and social services providers that works to improve the quality of prenatal care;
- Mama Certified, which collects data and publishes scores informed by community and institutional perspectives regarding local hospitals' maternal and infant health equity efforts;
- A policy committee that advocates for local and statewide policy changes;
- The CC Advisory Board composed of health care, public health, social service agencies, funders, and community representatives;
- Queens Village, a community for Black women to support one another;
- A community research team from Queens Village tasked with engaging parents to understand factors related to infant sleep-related deaths; and
- The Queens Village Advisory Board, whose members are Black women with a variety of lived experiences, and which directly advises CC and other stakeholders on improving health care services and supporting Black families.

Since the creation of CC in 2013, the infant mortality rate in Hamilton County has decreased from 10.2 deaths per 1,000 live births in 2008-2012 to 5.5 deaths per 1,000 in 2023. The Black infant mortality rate decreased from 16.5 to 9.0 deaths per 1,000 live births during the same period.[243] CC also reports improvements in breastfeeding rates, access to prenatal care in the first trimester, maternal smoking rates, and engagement with someone to discuss stress-related problems during pregnancy.[244]

3. Mamatoto Village (Washington, D.C.)

In 2013, Aza Nedhari and Cassietta Pringle co-founded a nonprofit organization, Mamatoto Village, to serve Black pregnant people, their babies and their families in historically underserved neighborhoods in Washington, DC.[245] Its current mission is, "serving Black women through the creation of career pathways in maternal health; and providing accessible perinatal support services designed to equip women with the necessary tools to make the most informed decisions in their maternity care, parenting, and lives."[246] Mamatoto Village currently serves residents in Wards 7 and 8 in Washington, DC and in Prince George's County, Maryland. Its specific services and programs include:

- Mothers Rising Home Visitation Program (MRHV), which is covered by Medicaid and provides clients with home visits by Perinatal Community Health Workers, care coordination, wellness coaching, parent education, support during social services appointments, personal hygiene and

[243] "Celebrating More First Birthdays: 2023 Hamilton County Maternal and Infant Health Report," Cradle Cincinnati, accessed April, 2025.
[244] Reid et al, "Improving Maternal and Infant Health."
[245] Anna Sorensen and Erika Hagen, "Mamatoto Village: Empowering Black Women to Thrive," Power to Decide (2022).
[246] "About Us," Mamatoto Village, accessed April 2025.

baby care items, emergency food supplies, doula services where possible, lactation support, and postpartum follow up;

- Fee-based doula (Community Birth Worker) services, which include continuous labor and birth support as well as two postpartum visits that include lactation and bottle-feeding support;
- Virtual or in person breastfeeding support from either a Certified Lactation Specialist or Lactation Consultant; and
- Training programs for Perinatal Community Health Workers, Lactation Specialists, and Community Birth Workers.

MRHV services are reimbursed by Medicaid as a result of contracts with four Managed Care Organizations (MCO). These contracts generate 75% of Mamatoto Village's revenues.[247] A study that compared MRHV clients to a sample of similar pregnant and birthing people found that MRHV clients' babies had higher gestational ages than the comparison group, and this difference was statistically significant.[248] Additionally, many MRHV clients have subsequently participated in the Perinatal Community Health Worker training and continued on to serve their community.

4. Family Connects, Frederick County, Maryland

In 2023, Frederick County, Maryland, launched Family Connects in partnership with Frederick Health, a local health system. Family Connects is a universal home visiting program that provides a free postpartum visit by a registered nurse to every Frederick County resident that has delivered a baby, regardless of insurance coverage (initially the program was available only to families that delivered at Frederick Health Hospital). Families can choose to meet with the nurse at their home or another agreed upon location. The program has two advisory committees that include community leaders and organizations: the Leadership Advisory Council and Community Partner Council.[249]

Some parents in Frederick County that have used the program report the nurse's visit supported their mental health, and in some cases helped them identify urgent medical issues that would otherwise not have received timely treatment.[250]

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[247] National Partnership for Women and Families, "Tackling Maternal Health Disparities: A Look at Four Local Organizations with Innovative Approaches," (2019).
[248] Erin Snowden, Deborah F. Perry, Rabiyah Amina, Bryan Shaw, and Aza Nedhari, "Assessing the Impact of a Culturally Congruent Perinatal Home-Visiting Program on Gestational Age at Delivery for Black Women," *Health Equity* 8, no. 1 (2024).
[249] "Frederick Health Launches Home Visiting Service for Families and Infants: Family Connects Frederick County—an innovative, at-home service for families with newborns," Press Release, Frederick Health, February 10, 2023; and "At Home Newborn Visit: Free Support for Baby and Family," Frederick Health, accessed April, 2025.
[250] Gabrielle Lewis, "'Made me feel normal': Frederick County parents share the impact of at-home nurse visits," *Frederick News-Post,* November 15, 2024.

5. Commonsense Childbirth (Winter Park, Florida)

In 1998, midwife Jenni Joseph founded her home birth practice, Commonsense Childbirth. Today, Commonsense Childbirth offers trauma-informed[251] perinatal care services to diverse populations in Winter Park, Florida:

> The goal of The JJ Way® is to achieve positive pregnancy outcomes for all. However, particular efforts are made to reach low-income and marginalized people who are uninsured or underinsured; or who are at risk for a poor birth outcome due to the social determinants of health, and the institutional and structural discrimination inherent in our current health care systems. The JJ Way® achieves this goal through consistently applying its four cornerstones: access, connection, knowledge, and empowerment. The JJ Way® provides 100% access by turning no one away from care. This is true even in the 3rd trimester when women seeking prenatal care for the first time are often refused by other healthcare practitioners.[252]

Commonsense Childbirth's programs include:

- A birthing center that primarily serves privately or publicly insured clients;
- The Easy Access Clinic, which provides free and reduced cost prenatal and postpartum care to clients that face barriers to accessing care and connects them with Medicaid and other resources; and
- The School of Midwifery, which offers a hybrid (virtual and in-person) direct entry midwifery training program and delivers midwifery training for the Rhode Island Certified Professional Midwifery Equity Initiative.

Commonsense Childbirth services use an approach termed "the JJ way" that emphasizes freedom of choice, self-reliance, easy access, connection creation, gap management (offering practical solutions to gaps faced by the client) and education. Data indicate that Black clients of Commonsense Childbirth experience significantly better outcomes, including lower rates of preterm birth and low birthweights, than other Black birthing people in Orange County and in Florida.[253]

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[251] The American College of Obstetricians and Gynecologists (ACOG) describes trauma-informed care as "grounded in an understanding of and responsiveness to the impact of trauma." ACOG emphasizes that a trauma-informed model of care in obstetrics is important because "trauma contributes to long-term adverse physical and mental health outcomes and can have a profound effect on survivors' attitudes and interactions with the healthcare system." See Maternal Health Awareness: Trauma Informed Model of Care | ACOG

[252] Lauren L. Josephs and Stephan E. Brown, "The JJ WAY®: Community-based Maternity Center Final Evaluation Report," Visionary Vanguard Group (2017), 2-3 [hereinafter Josephs and Brown, "The JJ WAY®."]

[253] National Partnership for Women and Families, "Tackling Maternal Health Disparities: A Look at Four Local Organizations with Innovative Approaches," (2019); "The JJ Way® – A Patient-Centered Model of Care," Commonsense Childbirth website, accessed April, 2025; and Josephs and Brown, "The JJ WAY®."

6. Roots Community Birth Center, North Minneapolis, Minnesota

Midwife Rebecca Polston opened Roots Community Birth Center (RCBC) in 2015 in Camden, which is a majority-Black neighborhood in North Minneapolis. RCBC has two birthing suites located in a renovated duplex. Polston and three other RCBC midwives serve 200 patients per year, of which 80% are Black or Indigenous, and the majority are enrolled in Medicaid. Due to a Minnesota law that requires insurers to contract with providers in underserved areas, RCBC is able to take insurance.[254]

RCBC medical visits are at least 30 minutes long, and they offer up to 22 visits for pregnant people before birth. The extended time and number of visits allow them to address patients' chronic conditions, cardiovascular risks and mental health issues. During labor and delivery, RCBC emphasizes patient autonomy to decline services, and allows patients to decide who is present. After delivery, patients typically return home within four to six hours, but RCBC offers three home visits in the first week, and three additional home visits in subsequent weeks, recognizing that significant percentages of morbidity and mortality occur in the postpartum period. RCBC's outcomes include a 5% rate of cesarean section, compared with 30% nationally, and a 99% breastfeeding rate at six months postpartum, compared with 25% nationally.[255]

RCBC has close relationships with two hospitals that receive the 10% of patients that require transfers due to a need for more intensive medical care or surgical intervention. RCBC staff accompany these patients to the hospital with their medical records to facilitate the transfer and offer support to hospital staff. Because of these relationships, hospital staff prepare to receive patients before they arrive, and patients that need hospital care are able to receive it without being required to go through the emergency department.[256]

[254] Sarah Klein and Laurie C. Zephyrin, "A Community-Led Approach to Transforming Maternity Care," The Commonwealth Fund (2024).
[255] Ibid.
[256] Ibid.

Chapter 6. Local Data on Racial Disparities in Maternal and Infant Health Outcomes

In this chapter, the terms Black, White, and Asian refer to non-Latinx individuals in these race categories. The Latinx category includes all individuals that identify as Latinx, including small numbers of people that also identify as Black, White, or Asian.

Chapter 3 describes how structural racial inequities within and without the healthcare system drive disparities in maternal and birth outcomes for Black birthing people. This chapter examines how these disparities are experienced locally. It presents trends in maternal and infant health outcomes in Montgomery County by race and ethnicity. Where appropriate, Maryland data are provided for the purposes of comparison or when corresponding County-level data are unavailable. For context, this chapter also provides background on racial and ethnic demographics of the County population.

Of note: Throughout this chapter, the extent to which data are disaggregated by race and ethnicity varies depending on the outcome. In some cases, disaggregated data for Latinx and Asian birthing people are not available. However, all outcomes in this chapter include data on Black-White health disparities.

Key Takeaway: The data in this chapter reveal stark racial disparities in every health outcome examined. Among the County's different racial and ethnic groups, Black birthing people and infants experience the most adverse health outcomes.

This chapter is organized as follows:

- **Section A** describes why it is important to address inequitable health outcomes experienced by Black, Indigenous, and other birthing people and babies of color given the County's changing racial and ethnic demographics;
- **Section B** presents local data on disparities in health outcomes for pregnant and birthing people by race and ethnicity, including maternal deaths, severe maternal morbidity, cesarean births, and mental health;
- **Section C** describes racial and ethnic differences in health outcomes by select maternal characteristics and behaviors including maternal age, country of birth, educational attainment, health insurance coverage, prenatal care initiation, and substance use; and
- **Section D** describes local data on disparities in infant health outcomes by race and ethnicity, including rates of preterm births, low birthweight, and fetal and infant deaths.

OLO compiled data from the following sources:

- Centers for Disease Control and Prevention (CDC) WONDER Online Database, National Center for Health Statistics, National Vital Statistics System;
- Maryland Health Services Cost Review Commission, Maryland Department of Health;
- Maryland Maternal Mortality Review, Maryland Department of Health;
- Maryland Pregnancy Risk Assessment Monitoring System (PRAMS), Maryland Department of Health;
- Montgomery County Fetal and Infant Mortality Review Board Community Action Team;
- Health Planning and Epidemiology, Montgomery County Department of Health and Human Services;
- Peristats, March of Dimes;
- Research & Strategic Projects Division, Montgomery Planning; and
- Vital Statistics Administration, Maryland Department of Health.

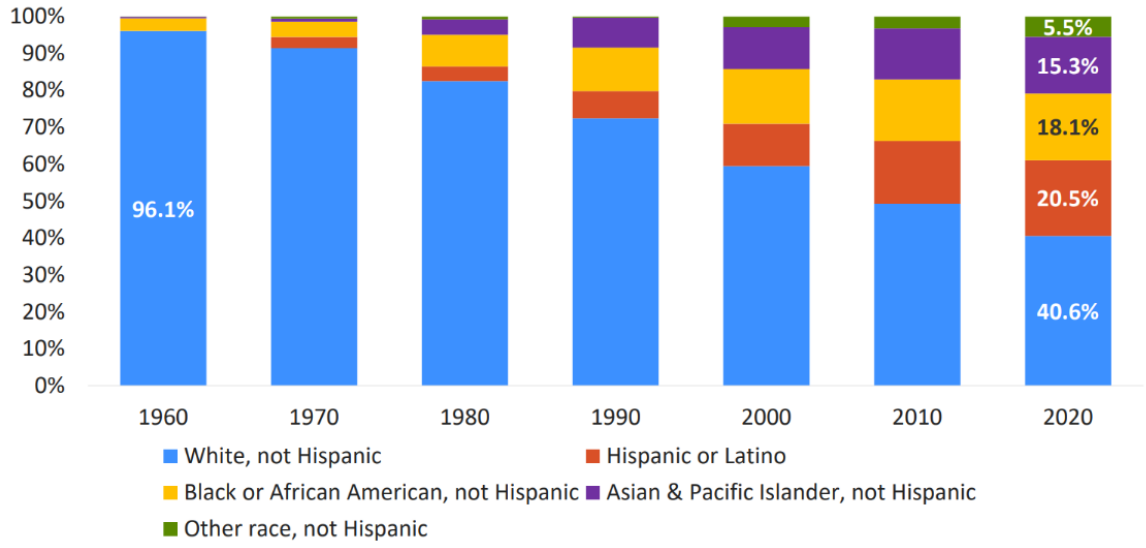
Of note, in 2024, Montgomery County's Department of Health and Human Services (DHHS) published *Maternal and Infant Health in Montgomery County, MD, 2012-2021*, which presents a wide-ranging review of local maternal and infant health trends.[257] This OLO chapter, while not as comprehensive, presents data on many of the same key health indicators found in DHHS's research.

A. County Racial and Ethnic Demographics

Demographic trends in the County highlight the need to address inequitable health outcomes experienced by Black, Indigenous, and other birthing people and babies of color. As the County's population of Black, Indigenous, and other people of color (BIPOC) continues to grow, the County's pregnancy-related health outcomes are likely to worsen. Figure 6.1 illustrates the significant changes in the County's racial and ethnic makeup over recent decades. The County, which was once primarily White, is now 40% White and 59% BIPOC.

[257] Montgomery County, Maryland, Department of Health and Human Services, Health Planning and Epidemiology. Maternal and Infant Health in Montgomery County, MD, 2012-2021, 2024 [hereinafter "DHHS, Maternal and Infant Health in Montgomery County, 2012-2021"].

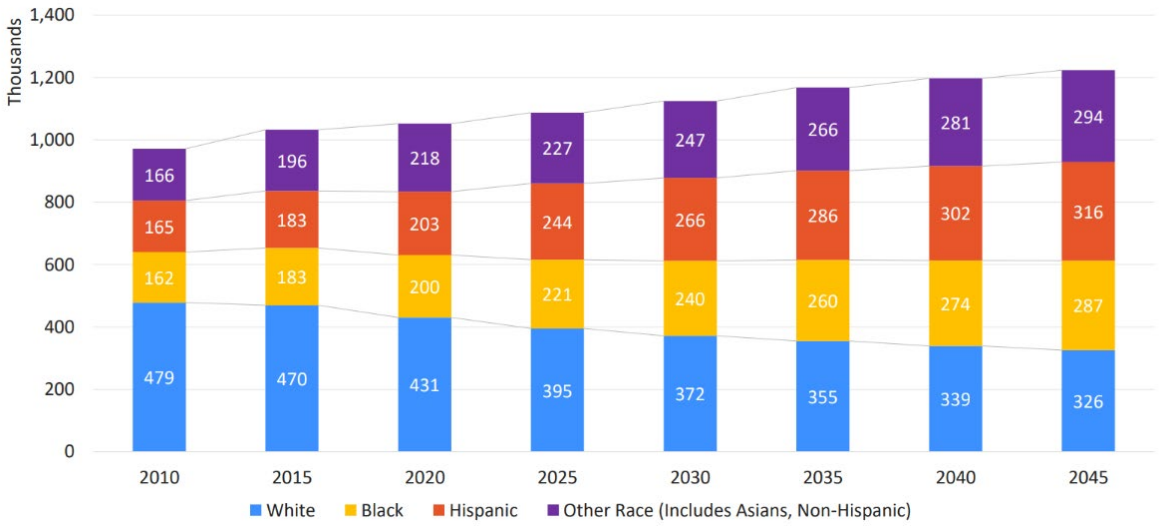
Figure 6.1. County Population by Race and Ethnicity by Decade from 1960 to 2020



Source: Montgomery Planning Analysis of 1960-2020 Decennial Census, Census Bureau.

The BIPOC population in the County is expected to keep growing. As shown in Figure 6.2, by 2045, the County's population is projected to be equally divided among Black, Latinx, White, and Other racial groups.

Figure 6.2. County Population Projections by Race and Ethnicity from 2010 to 2045



Source: Montgomery Planning Analysis of State Data Center Data, Maryland Department of Planning.

Table 6.1 on the next page displays select demographic characteristics of the County's population by race and ethnicity, with a focus on those most likely to become pregnant and/or give birth. The data show:

- Women between the ages of 15 and 50 account for approximately 23% of the County's population. This group can be considered a proxy for the birthing population in the County;
- Latinx women are much less likely than White, Black, and Asian women to have a high school diploma. Both Latinx women and Black women are less likely than White and Asian women to hold a bachelor's degree or higher.
- While a greater proportion of Black and Latinx women are in the labor force than White and Asian women, they have the highest rates of unemployment and the lowest median incomes;
- Latinx and Asian residents are more likely to be foreign-born compared to all people in the County, while Black residents are about just as likely. Additionally, foreign-born Latinx and Asian residents are more likely than foreign-born White or Black residents to speak English less than "very well."
- Poverty rates for Black and Latinx individuals are two to three times higher than for White and Asian individuals. Also, more than half of Black and Latinx residents rent their homes, compared to a quarter of White and Asian residents; and
- Latinx and Black residents are more likely to have public health insurance and less likely to have private health insurance compared to all people in the County. Additionally, more than one in five Latinx residents are uninsured.

Table 6.1. Select Demographics of County Population by Race and Ethnicity, 2023

	All	White	Latinx	Black	Asian
Population					
Total Population	1,058,474	416,960	223,318	197,753	158,114
Percent total population	100%	39%	21%	19%	15%
Women 15 to 50 years	241,934	82,170	55,791	51,032	38,429
Percent women 15 to 50 years	23%	20%	25%	26%	24%
Educational Attainment					
Population 25 years and over	737,675	317,592	134,067	133,891	121,705
Less than high school diploma	9%	2%	27%	7%	8%
High school graduate or higher - Female	92%	98%	74%	93%	92%
Bachelor's degree or higher - Female	61%	76%	32%	47%	71%
Employment Status					
Females 16 years and over	440,148	180,479	81,848	84,555	72,433
In labor force	66%	64%	68%	69%	64%
Unemployment Rate	4%	3%	6%	5%	2%

	All	White	Latinx	Black	Asian
Income and Poverty					
Median Full-Time Earnings - Male	90,514	125,816	53,706	61,048	102,718
Median Full-Time Earnings - Female	80,199	101,570	42,368	61,926	90,653
Poverty Rate for Individuals	7%	4%	12%	10%	5%
Nativity					
Percentage Foreign Born	34.7%	12.3%	54.7%	36.5%	69.4%
Percentage speak English less than "very well"	16%	4%	40%	10%	28%
Housing					
Owner-occupied housing units	64%	75%	49%	44%	75%
Renter-occupied housing units	36%	25%	51%	56%	25%
Health Insurance Coverage					
With private health insurance	76%	88%	53%	70%	82%
With public coverage	30%	30%	32%	38%	25%
No health insurance coverage	7%	1%	22%	5%	3%

Source: 2023 ACS 1-Year Estimates Selected Population Profiles, Table S0201

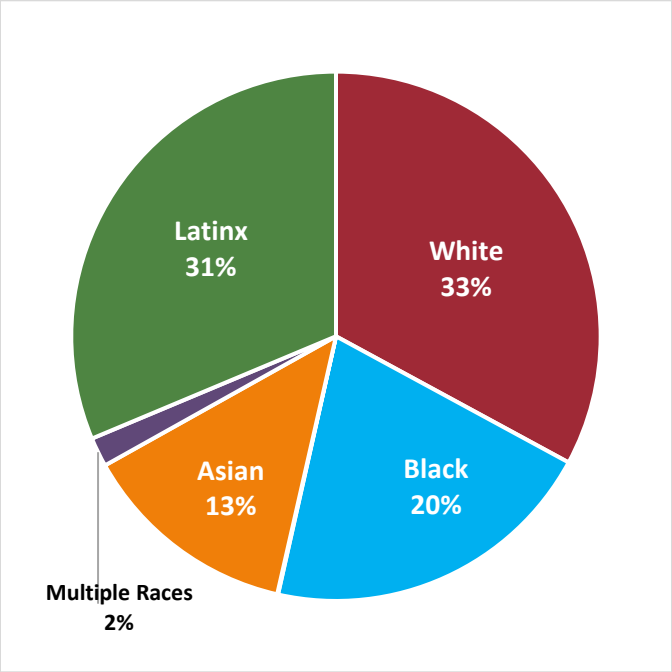
Table 6.1 shows that BIPOC women, particularly Black and Latinx women, are less advantaged than White and Asian women across several socio-economic outcomes including education, income, housing, and access to healthcare. Socio-economic factors and social determinants of health (SDOH) – the non-medical conditions in which people are born, grow, live, work and age – can significantly impact an individual's health. As discussed in Chapter 3, SDOH are unequally distributed by race and ethnicity, with BIPOC experiencing, on average, more adverse SDOH than White people. Racial disparities in socio-economic outcomes and SDOH are rooted in a deep history of laws, policies and practices – including slavery, racial segregation, and land and labor theft – that structurally advantage White people and structurally exclude and oppress BIPOC.[258]

[258] Office of Legislative Oversight Report 2024-11, *Racial Equity and Social Justice Policy Handbook: Land Use, Housing, and Economic Development*, June 18, 2024.

B. Maternal Outcomes

In 2021 11,505 total live births occurred in Montgomery County.[259] The chart below shows that Latinx mothers and White mothers made up the largest shares, each accounting for about a third of all live births in the County. Black mothers accounted for a fifth of all births, while Asian mothers accounted for 13%. Mothers of multiple races made up the smallest share, accounting for just 2% of live births in 2021.

Figure 6.3. Live Births by Maternal Race and Ethnicity, Montgomery County, 2021

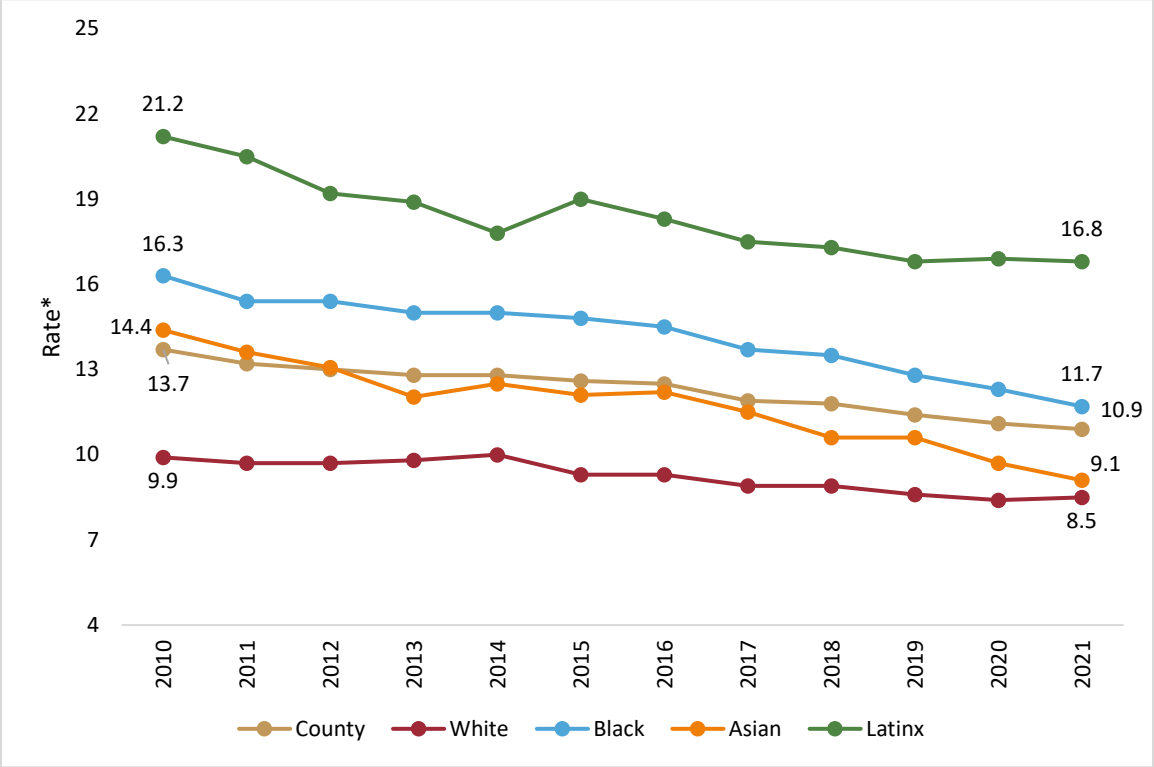


Source: 2021 MDH Vital Statistics Administration Live Birth Data

Birth rates in the County have been declining for all racial and ethnic groups since 2010. The figure below shows that Asian individuals have experienced the largest drop in births, followed by Black individuals. Although seeing similar declines, Latinx birth rates are the highest in the County and remain well above overall County birth rates. Birth rates for White individuals are significantly lower than overall County rates, and have held relatively steady, seeing only a slight decrease between 2010 and 2021.

[259] Maryland Department of Health, Vital Statistics Administration, 2021 Montgomery County Live Births Data, Table 1.

Figure 6.4. Birth Rates by Mother's Race and Ethnicity, Montgomery County, 2010-2021



Source: DHHS Health Planning and Epidemiology and MDH Vital Statistics Administration
*Birth rate = number of births per 1,000 population.

The remainder of this section describes local data on health outcomes for pregnant and birthing people by race and ethnicity. The outcomes presented include maternal mortality, severe maternal morbidity, cesarean births, and mental health. The data show that overall, rates of adverse pregnancy-related outcomes are higher for Black birthing people than for their White peers and for the County overall.

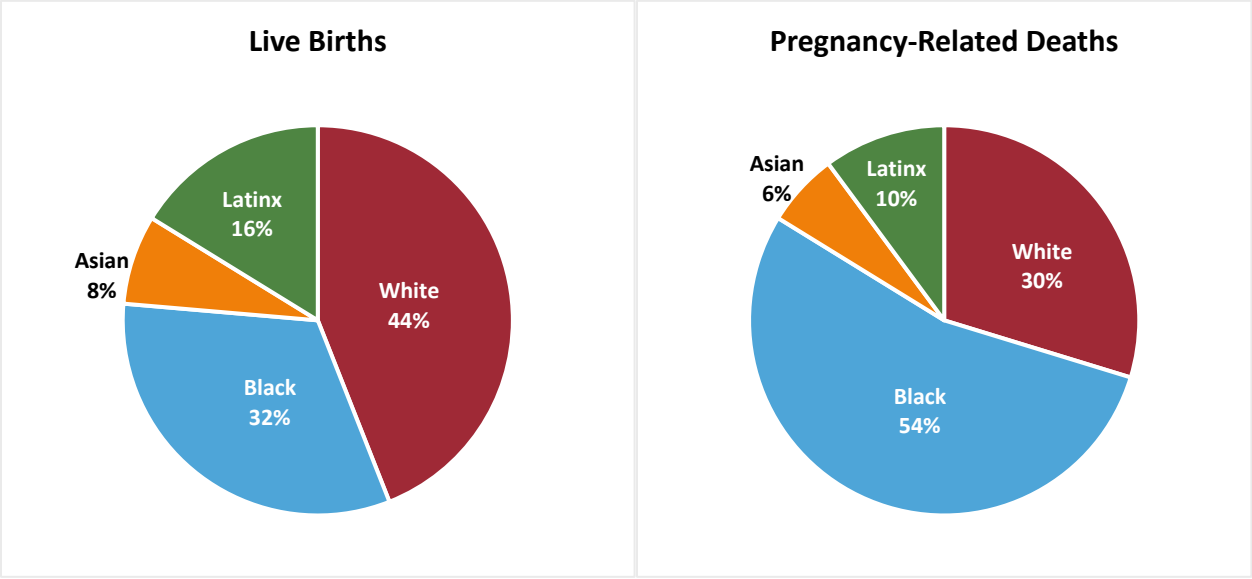
1. Maternal Mortality

In 2020, there were three pregnancy-related deaths in Montgomery County.[260] County maternal mortality rates are unavailable because the small number of maternal deaths each year makes the calculation of reliable rates difficult. Instead, this section presents statewide trends on pregnancy-related deaths.

As described in Chapter 2, pregnancy-related deaths are a more comprehensive measure of maternal mortality. Maternal deaths technically occur during or within 42 days (6 weeks) of pregnancy. Conversely, pregnancy-related deaths include deaths that occur during or within one year of pregnancy from any cause related to or aggravated by the pregnancy or its management, excluding accidental or incidental causes.

Black individuals experience a disproportionate share of pregnancy-related deaths in Maryland. Figure 6.5 displays the distribution of live births and pregnancy-related deaths by race and ethnicity from 2011 to 2020. It shows that Black individuals represented 32% of live births but 54% of pregnancy-related deaths. Comparatively, White individuals represented 44% of live births but just 30% of pregnancy-related deaths. Both Asian and Latinx individuals were also underrepresented in pregnancy-related deaths.

Figure 6.5. Live Births and Pregnancy-Related Deaths by Mother's Race and Ethnicity, Maryland, 2011-2020

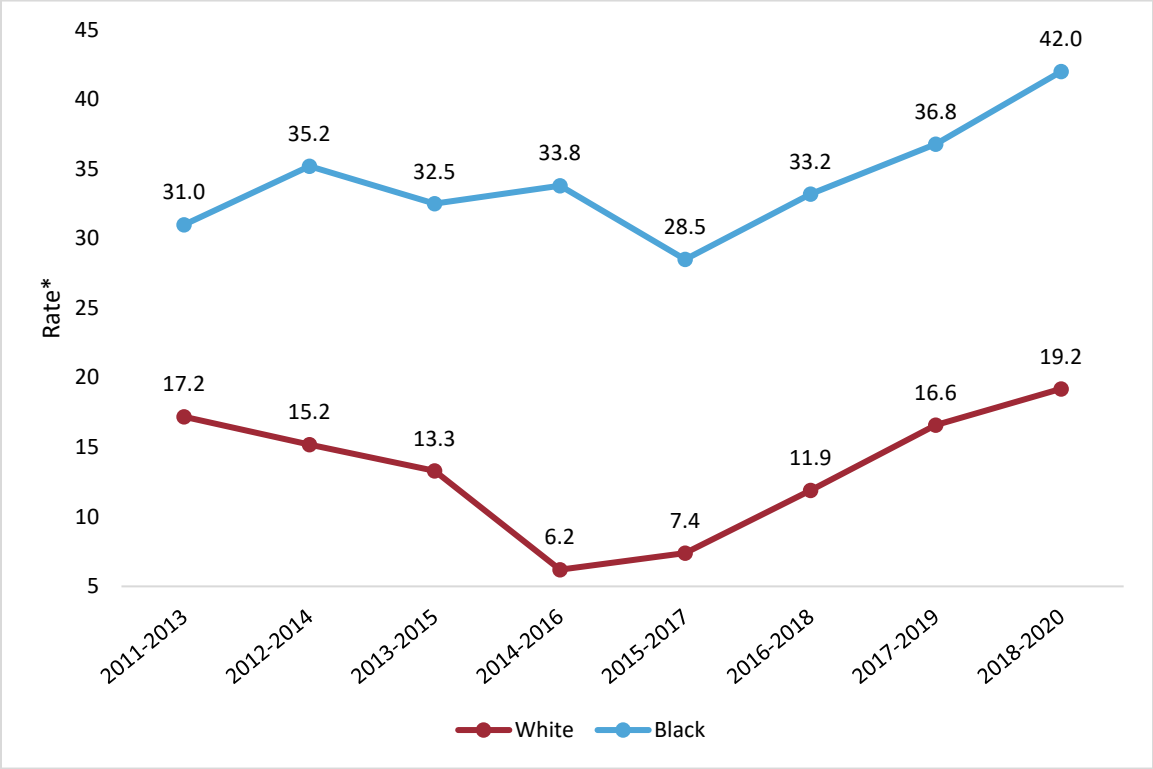


Source: Maryland Maternal Mortality Review 2022 Annual Report, Maryland Department of Health

[260] 2022 Maryland Maternal Mortality Review.

The figure below shows statewide trends in pregnancy-related mortality rates for White and Black individuals as reported by the Maryland Maternal Mortality Review Program.[261] Because of the small number of deaths each year, the program presents rates as rolling three-year averages. Since 2011, the Black pregnancy-related mortality rate has been consistently higher than the White rate. In 2018-2020, the rate for Black individuals (42 deaths per 100,000 live births) was more than twice the rate for White individuals (19.2 deaths per 100,000 births). Furthermore, while rates for both racial groups have increased since 2011, the rate for Black individuals has increased 35% compared to just 12% for White individuals.

Figure 6.6. Pregnancy-Related Mortality Rates by Race, Maryland, 2011-2020



Source: Maryland Maternal Mortality Review 2022 Annual Report, Maryland Department of Health
Data unavailable for Asian and Latinx pregnancy-related deaths.
*Pregnancy-related mortality rate = number of pregnancy-related deaths per 100,000 live births.

[261] Maryland established The Maryland Maternal Mortality Review Program into law in 2000. The purpose of the program is to: (1) identify maternal death cases; (2) review medical records and other relevant data; (3) determine preventability of death; (4) develop recommendations for the prevention of maternal deaths; and (5) disseminate findings and recommendations to policymakers, physicians and other health care providers, health care facilities, and the general public. Md. Ann. Code Health-General Art., §13-1203 - 1207

a. Leading Causes of Pregnancy-Related Maternal Death

In Maryland, the causes of maternal death vary by race and ethnicity. Between 2011 and 2020, the leading causes of pregnancy-related deaths overall were hemorrhage, non-cardiovascular medical conditions, and homicide, with the majority of deaths in each category occurring among Black individuals. Reviewing these data further by race and ethnicity reveal the following differences:[262]

- For Black individuals, the leading cause of pregnancy-related death was **non-cardiovascular medical conditions** (e.g., seizure disorders, asthma, cancer, and collagen vascular diseases such as lupus).
- For White individuals, **behavioral health conditions** and **hemorrhage** tied for the leading cause of pregnancy-related death. Notably, while White individuals accounted for the majority of behavioral health deaths, Black individuals still represented the majority of hemorrhage deaths.
- The leading cause of pregnancy-related deaths for Latinx individuals were **pregnancy-induced hypertension** and **non-cardiovascular medical conditions**. However, it should be noted that the total number of pregnancy-related deaths among Latinx individuals during this period was very small.

b. Timing of Pregnancy-Related Maternal Deaths

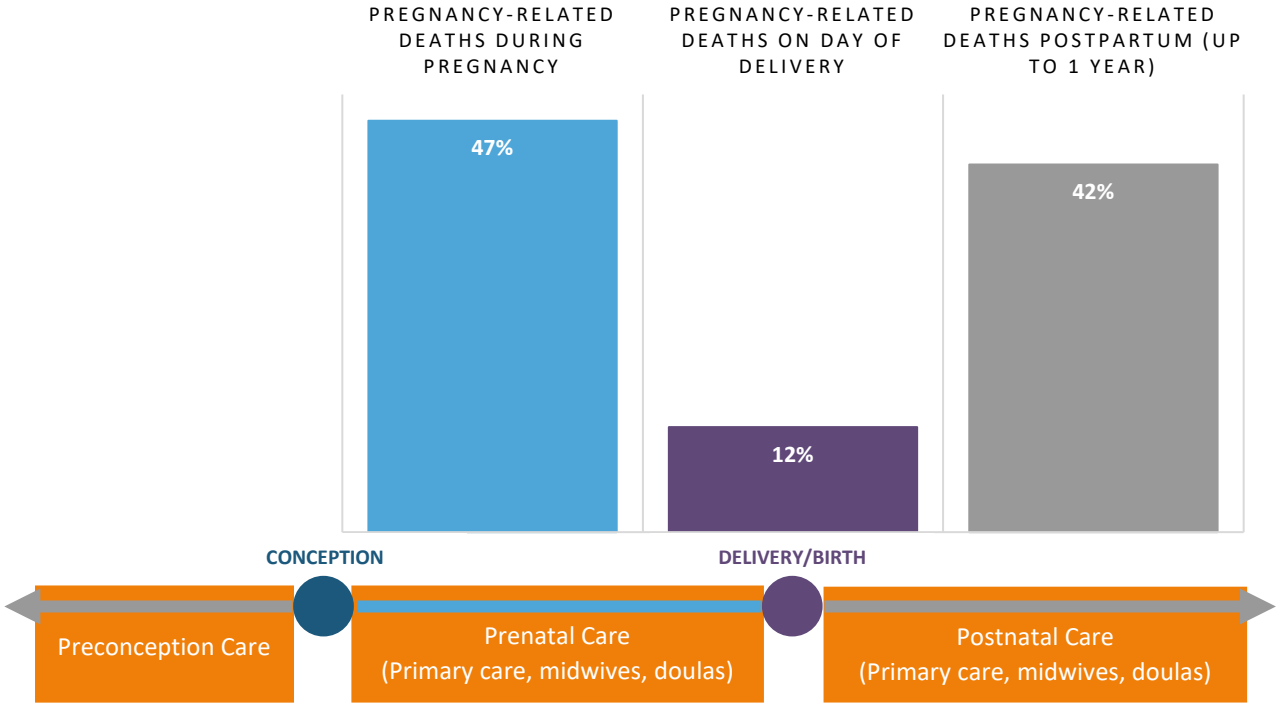
Understanding the timing of deaths in relation to pregnancy provides important insights for health care improvements not only during delivery, but also throughout an individual's pregnancy and postpartum. Nationally, more than half (53%) of pregnancy-related deaths happen up to one year after birth.[263]

The share of postpartum deaths in Maryland is smaller, yet still significant. As the figure below shows, 42% of pregnancy-related deaths in 2020 happened after delivery. Twenty four percent of these deaths occurred within six weeks postpartum, and 18% occurred between 43 and 365 days postpartum. These statistics reveal a need for improvements to postpartum care delivery and utilization statewide.

Close to half (47%) of pregnancy-related deaths in Maryland in 2020 occurred during pregnancy, suggesting a need to focus both on providing timely and regular prenatal care and on addressing the causes of morbidity and mortality that develop during pregnancy. Notably, to eliminate inequitable maternal mortality rates, it is critical to consider the differences in cause of death by race and ethnicity discussed in the previous section.

[262] 2022 Maryland Maternal Mortality Review.
[263] "Four in 5 pregnancy-related deaths in the U.S. are preventable," Centers for Disease Control and Prevention Website Archive. Accessed March 6, 2025.

Figure 6.7. Pregnancy-Related Deaths by Timing of Death, Maryland, 2020



Source: Maryland Maternal Mortality Review 2022 Annual Report, Maryland Department of Health
Figure adapted from Maternal Mortality in the United States: A Primer, The Commonwealth Fund.

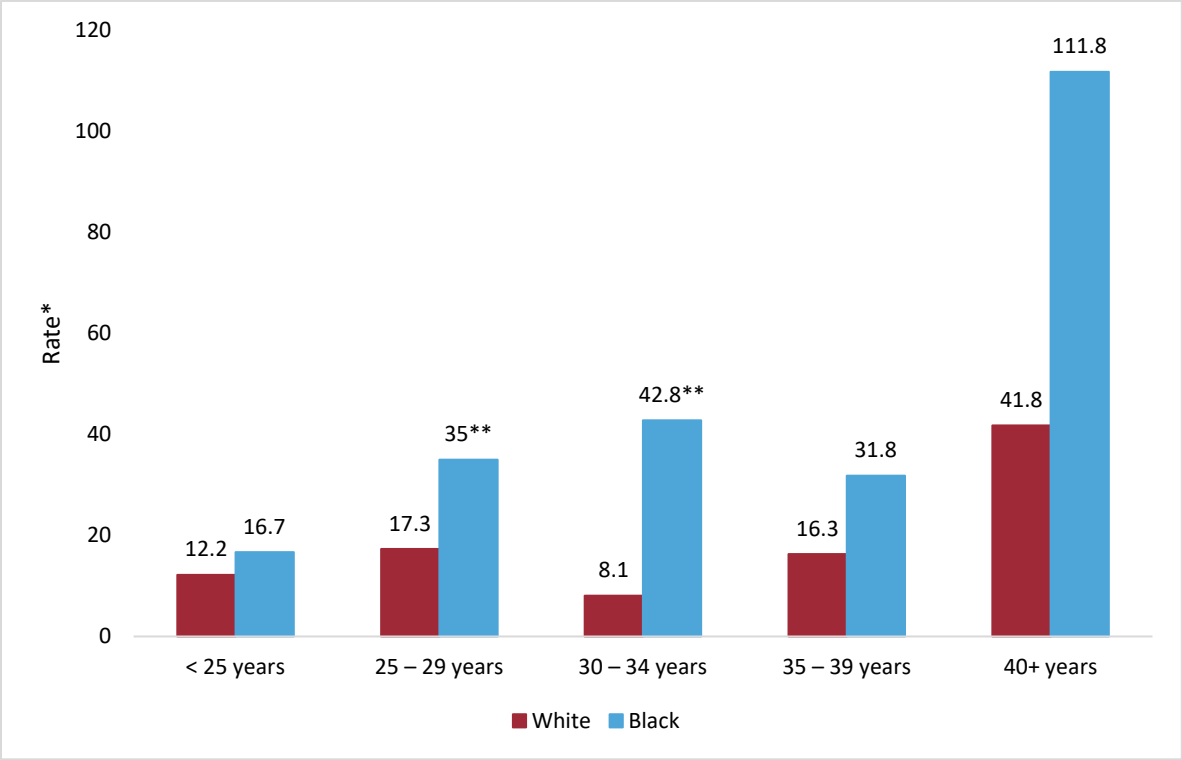
c. Pregnancy-Related Deaths by Age

Census data show that Americans are waiting longer to have children – the median age of women giving birth in the U.S. rose from 27 in 1990 to 30 in 2019.[264] Between 2021-2023, women ages 30-39 accounted for a slightly larger share of all live births in the U.S. (47%) than women ages 20-29 (45.1%).[265] However, research shows the risk for pregnancy-related morbidity and mortality increases with age. Women of "advanced maternal age," defined as 35 or older, are more likely to enter pregnancy with conditions like hypertension and diabetes. They are also more likely to experience complications such as preterm birth and delivery by cesarean section.[266,267,268]

[264] Maternal Mortality Is on the Rise, 2023.
[265] "Percentage of births by maternal age: United States, 2021-2023 Average," Peristats, March of Dimes.
[266] Hoyert., D.L., Maternal Mortality Rates in the United States, 2021, Health E-Stats, Division of Vital Statistics, National Center for Health Statistics, Centers for Disease Control and Prevention, March 2023.
[267] Alford, J.M. et al., National Hospital Care Survey Demonstration Projects: Severe Maternal Morbidity in Inpatient and Emergency Departments, National Health Statistics Reports; no 166, National Center for Health Statistics, Centers for Disease Control and Prevention, October 2021.
[268] Ibid.

In Maryland, between 2011-2020, pregnancy-related mortality rates for Black individuals were higher than those for White individuals at all ages. However, compared to White individuals, the Black rate was two times higher for 25 to 29-year-olds and 5.3 times higher for 30 to 34-year-olds (both rates represent a statistically significant difference).

Figure 6.8. Pregnancy-Related Mortality Rates by Age and Race, Maryland, 2011-2020



Source: Maryland Maternal Mortality Review 2022 Annual Report, Maryland Department of Health
Data unavailable for Asian and Latinx pregnancy-related deaths.
*Pregnancy-related mortality rate = number of pregnancy-related deaths per 100,000 live births.
**Represents statistically significant difference.

2. Severe Maternal Morbidity

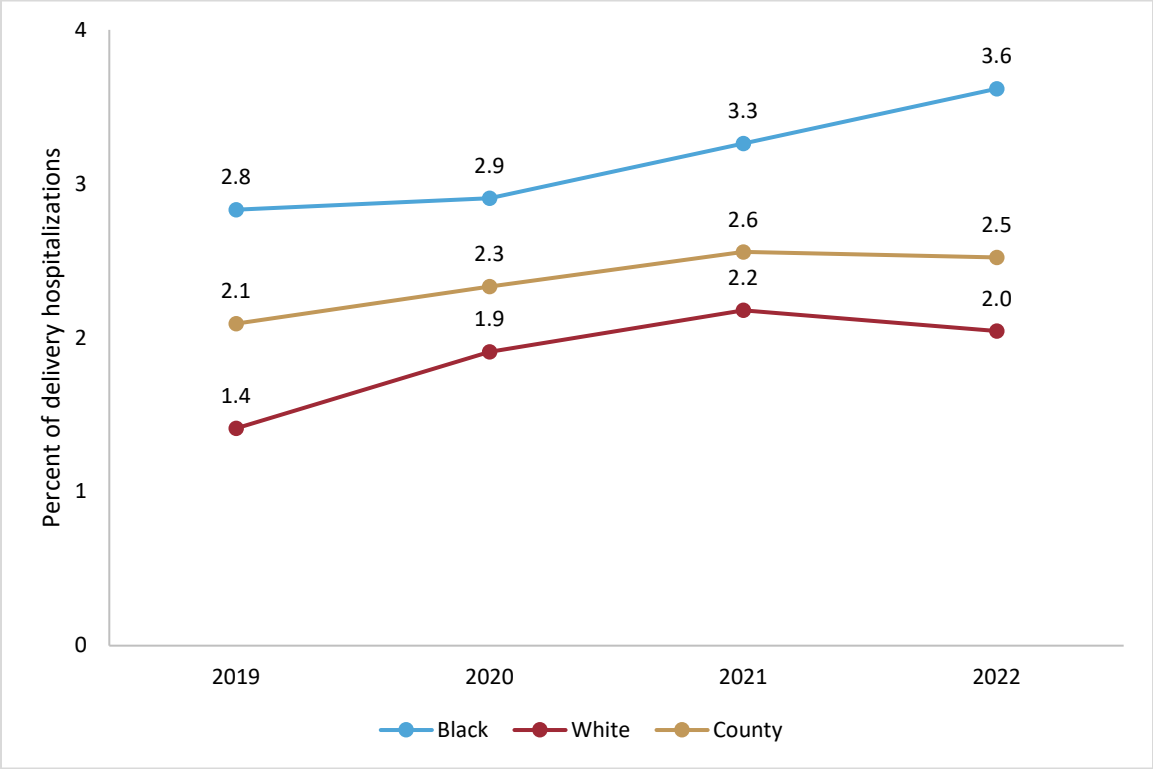
The Centers for Disease Control and Prevention (CDC) describes severe maternal morbidity (SMM) as "unexpected outcomes of labor and delivery that can result in significant short- or long-term health consequences."[269] SMM generally involves life-threatening conditions or complications during pregnancy and/or childbirth, including heart attack, blood clots, and sepsis.[270] SMM, often called

[269] "Severe Maternal Morbidity," CDC
[270] Healthcare Cost and Utilization Project (HCUP), Statistical Brief #243, *Trends and Disparities in Delivery Hospitalizations Involving Severe Maternal Morbidity, 20016-2015*, Agency for Healthcare Research and Quality, August 2018.

"near-misses," affects between 50,000 to 60,000 Americans each year and is about 70 to 80 times more common than maternal mortality.[271]

The CDC tracks SMM at a population-level using a list of 21 health indicators that correspond to International Classification of Disease (ICD) diagnosis codes found in delivery hospital administrative discharge data. These data show that SMM rates are increasing both nationally and statewide.[272] County rates are also increasing, as seen in the figure below. The percentage of delivery hospitalizations with SMM in Montgomery County is increasing overall, but Black individuals are disproportionately affected. For each year from 2019 to 2022, the percentage of delivery hospitalizations with SMM was between one and a half to two times higher for Black individuals than for White individuals.[273,274]

Figure 6.9. Percentage of Delivery Hospitalizations with Severe Maternal Morbidity by Race, Montgomery County, 2019-2022



Source: DHHS Health Planning and Epidemiology.
Data unavailable for Asian and Latinx delivery hospitalizations with SMM.

[271] *Severe Maternal Morbidity*, Commonwealth Fund.
[272] "Severe Maternal Morbidity in Maryland," Maryland Maternal Health Innovation Program (MDMOM); "Identifying Severe Maternal Morbidity (SMM)," CDC.
[273] Montgomery County, Maryland, Department of Health and Human Services, Health Planning and Epidemiology, *Maternal and Infant Heath in Montgomery County, Maryland 2008-2017*, 2019.
[274] Montgomery County DHHS, Health Planning and Epidemiology, *"Maternal and Infant Health Outcomes v1.4,"* PowerPoint Presentation.

Hospital-Based SMM Review and Response

From July 1, 2020 to December 31, 2022, the Maryland Maternal Health Innovation Program (MDMOM) conducted a facility-based SMM Surveillance and Review Pilot Program. The program reviewed 374 SMM events in pregnant and up to 42-day postpartum individuals admitted across 13 participating delivery hospitals in Maryland. Instead of ICD diagnosis codes, hospitals identified SMM cases using three criteria: 1) admission to an intensive/critical care unit (ICU/CCU); and/or 2) transfusion of four or more units of blood products; and/or 3) hospitalization for management of emerging public health threats (e.g. severe COVID-19 infection). The review found that about a third of SMM events were potentially preventable. Other key findings from the pilot program include:[275]

- Racial and ethnic disparities: The SMM rate for Black individuals (135.0 SMM events per 10,000 deliveries) was 54% higher than the overall rate (87.8 per 10,000 deliveries) and more than double that of White individuals (62.9 per 10,000 deliveries). The SMM rate for Latinx individuals (86.2 per 10,000 deliveries) was 37% higher than for White individuals.
- Age of the birthing person: 49.5% of SMM events occurred in individuals ages 25 – 34 and 35% in individuals 35 years or older.
- Primary causes of SMM: Obstetric hemorrhage was the most common primary cause of SMM (47.6%), followed by COVID-19 infection (19.8%), and hypertensive disorders of pregnancy (9.6%).
- Medical history: Obesity was the most common pre-existing medical condition prior to the pregnancy (41.2%), followed by a mental health disorder (31.3%) and chronic hypertension (19.1%).
- Timing of SMM events: Most SMM events happened before and/or immediately after delivery: 36.6% occurred before birth and 34.2% during the first eight hours after birth.
- Type of delivery: Of those SMM events that occurred during the delivery hospitalization, 72.3% were cesarean deliveries and 25.8% were vaginal deliveries.
- Type of insurance: Half of the people with SMM events (51.2%) were privately insured, 42% had Medicaid, and 4.6% either had no insurance or self-paid for their hospitalizations.

Following the passage of the Maryland Maternal Health Act of 2024, all 32 birthing facilities in Maryland are now required to participate in SMM surveillance and review.[276]

[275] MDMOM, *Severe Maternal Morbidity Surveillance & Review Pilot Program,* April 2023.
[276] "Severe Maternal Morbidity in Maryland," Maryland Maternal Health Innovation Program (MDMOM).

3. Cesarean Births

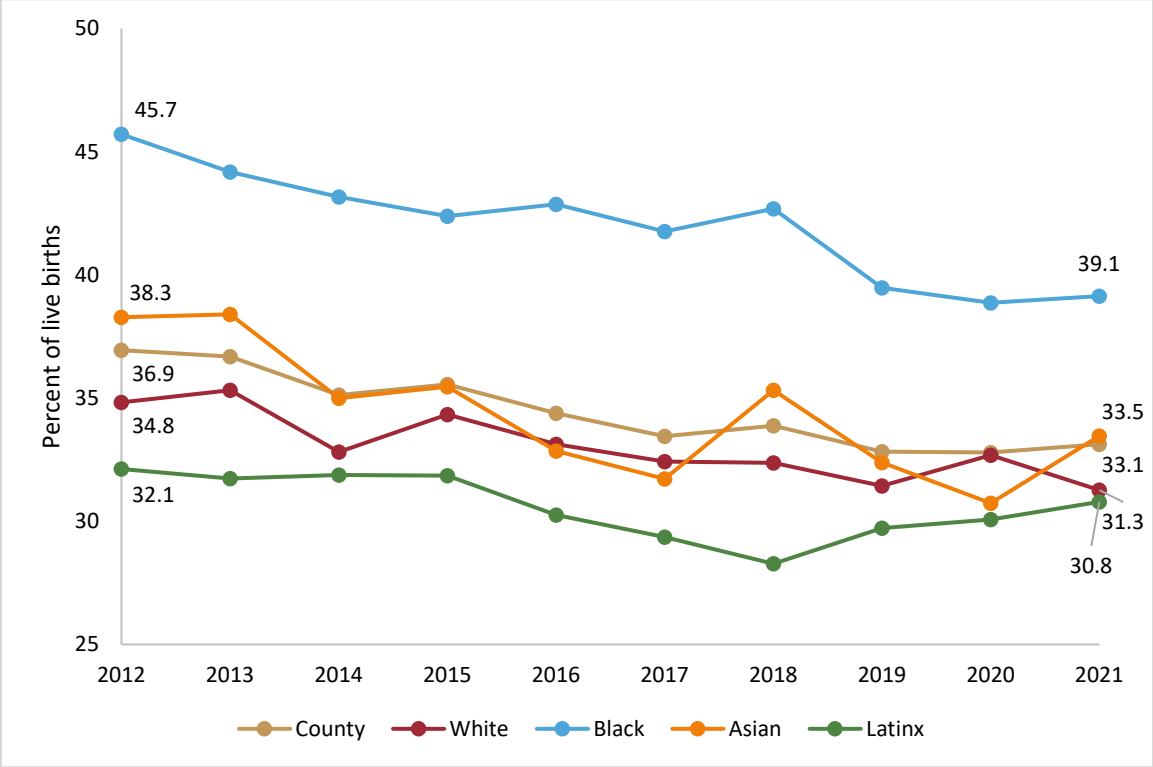
Cesarean births, or C-sections, are generally safe procedures. They can be medically necessary for people who are at high risk for complications from vaginal birth or who experience unexpected complications during delivery. However, cesarean births also place birthing people at higher risk for issues such as infection, blood clots, and complications in a later pregnancy.[277] Furthermore, data show that many low-risk individuals (that is, pregnant people who would likely have safe vaginal births) still undergo medically unnecessary C-sections, which increase their chances for adverse health outcomes.[278]

Figure 6.10 shows the percentage of all cesarean births in the County between 2012 and 2021 by race and ethnicity. The County does not collect data on high-risk versus low-risk cesarean births. Countywide, about 34% of births during this period were cesarean. However, the percentage of cesarean births for Black individuals was strikingly higher than both the County average and the percentage for any other racial or ethnic group. Between 2012 and 2021, 42% of live births among Black individuals were C-sections, compared to 34% among Asian, 33% among White, and 31% among Latinx individuals.

Though cesarean births have been trending down for all racial and ethnic groups, Black individuals continue to be overrepresented. In 2021, Black individuals accounted for nearly 40% of cesarean births, despite representing only 20% of all births in the County.

[277] "C-section," Mayo Clinic.
[278] "Low-Risk Cesarean Delivery: Improving Maternal Health by Reducing Low-Risk Cesarean Delivery," Medicaid.gov; "Healthy Beginnings/Reducing Cesarean Births," Let's Get Healthy California, California Department of Public Health; "Reduce cesarean births among low-risk women with no prior births - MICH-06," Healthy People 2030, Office of Disease Prevention and Health Promotion, U.S. Department of Health and Human Services.

Figure 6.10. Percentage of Cesarean Births by Race and Ethnicity, Montgomery County, 2012-2021



Source: DHHS Health Planning and Epidemiology

4. Mental Health

Pregnancy, childbirth, and the postpartum period can affect a person's mental well-being. Pregnant and recently pregnant people can experience a range of issues from mild mood changes to more serious mental health conditions like depression and anxiety. Individuals with pre-existing mental health conditions can be especially vulnerable, particularly if they discontinue the use of psychotropic medications during and/or after their pregnancies.

Depression, anxiety, and substance use disorders before, during, and after pregnancy are common, affecting one in five women nationally.[279] Data from the CDC and state maternal mortality review committees further show that mental health conditions are a leading underlying cause of pregnancy-related death, including deaths due to suicides and overdoses.[280]

[279] "Take Care of Your Mental Health During Pregnancy," March of Dimes; "Maternal Mental Health," American Hospital Association.
[280] "Four in 5 pregnancy-related deaths in the U.S. are preventable," Centers for Disease Control and Prevention Website Archive. Accessed March 6, 2025.

State data reveal a need to focus on mental health care for women and pregnant people from pre-conception through pregnancy and into postpartum. A survey of recently pregnant people by the Maryland Pregnancy Risk Assessment Monitoring System (PRAMS) found that:[281]

- One in four reported having anxiety during the three months before they got pregnant and nearly one in five reported experiencing depression during the same time period;
- Fifteen percent reported experiencing depression during their pregnancies; and
- Seven percent reported symptoms of postpartum depression – feeling down, depressed, or hopeless since the new baby was born.

Notably, both state and national data suggest that postpartum depression affects Black, Indigenous, and other women of color at higher rates:

- In Maryland, postpartum depression rates were highest among Black individuals. Twelve percent of recently pregnant Black people reported experiencing postpartum depression "Always" or "Often/Almost Always," compared to 5% of recently pregnant White people, and 4% of both recently pregnant Asian and Latinx people.[282]
- Nationally, postpartum depressive symptoms are higher among people who identify as American Indian or Alaska Native (22%), Asian or Pacific Islander (19%), and Black (18%) than among White people (11%).

Finally, OLO spoke with a team of registered nurse case managers who administer the African American Health Program: Start More Infants Living Equally (SMILE) Program. SMILE seeks to reduce infant mortality and improve pregnancy outcomes among Black and African American individuals in Montgomery County. SMILE's nurse case managers provide care and support to new and expecting parents. They report nearly 70% of their clients experience some form of anxiety or depression.

C. Maternal Characteristics and Behaviors

The following section describes racial and ethnic differences in health outcomes by select maternal characteristics such as a person's age when they give birth, their country of birth, educational attainment, and health insurance coverage. It also describes racial and ethnic differences in health outcomes by select maternal behaviors such as when a person starts prenatal care, and if they use drugs and/or alcohol. The data suggest that efforts targeting these individual-level factors have not improved racial disparities or overall outcomes for Black birthing people.

[281] Maryland Pregnancy Risk Assessment Monitoring System, Maryland PRAMS Report - 2020 Births, Vital Statistics Administration, Maryland Department of Health.
[282] DHHS, Maternal and Infant Health in Montgomery County, 2012-2021.

1. Maternal Age

Efforts to reduce poor maternal outcomes have historically focused on decreasing the prevalence of adolescent births. According to the World Health Organization (WHO), compared to individuals aged 20-24 years, pregnant adolescents (aged 10-19 years) face higher risks for maternal and child morbidities, including eclampsia, endometriosis, low birth weight, and preterm birth.[283] However, teen birth rates have been steadily decreasing both nationally and at the County level. In 2021, the County recorded its lowest adolescent birth rate in a decade (7.1 per/1,000 live births). At 22.2 per 1,000 live births, Latinx teens have the highest adolescent pregnancy and birth rates in the County. This is compared to 5.5 per/1,000 live births for Black teens and just 0.8 per/1,000 live births for White teens.[284]

More women in the County are waiting longer to have children. From 2017-2021, nearly a third of all births (32.6%) were to people between the ages of 35-44, or of "advanced maternal age." White and Asian women are more likely to give birth within this age range (38.6% and 36.7%, respectively). Black women are just as likely to give birth within this age range (32.5%), while Latinx women are less likely (24%).[285]

As discussed earlier, increasing maternal age is also associated with increased risk for negative health outcomes, including maternal death. The risks are especially high for older Black mothers. Figure 6.5 on page 82 demonstrates the Black pregnancy-related mortality rate in Maryland is higher than the White pregnancy-related mortality rate at all ages. However, rates for Black women jump sharply with age: from 16.7 for women under 25 years old to 42.8 for women between 30-34 years. White women experience the opposite trend: pregnancy-related mortality rates for White women decrease from 12.2 for women less than 25 years old to 8.1 for women 30-34 years old.[286]

Of note, these statistics are supported by studies that find Black adolescents have better pregnancy and birth outcomes than Black women in their early twenties.[287] Considering that adolescents typically face greater risks for negative birth outcomes, researchers view this unexpected finding as strong evidence for the "weathering" hypothesis – the idea that prolonged exposure to the cumulative

[283] World Health Organization, Adolescent pregnancy Fact Sheet, April 10, 2024.
[284] DHHS, Maternal and Infant Health in Montgomery County, 2012-2021.
[285] Ibid.
[286] Maryland Maternal Mortality Review 2022 Annual Report, Maryland Department of Health
[287] Collins J.W., Rankin K.M., Hibbs S., *The maternal age related patterns of infant low birth weight rates among non-Latino Whites and African-Americans: the effect of maternal birth weight and neighborhood income*, Maternal and Child Health Journal, 2015; Geronimus, A.T., *The effects of race, residence, and prenatal care on the relationship of maternal age to neonatal mortality*, American Journal of Public Health 76 (12), 1986.

stresses of living in a racially unjust society adversely affects Black women's health.[288] The "weathering" hypothesis is discussed in more detail in Chapter 3.

2. Country of Birth

According to data from the CDC's WONDER Database, a little more than half (53%) of all births in Montgomery County from 2016-2023 were to foreign born individuals. Notably, the majority of births among Asian (80%), Latinx (77%), Black (61%), and Native Hawaiian or Other Pacific Islander (56%) birthing people were to foreign born individuals.[289]

Comparing the maternal health outcomes of different racial and ethnic subgroups by place of birth reveals notable differences. The table below compares outcomes for native born Black and Latinx mothers to those born in a different country. The data show:

- Black mothers who are foreign born have higher rates of cesarean births and delivery hospitalizations than American-born Black mothers. However, compared to native born Black mothers, Black mothers who are born outside the U.S. are less likely to need blood transfusions during childbirth or to have preterm or low birth weight babies.
- Latinx mothers who are foreign born have better maternal and infant health outcomes than native born Latinx mothers, especially in rates of preterm births. The one exception is cesarean births, where outcomes for both subgroups are the same.

Table 6.2. Birth Outcomes for Black and Latinx Mothers, Native vs. Foreign Born, Montgomery County, 2016-2023

	Black Native Born	Black Foreign Born	Latinx Native Born	Latinx Foreign Born
Total Births	7,736	12,537	6,740	22,319
% Cesarean Births	38%	44%	30%	30%
% Maternal ICU	0.22%	0.30%	0.19%	0.16%
% Maternal Transfusion	0.94%	0.84%	0.49%	0.47%
% Preterm Births	12.20%	8.59%	10.12%	9.55%
% Low Birth Weight	12%	8%	8%	7%

Source: CDC WONDER Online Database. Data are from Natality Records 2016-2023. Birth data are based on where the birthing person resides. Data exclude a small number of births to individuals of unknown ethnicity.

[288] Geronimus, Arline T. "THE WEATHERING HYPOTHESIS AND THE HEALTH OF AFRICAN-AMERICAN WOMEN AND INFANTS: EVIDENCE AND SPECULATIONS." *Ethnicity & Disease* 2, no. 3 (1992).

[289] Centers for Disease Control and Prevention, National Center for Health Statistics. National Vital Statistics System, Natality on CDC WONDER Online Database. Data are from Natality Records 2016-2023, as compiled from data provided by the 57 vital statistics jurisdictions through the Vital Statistics Cooperative Program. Accessed on Jan 30, 2025. Birth data are based on where the mother resides. Data exclude a small number of births to individuals of unknown ethnicity.

These findings align, for the most part, with research that suggests Black birthing people who are immigrants tend to have better maternal and infant health outcomes than native born Black birthing people. For example, studies have found foreign born Black mothers who arrived in the U.S. as adults experience better birth outcomes than native born Black mothers. Researchers believe this is because foreign born Black women have spent less time exposed to the stresses of American racial inequality than native born Black women.[290]

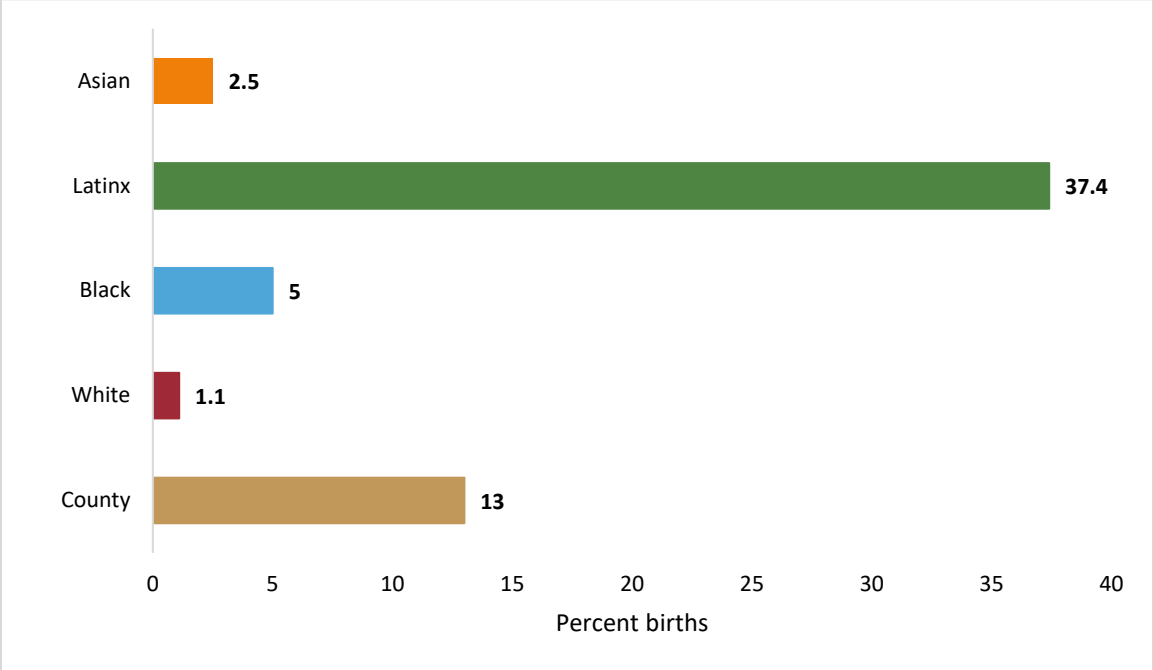
These outcomes by country of birth are important to consider in the context of the County's efforts to improve outcomes in maternal and infant health. Currently, the County's three maternal and infant health home visiting programs largely serve immigrant populations.[291] Understanding how maternal and infant health disparities are distributed within various racial and ethnic subpopulations could help the County more effectively target program resources and address gaps in services. More on the County's maternal and infant health home visiting programs is in Chapter 8.

3. Educational Attainment

In Montgomery County, Latinx individuals make up the largest share of birthing people with lower levels of education. Figure 6.11 shows that between 2017-2021, Latinx individuals accounted for nearly 40% of births to people with less than a high school education. Black, Asian, and White individuals each accounted for 5%, 2.5%, and 1.1% of these births.[292]

[290] Green, T.L., *Black and Immigrant: Exploring the Effects of Ethnicity and Foreign-Born Status on Infant Health*, Migration Policy Institute, 2012.
[291] In FY24, 83% of the Montgomery Perinatal Program's clients were Latinx, and because the program has historically served the County's uninsured pregnant and birthing population, its clients have, and continue to be, predominantly immigrants from Central America. In FY24, 65% of Babies Born Healthy participants were born in African and Caribbean countries. And as reported by the African American Health Program, in FY24, 68% of Start More Infants Living Equally participants were born in African and Caribbean countries.
[292] DHHS, Maternal and Infant Health in Montgomery County, 2012-2021.

Figure 6.11. Percent Births to Individuals Without High School Education by Race and Ethnicity, Montgomery County, 2017-2021

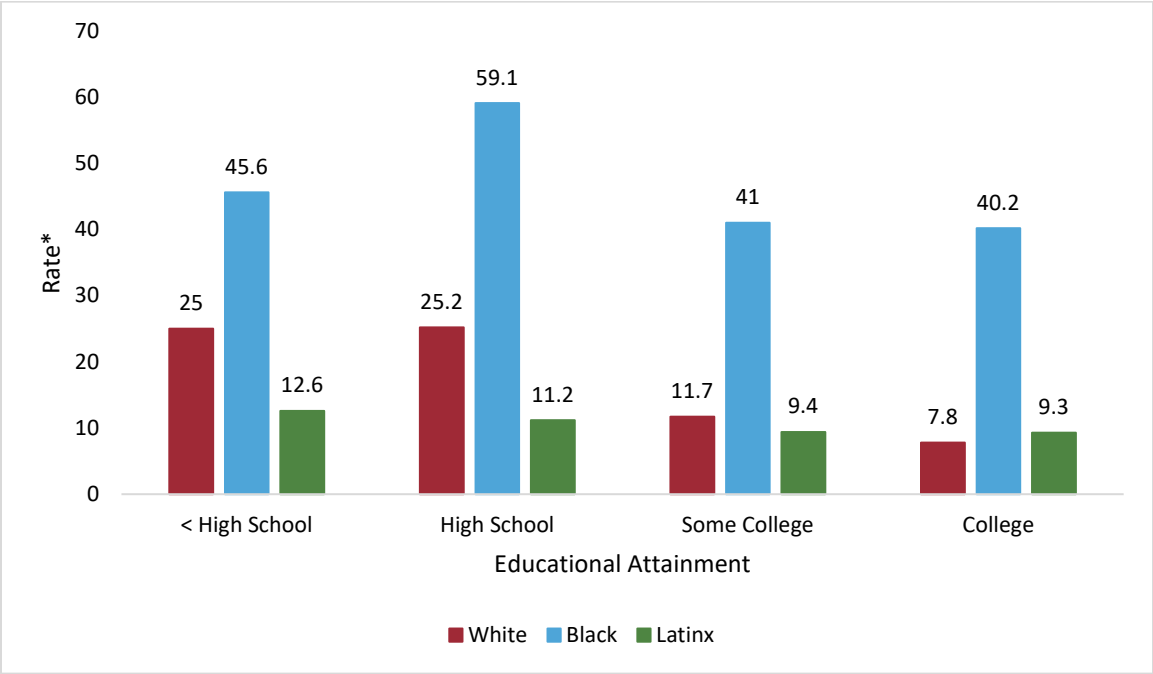


Source: DHHS Health Planning and Epidemiology

Although educational attainment has generally shown to protect against various adverse health outcomes, it does not protect Black birthing people from maternal mortality in the same way it does for White and Latinx birthing people. While mortality rates do decrease with higher education among all subgroups, Figure 6.12 shows that rates change little for Black individuals, remaining above 40 deaths per 100,000 births regardless of educational attainment. Notably, disparities in maternal mortality rates between racial groups increase with educational attainment. College educated Black individuals are five times more likely to die from pregnancy-related causes than college educated White individuals. However, Black women with less than a high school education are only two times more likely to die from pregnancy-related causes than White women with the same level of education. Even more striking, maternal deaths are more common among college educated Black women (40.2 deaths per 100,000 births) than they are among both White and Latinx women with less than a high school education (25 deaths and 12.6 deaths per 100,000 births, respectively). This further

demonstrates that differences in maternal outcomes by race and ethnicity are not driven by individual behaviors, but by structural inequities, as outlined in Chapter 3.

Figure 6.12. Pregnancy-Related Mortality Rates by Educational Attainment and by Race and Ethnicity, United States, 2007–2016



Source: Maternal Mortality in the United States: A Primer, The Commonwealth Fund
*Pregnancy-related mortality rate = number of pregnancy-related deaths per 100,000 live births.

4. Health Insurance Coverage

As noted in Chapter 3, Black and Latinx individuals are more likely than White individuals to be uninsured or enrolled in Medicaid and to experience difficulties accessing primary care providers. For pregnant people, this can translate to inadequate access to prenatal care, which is associated with adverse birth outcomes.[293] At the same time, recent studies show that Medicaid expansion under the Affordable Care Act (ACA) has led to increased rates of coverage before and during pregnancy, as well as postpartum. Research also suggests that Medicaid expansion has increased access to health care for pregnant and postpartum individuals and has improved certain adverse pregnancy outcomes.[294]

Compared to all people in Montgomery County, Latinx, Black, and Native Hawaiian or Other Pacific Islander mothers are more likely to have a Medicaid covered birth. Data in Table 6.3 below show that while 33% of all births in the County from 2016-2023 were covered by Medicaid, 63% of Latinx births, 46% of Black births, and 36% of Native Hawaiian or Other Pacific Islander births were covered by

[293] Crear-Perry J, et al., *Social and Structural Determinants of Health Inequities in Maternal Health*. J Womens Health, 2021.
[294] Guth, M. and Diep, K., What Does the Recent Literature Say About Medicaid Expansion?: Impacts on Sexual and Reproductive Health, KFF Issue Brief, June 29, 2023.

Medicaid. Both White and Asian mothers are far less likely to have a Medicaid covered birth (7% and 13%, respectively), and American Indian or Alaskan Native mothers and mothers of more than one race are just as likely at 30% each.

Table 6.3. Births to Medicaid Enrollees by Mother's Race and Ethnicity, Montgomery County, 2016-2023

	All Births	Medicaid Births	% Medicaid Births
Total Births	96,254	32,110	33%
Race (not Latinx)			
American Indian or Alaska Native	54	16	30%
Asian	13,560	1,707	13%
Black	20,386	9,419	46%
Native Hawaiian or Other Pacific Islander	36	13	36%
White	31,011	2,086	7%
More than one race	1,894	573	30%
Latinx	29,131	18,234	63%

Source: CDC WONDER Online Database. Data are from Natality Records 2016-2023. Birth data are based on where the mother resides. Data exclude a small number of births to individuals of unknown ethnicity.

Notably, data in the next table show little difference between outcomes for Black and Latinx mothers enrolled in Medicaid versus outcomes for Black and Latinx mothers in the County overall. Except for births requiring admittance to the intensive care unit (ICU), birth outcomes for Black mothers on Medicaid were either the same or better than for all Black mothers. However, outcomes for Black mothers in both categories are worse across all metrics than for the County overall. These data suggest that Black mothers experience inequitable health outcomes regardless of insurance coverage.

Generally, Latinx mothers experience similar or better outcomes than all birthing people in the County. Except for births requiring blood transfusions, birth outcomes for Latinx Medicaid enrollees were the same or better than for the overall Latinx birthing population. This could be because the majority of Latinx births are covered by Medicaid (63%). Of note, given close to a quarter of Latinx individuals in the County are uninsured,[295] a significant share of Latinx births may be to individuals without health insurance.

[295] 2023 ACS 1-Year Estimates Selected Population Profiles, Table S0201

Table 6.4. Birth Outcomes for Black and Latinx Individuals, Medicaid vs. All Births, Montgomery County, 2016-2023

	All Births	Black Births	Black Medicaid Births	Latinx Births	Latinx Medicaid Births
Total Births	96,254	20,386	9,419	29,131	18,234
% Cesarean	34.0%	41.0%	41.0%	30.0%	29.0%
% Maternal ICU	0.18%	0.26%	0.31%	0.18%	0.13%
% Maternal Transfusion	0.49%	0.87%	0.87%	0.47%	0.52%
% Preterm Births	9.40%^	10.4%	9.93%	9.83%	9.59%
% Low Birth Weight	7.60%^	10.0%	9.00%	7.00%	7.00%

Source: CDC WONDER Online Database. Data are from Natality Records 2016-2023. Birth data are based on where the mother resides.

^Preterm birth and low birth weight data are 2021 figures from DHHS, Office of Planning and Epidemiology.

5. Prenatal Care Initiation

Prenatal care has shown to be a critical defense against maternal and infant mortality and morbidities. It is most effective when accessed early, ideally during the pregnancy's first trimester.[296] County data show that from 2017-2021, 6.9% of all births had late or no prenatal care. Black women had the highest percentage of births with late or no prenatal care (10.2%), followed by Latinx women (9.2%), Asian women (4.9%), and White women (3.6%).[297]

However, Maryland data from 2011-2020 show that even when Black pregnant people start prenatal care during the first trimester, they are still disproportionately at risk for pregnancy-related death:[298]

- The pregnancy-related mortality rate among women receiving early prenatal care was almost three times higher for Black women (31 deaths per 100,000 births) than for White women (10.5 deaths per 100,000 births); and
- The disparity in mortality rates, while still present, decreases among women who start prenatal care late (during the third trimester) or not at all – 41.6 for Black women and 32.0 for White women.

[296] "Pre-Pregnancy Care and Prenatal Care," Eunice Kennedy Shriver National Institute of Child Health and Human Development.

[297] DHHS, Maternal and Infant Health in Montgomery County, 2012-2021.

[298] Maryland Maternal Mortality Review 2022 Annual Report, Maryland Department of Health.

6. Substance Use

The use of alcohol, tobacco, and other substances during pregnancy can result in serious adverse birth outcomes, including fetal growth restriction, fetal alcohol spectrum disorder (FASD), stillbirth, preterm birth, and sudden infant death syndrome. Exposure to substances in utero can also lead to intellectual and behavioral disorders in children as they get older.[299] As noted in Chapter 3, research shows Black individuals are more likely to receive drug testing during childbirth than White individuals.[300] However, studies have also found no significant racial or ethnic differences in the percentages of pregnant people who use illicit drugs.[301]

A 2018 analysis of Montgomery County birth records and statewide hospitalization data found that individuals who used substances during pregnancy had higher percentages of low weight and preterm births (9.5% and 12.3%, respectively) than those who did not (7.4% and 9.4%, respectively). However, rates of maternal morbidity, cesarean births, and vaginal deliveries were similar for both groups. The same analysis found:[302]

- White and Black individuals are more likely to use substances during pregnancy. 38.5% of White and 39.7% of Black individuals used substances during pregnancy compared to 13.4% of Latinx, and 2.2 of Asian individuals; and
- Individuals with lower incomes are more likely to use substances during pregnancy. 63.3% of individuals who used substances while pregnant were enrolled in Medicaid, while only 37.5% of all pregnant individuals were enrolled in Medicaid.

County and state data on tobacco and alcohol use among pregnant people collected through the Pregnancy Risk Assessment Monitoring System (PRAMS) reveal:[303]

- Rates of tobacco use were similar for Black and White individuals in the County: 1.5% of Black individuals and 1.2% of White individuals used tobacco during pregnancy (of note, actual rates may be higher as these data are self-reported); and

[299] DHHS, Maternal and Infant Health in Montgomery County, 2012-2021.
[300] Jarlenski M, et al., Association of Race With Urine Toxicology Testing Among Pregnant Patients During Labor and Delivery, *JAMA Health Forum.* 2023;4(4):e230441.
[301] Washington, *Medical Apartheid*, chap. 8.
[302] Ruane, Kelsey, Birth Outcomes of Women Who Use Substances During Pregnancy, Montgomery County Council Summer Fellows Program, 2018.
[303] DHHS, Maternal and Infant Health in Montgomery County, 2012-2021.

- White individuals in Maryland are more likely to drink alcohol before and during their pregnancies:[304]
    - In 2020, nearly a quarter (23%) of White individuals reported binge drinking (consuming four alcoholic drinks or more in one sitting) in the three months leading up to their pregnancy, followed by 14% of Black individuals, 7% of Latinx individuals, and 1% of Asian individuals.
    - Eleven percent of White individuals reported any drinking in the last three months of pregnancy, compared to 5% of Black individuals and 4% of Latinx individuals.

D. Infant Outcomes

This section describes County data on infant health outcomes by race and ethnicity, including rates of preterm births, low birthweight, and fetal and infant deaths. The data presented show that adverse health outcomes are consistently worse for Black infants compared to both White infants and infants in the general County population.

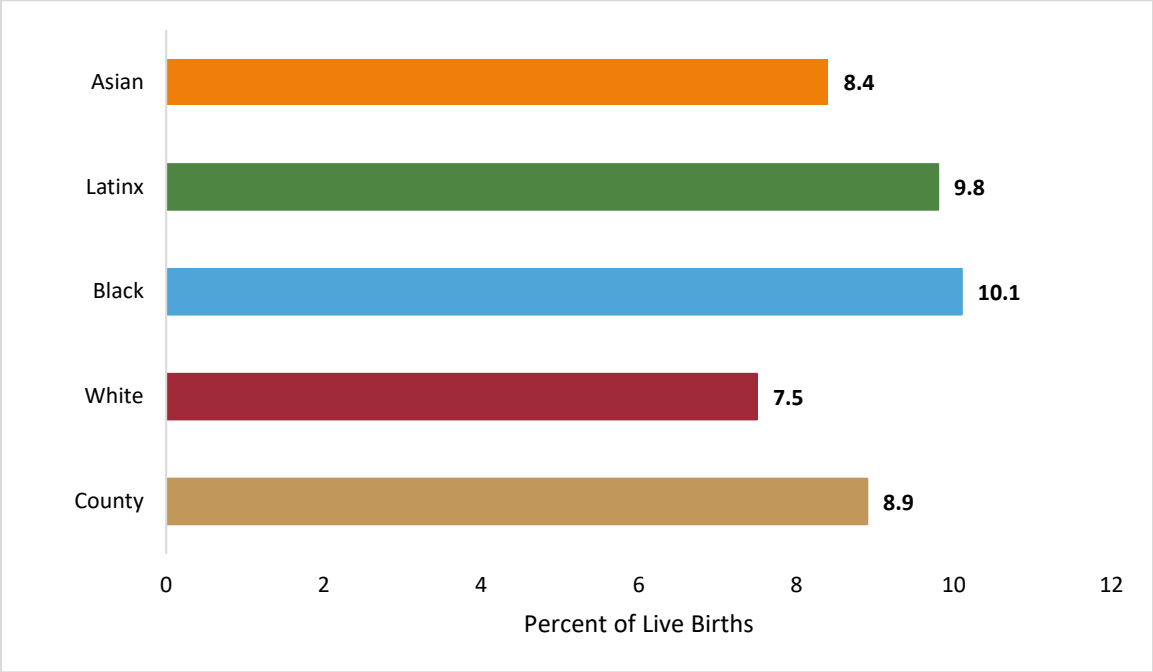
1. Preterm Births

Research shows that babies who are born preterm (before 37 weeks of gestation) can experience severe health consequences, including sensory impairments, developmental delays, and chronic respiratory problems. Preterm birth is also a leading cause of infant death, accounting for over a third of all infant deaths nationally.[305]

The rate of preterm births in the County has been consistently lower than that of Maryland for many years.[306] However, the figure below shows that Black people experience the highest share of preterm births in the County (10.1% of live births), followed closely by Latinx people (9.8% of live births).

[304] As described in the latest Maryland PRAMS Report, "PRAMS is a surveillance system established by the Centers for Disease Control and Prevention (CDC) in 1987 to obtain information about maternal behaviors and experiences that may be associated with adverse pregnancy outcomes. Data are collected by surveying pregnant people and birthing people who have recently delivered live born infants." Maryland PRAMS Report: 2020 Births, Pregnancy Risk Assessment Monitoring System, Maternal and Child Health Bureau Vital Statistics Administration, Maryland Department of Health.
[305] "A profile of prematurity of United States,", PeriStats, March of Dimes.
[306] DHHS, Maternal and Infant Health in Montgomery County, 2012-2021, pg. 44.

Figure 6.13. Percentage of Preterm Births by Race and Ethnicity, Montgomery County, 2017-2021

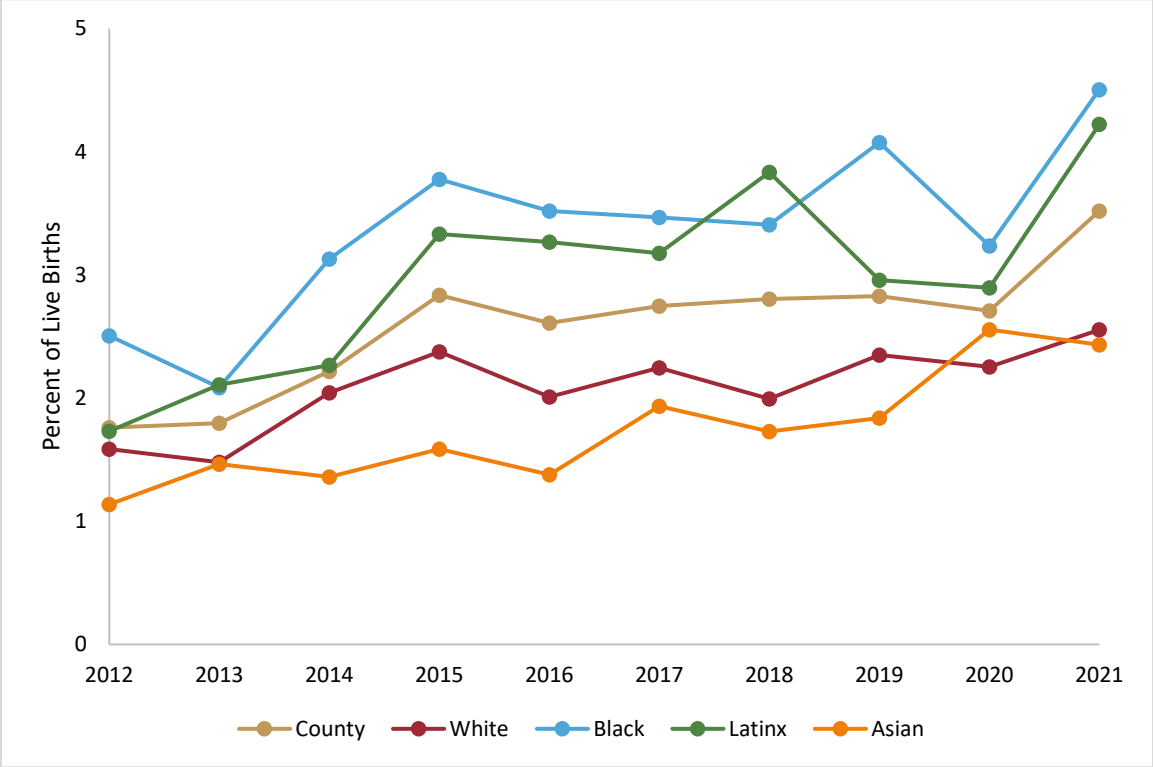


Source: DHHS Health Planning and Epidemiology

According to research, a history of preterm births, that is, having had a previous pregnancy or pregnancies that resulted in preterm birth, is one of the biggest risk factors for preterm birth.[307] The figure below shows that the percentage of previous preterm births in the County is trending upward across all racial and ethnic groups. However, Black people have the highest percentage of previous preterm births (4.5% of live births in 2021), placing them at the highest risk for future preterm births. Latinx people have the next highest percentage of previous preterm births at 4.2% of live births in 2021.

[307] "A profile of prematurity of United States,", PeriStats, March of Dimes.

Figure 6.14. Percentage of Previous Preterm Births by Race and Ethnicity, Montgomery County, 2012-2021



Source: DHHS Health Planning and Epidemiology

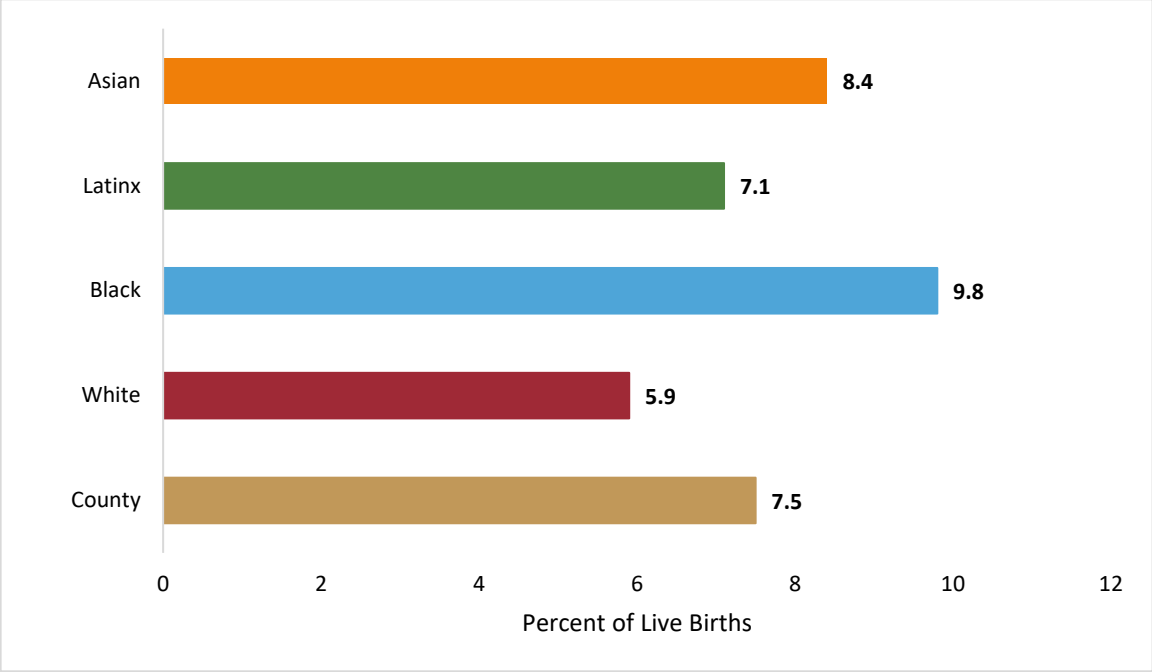
2. Low Birthweight

While not always dangerous, low birthweight, defined as when a baby is born weighing less than 5 pounds, 8 ounces, may pose serious health risks to an infant. Babies who are born very small may have difficulty eating and gaining weight, making it harder for them to fight off infection.[308] Research also shows that low birthweight accounts for 20% of all infant deaths within their first year.[309]

The figure below shows Black infants have the highest percentage of low birthweight than any other racial or ethnic group in Montgomery County. From 2017 to 2021, 9.8% of Black infants born in the County had low birthweight, compared to just 5.9% of White infants (the County average was 7.5%).

[308] "Low birthweight," March of Dimes.
[309] Committee to Study the Prevention of Low Birthweight, Preventing Low Birthweight, Part 1, chap. 1., Division of Health Promotion and Disease Prevention, Institute of Medicine, National Academies Press, 1985.

Fig. 6.15. Percentage of Low Birthweights by Race and Ethnicity, Montgomery County, 2017-2021



Source: DHHS Health Planning and Epidemiology

3. Fetal and Infant Mortality

Fetal mortality[310] refers to the death of a fetus at 20 weeks of gestation or more, whereas infant mortality refers to the death of an infant before one year of age.

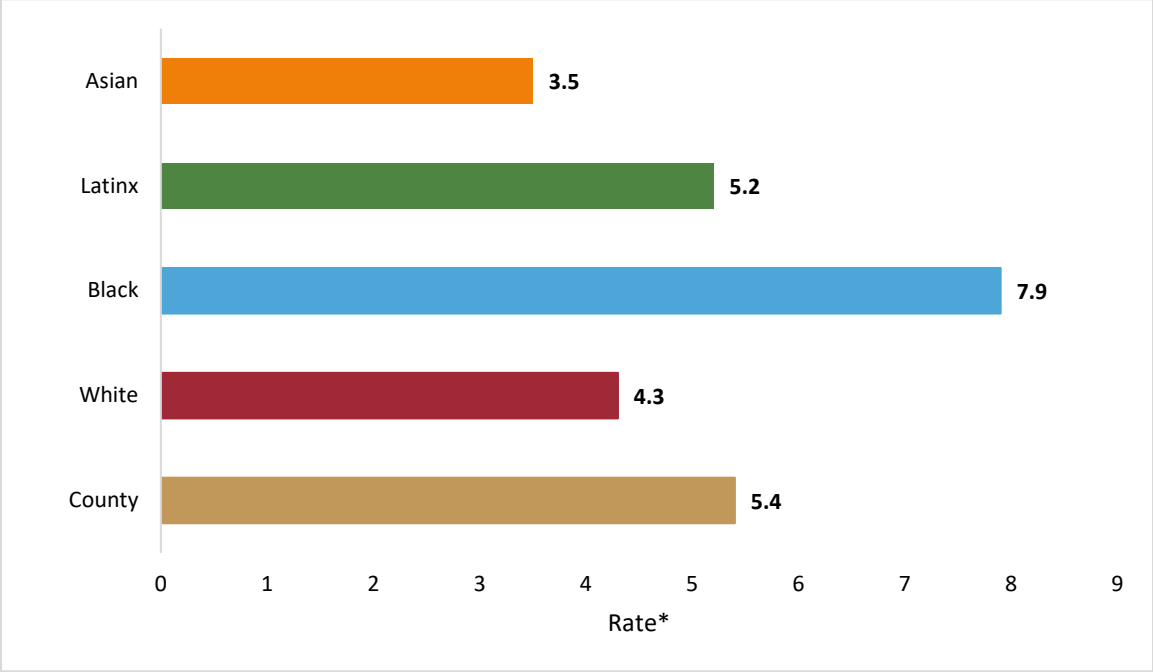
Data compiled by the Montgomery County Fetal and Infant Mortality Review Board Community Action Team show that in 2021, the top three causes of fetal death in the County were:[311]

- Unknown (accounted for 38% of all fetal deaths);
- Placenta and/or cord complications (accounted for 24% of deaths); and
- Maternal condition and/or disease, including hypertension, fibroids, preeclampsia, and one case of COVID-19 (accounted for 16% of deaths).

The figure below displays fetal mortality rates (the number of fetal deaths per 1,000 live births plus fetal deaths) by race and ethnicity. Again, rates are much higher for Black individuals than for any other racial and/or ethnic group in the County. From 2017-2021, the Black fetal mortality rate was 7.9 compared to 4.3 for White individuals, 5.2 for Latinx individuals, and 3.5 for Asian individuals.

[310] Other terms used to describe fetal death include miscarriage, pregnancy or fetal loss, or stillbirth.
[311] Montgomery County, MD Improved Pregnancy Outcomes Program Fetal & Infant Mortality Review Board Community Action Team, Fiscal Year 2022 Annual Report, pg. 20.

Figure 6.16. Fetal Mortality Rates by Race and Ethnicity, Montgomery County, 2017-2021



Source: DHHS Health Planning and Epidemiology and MDH Vital Statistics Administration
*Fetal mortality rate = number of fetal deaths per 1,000 live births plus fetal deaths.

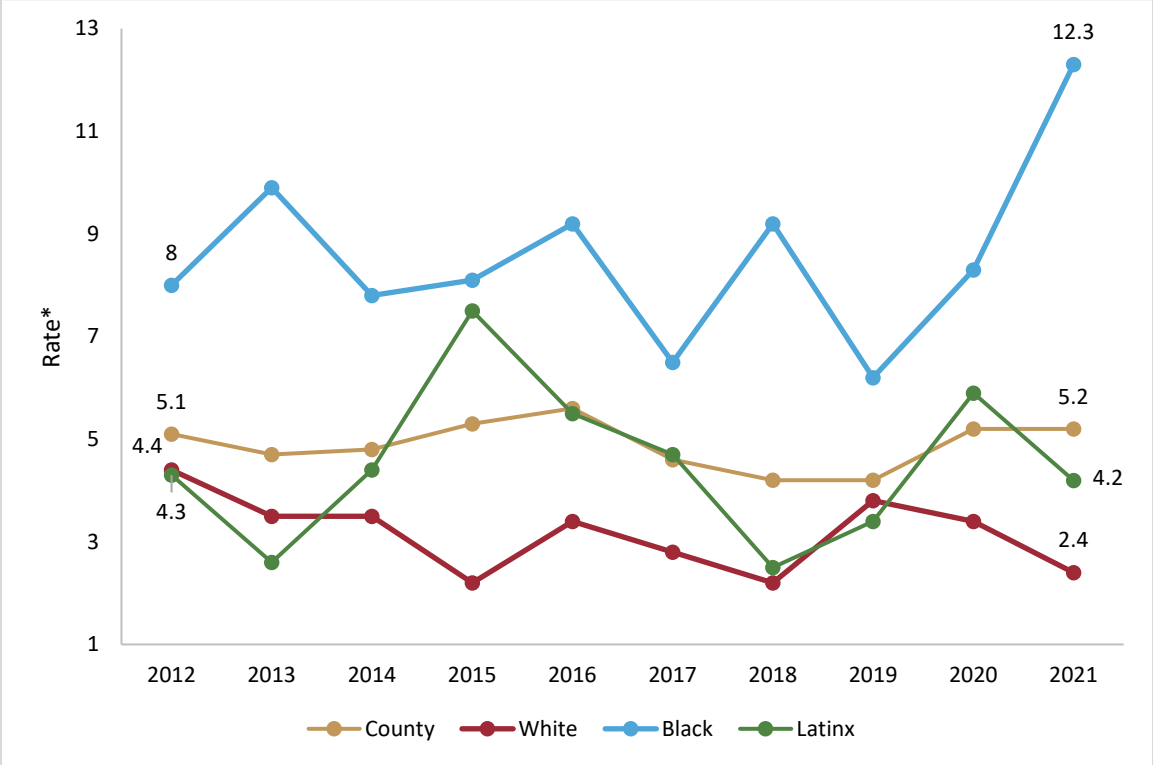
The Montgomery County Fetal and Infant Mortality Review Board Community Action Team reports the leading causes of infant death in Montgomery County in 2021 were:[312]

- Extreme prematurity (accounted for 53% of all infant deaths);
- Congenital anomalies (accounted for 16% of deaths); and
- Sudden Unexplained Infant Death (SUID) (accounted for 10% of deaths).

Infant mortality rates, shown in the figure below, make apparent once again that there are inequitable health outcomes for Black birthing people and infants in the County. The mortality rate among babies born to Black individuals is 3 times higher than rates for Latinx babies, and 5 times higher than for White babies. Moreover, while the White infant mortality rate declined from 3.8 in 2019 to 2.4 in 2021, the mortality rate for Black infants nearly doubled during this same period, from 6.2 to 12.3.

[312] Ibid.

Figure 6.17. Infant Mortality Rates by Race and Ethnicity, Montgomery County, 2012-2021



Source: DHHS Health Planning and Epidemiology and MDH Vital Statistics Administration
Data are not provided for Asian infant deaths because the number of events is too low to calculate a reliable rate.
*Infant mortality rate = number of infant deaths per 1,000 live births

Chapter 7. Perinatal Providers and Services in Montgomery County

This chapter describes the health care providers, facilities, and services available to birthing people and their families in Montgomery County. It is organized as follows:

- **Section A** analyzes individual maternal health care providers in the County, including their geographic distribution and demographic characteristics;
- **Section B** presents information on the five birthing hospitals in Montgomery County; and
- **Sections C and D** discuss the levels of perinatal care available at freestanding birth centers and community health centers.

A. Individual Providers

The following describes the types of providers that offer maternal health care and services to birthing people. In addition to the providers below, primary care doctors may also offer some prenatal care services (e.g., regular checkups, blood tests, etc.), especially for low-risk pregnancies.

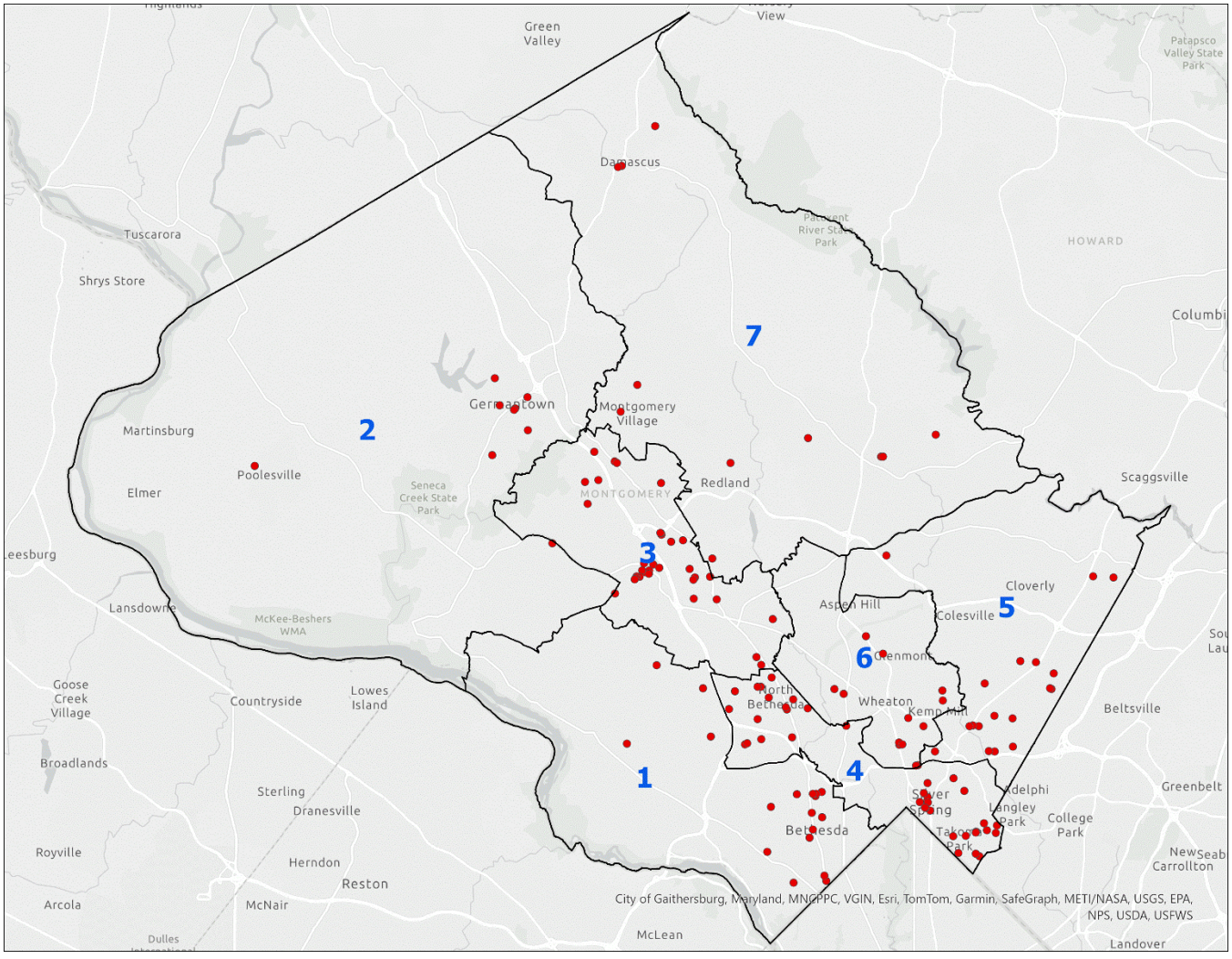
- **Obstetrician and Gynecologist (OB/GYN):** Most birthing people access perinatal health services from an OB/GYN, a physician who specializes in pregnancy and childbirth;
- **Maternal-Fetal Medicine (MFM) Specialist:** Individuals with complex conditions may seek care from an obstetrician specializing in maternal-fetal medicine (MFM). MFM specialists focus on managing the health concerns of a high-risk pregnant person and their unborn baby before, during, and immediately after pregnancy;
- **OB/GYN Nurse Practitioner (OB/GYN NP):** Specialized nurse practitioners who work with obstetricians;
- **Midwives:** Certified *nurse* midwives are advanced practice registered nurses specializing in comprehensive women's reproductive care, including gynecological services, family planning, prenatal care, childbirth, and postpartum care.[313] "Midwife hospitalists" are certified nurse midwives who specialize in providing inpatient labor and delivery care within a hospital setting and who work in close collaboration with OB/GYNs. Certified *professional* midwives are not nurses but are credentialed by the North American Registry of Midwives. In the United States, midwives typically manage low-risk pregnancies and attend far fewer births than in other wealthy nations where midwifery-led models of care are the norm.[314] (The benefits of midwifery-led care, especially for Black birthing people, are discussed in Chapter 5); and

[313] "What is a Certified Nurse-Midwife?," Frontier Nursing University; "Nurse Midwife," Mayo Clinic College of Medicine and Science; "Nurse-Midwife," California Board of Registered Nursing.
[314] Willem Roper (November 20, 2020), "U.S. Midwife Workforce Far Behind Globally," Published on Statista.com.

- **Doula:** An individual who provides guidance during pregnancy and childbirth. Doulas do not have formal obstetric training, but they offer their clients physical, emotional, and informational support before, during, and after pregnancy, and can help advocate for their clients' needs to healthcare providers.[315]

Geographic Distribution of Maternal Healthcare Providers. According to data from the Centers for Medicare and Medicaid Services (CMS) National Plan and Provider Enumeration System (NPPES), there are 387 total individual maternal healthcare providers in Montgomery County. This comprises OB/GYNs, MFMs, OB/GYN NPs, midwives, and doulas. The Council District map below shows the locations of these providers' practices. Providers are primarily concentrated along the I-270 and Route 29 corridors, with clusters near Shady Grove Medical Center and in the Silver Spring Central Business District.

Map 7.1. Individual Maternal Healthcare Providers in Montgomery County by Council District



[315] Maternal Mortality Is on the Rise, 2023; "Having a Doula – What are the Benefits?," American Pregnancy Association.

Source: Centers for Medicare and Medicaid Services (CMS) National Plan and Provider Enumeration System (NPPES)

Table 7.1. displays the number and types of maternal healthcare providers in each Council District. The data reveal the following regional variations in the availability of different types of providers across the County:

- **Providers are concentrated in Mid and Downcounty**. Districts 3 and 4 have the highest concentration of maternal healthcare providers, with District 3 leading in OB/GYNs, MFM specialists, and OB/GYN NPs, and District 4 having a significant share of doulas and midwives.
- **Most maternal healthcare providers are OB/GYNs.** OB/GYNs make up the majority of maternal healthcare providers in the County (74%), with Districts 1, 3, and 4 having the highest numbers. Districts 2 and 5 have notably fewer OB/GYNs, with District 2 having just 2% of all OB/GYNs in the County, and District 5 having 9% of all OB/GYNs in the County.
- **Limited presence of midwives**. Midwives constitute only 4% of all maternal healthcare providers in the County, with Districts 4 and 7 having the most. OB/GYNs far outnumber midwives in the County by a ratio of nearly 19 to 1.

Table 7.1. Individual Maternal Healthcare Providers by Council District

Council District	OB/GYN					District Totals
	OB/GYN	MFM	NP	Midwife	Doula	
1	59	3	3	0	2	**67**
2	7	1	0	1	2	**11**
3	59	9	5	1	11	**85**
4	56	1	1	5	17	**80**
5	26	4	1	2	8	**41**
6	44	2	4	3	7	**60**
7	35	0	0	5	3	**43**
Provider Totals	**286**	**20**	**14**	**17**	**50**	**387**

Source: Centers for Medicare and Medicaid Services (CMS) National Plan and Provider Enumeration System (NPPES)

Geographic Disparities by Race and Ethnicity. To analyze whether racial and ethnic disparities exist in the distribution of maternal healthcare providers in the County, OLO compared the above data to each Council District's racial and ethnic profile, displayed in Table 7.2 below. Key findings from the data include:

- **Districts with the fewest providers have high proportions of BIPOC residents.** District 2 has the fewest maternal healthcare providers in the County, with only 11 total providers. The district's population is 67% BIPOC. Specifically, Asian residents make up 24% of District 2's population, which is higher than the County's overall Asian population (15%). Black residents also make up 19% of District 2's population, which is proportional to the County's overall Black population (18%).

District 5 has the second fewest maternal healthcare providers in the County, with a total of 41 providers. It is a majority BIPOC district and has the highest share of Black residents in the County. Specifically, 37% of District 5's population is Black, compared to 18% in the County overall. Additionally, Latinx residents make up 21% of District 5's population, which is proportional to the County's overall percentage of 20%.

- **Districts with the most providers are also racially and ethnically diverse.** Districts 3 and 4 have the highest numbers of maternal healthcare providers in the County, including the most OB/GYNs and doulas. Both districts are majority BIPOC and have racial and ethnic compositions that generally resemble the County's overall demographic. However, District 3 has a higher proportion of Asian (20%) and Latinx (22%) residents compared to the County's population (15% and 20%, respectively). Conversely, District 4 has a larger share of White and Black residents (47% and 21%, respectively) than the County overall (40% and 18%, respectively).
- **The only majority White district in the County is tied for the most OB/GYNs.** District 1, which is the only majority White district, is tied with District 3 for the highest number of OB/GYNs (59). The district's population is 65% White.

Table 7.2. Racial and Ethnic Profiles of County Council Districts

Council District	Total Population*	Latinx	White	Black	Asian	Other	BIPOC**
1	155,015	8%	65%	5%	16%	6%	35%
2	158,833	17%	33%	19%	24%	5%	67%
3	158,980	22%	38%	14%	20%	5%	62%
4	145,660	18%	47%	21%	9%	6%	53%
5	148,184	21%	25%	37%	12%	5%	75%
6	145,250	35%	31%	17%	12%	5%	69%
7	150,788	23%	44%	15%	12%	6%	56%
County	**1,062,710**	**21%**	**40%**	**18%**	**15%**	**5%**	**59%**

Source: Montgomery County Council District geodatabase file; Table DP1, 2020 Decennial Census, Census Bureau.
*County population totals in this table vary from totals presented in subsequent tables because the data are tied to the 2020 Decennial Census.
**OLO's calculation of BIPOC constituents includes the Latinx population and Non-Latinx Black, Asian, and Other race populations.

Births by Attendant. While national trends show the number of births attended by midwives is growing overall, the proportion of midwife-attended births varies greatly by state. In Maryland, CDC Natality Records show that between 10-15% of vaginal births were attended by midwifes in 2022.[316] This

[316] Data source: Centers for Disease Control and Prevention, National Center for Health Statistics. National Vital Statistics System, Natality on CDC WONDER Online Database. Data are from the Natality Records 2007-2022, as compiled from data provided by the 57 vital statistics jurisdictions through the Vital Statistics Cooperative Program. Cited from: American College of Nurse-Midwives, *Access to Midwifery Care National Chartbook*. Compiled for ACNM by Dr. Jennifer Vanderlaan.

percentage is much smaller in Montgomery County. Table 7.3 displays the percentage of births attended by physicians and midwives in the County between 2016-2023, broken out by the mother's race and ethnicity. The data show that, on average, only 5% of births in the County were attended by midwives. By comparison, OB/GYNs attended the vast majority of births (over 90%) across all racial and ethnic groups. These statistics are consistent with OLO's previous finding that OB/GYNs far outnumber midwives in the County.

Table 7.3. Births Attended by Physicians and Midwives by Mother's Race and Ethnicity, Montgomery County, 2016-2023

	Physician Attended	Midwife Attended
Total Births	90,733	4,339
Asian	97%	3%
Black	96%	3%
White	92%	8%
Latinx	96%	3%

Source: Centers for Disease Control and Prevention, National Center for Health Statistics. National Vital Statistics System, Natality on CDC WONDER Online Database. Data are from Natality Records 2016-2023, as compiled from data provided by the 57 vital statistics jurisdictions through the Vital Statistics Cooperative Program. Accessed on Jan 30, 2025.

*Birth data are based on where the mother resides. Data exclude a small number of births to individuals of unknown ethnicity.

However, Table 7.3 also demonstrates a notable difference in midwife utilization by race and ethnicity. White mothers in the County used midwives at over twice the rate of other racial or ethnic groups. Eight percent of White births were attended by midwives, compared to 3% of births among Asian, Black, and Latinx people.

Provider Demographics. According to the American Community Survey, there were approximately 5,500 physicians and surgeons (across all specializations, not just obstetrics and gynecology) and approximately 10,000 registered nurses (again, across all specializations) in Montgomery County in 2018. Table 7.4 displays the gender, racial, and ethnic demographics of these providers compared to the County population. The data reveal the following disparities:

- There are almost twice as many male physicians and surgeons as female physicians and surgeons. By contrast, the vast majority of registered nurses (90%) are female;
- Compared to the overall County population, White and Asian physicians and surgeons are overrepresented (60% and 24%, respectively) and Black and Latinx physicians and surgeons are underrepresented (6.5% and 5.7%, respectively); and

- While the largest proportion of registered nurses are White (40.5%), Black registered nurses follow closely at almost 36% and are overrepresented compared to the County's Black population (18.7%). Both Asian and Latinx registered nurses are underrepresented compared to the County population.

Table 7.4. Demographic Characteristics of Physicians and Surgeons, and Registered Nurses – All Specializations, Montgomery County, 2018 and 2023

	Physicians and Surgeons* (2018)	Registered Nurses* (2018)	County Population (2023)
Total	5,470	10,020	1,058,474
Male	63.3%	9.3%	48.7%
Female	36.7%	90.6%	51.3%
Asian	24.0%	12.6%	14.9%
Black	6.5%	35.9%	18.7%
White	59.5%	40.5%	39.4%
Latinx	5.7%	9.0%	21.1%

Source: U.S. Census Bureau, 2018 American Community Survey 5-Year Estimates Equal Employment Opportunity, Tables EEOALL1W, and 2023 ACS 1-Year Estimates Selected Population Profiles, Table S0201
*Data are for physicians, surgeons, and registered nurses across all specializations, not just obstetrics and gynecology.

The data in Table 7.4 show that physicians and surgeons in the County do not reflect the racial and ethnic background of the overall community they serve. This local finding supports national trends that show BIPOC providers are underrepresented among clinical health professionals.[317] As noted in Chapter 3, studies have found receiving racially concordant care, meaning care from providers whose race or ethnicity matches that of the patient, can improve health outcomes for Black, Latinx, and Asian patients.[318] Within the context of maternal healthcare, the underrepresentation of BIPOC in highly specialized clinical roles, such as obstetricians, maternal-fetal specialists, or surgeons, could impact the care experiences of Black and Latinx birthing people who develop or are at high-risk for developing health complications during or after pregnancy.

While the demographics of registered nurses align more closely with those of the County, the above data demonstrate opportunities for more Latinx and Asian representation in nursing overall. The data also highlight an opportunity to increase and diversify the County's midwifery workforce. Specifically, the large numbers of Black registered nurses currently in the County presents a potential pipeline for more trained Black nurse midwives.

[317] *Ending Unequal Treatment: Strategies to Achieve Equitable Health Care and Optimal Health for All*, National Academies of Sciences, Engineering, and Medicine, 2024, pp. 180-181, 185.
[318] Ibid, p. 186.

Data from the American College of Nurse-Midwives show that midwifery is already diversifying at the national level: although the workforce is still predominantly White (84%), recently certified midwives – meaning those certified between 2016-2020 – were more likely to identify as Black, Latinx, or Asian than midwives certified prior to 2016.[319]

B. Birthing Hospitals

Ninety-nine percent of all births in Montgomery County occur in hospitals.[320] The five hospitals in the County that offer labor and delivery services are listed below and displayed on Map 7.2:

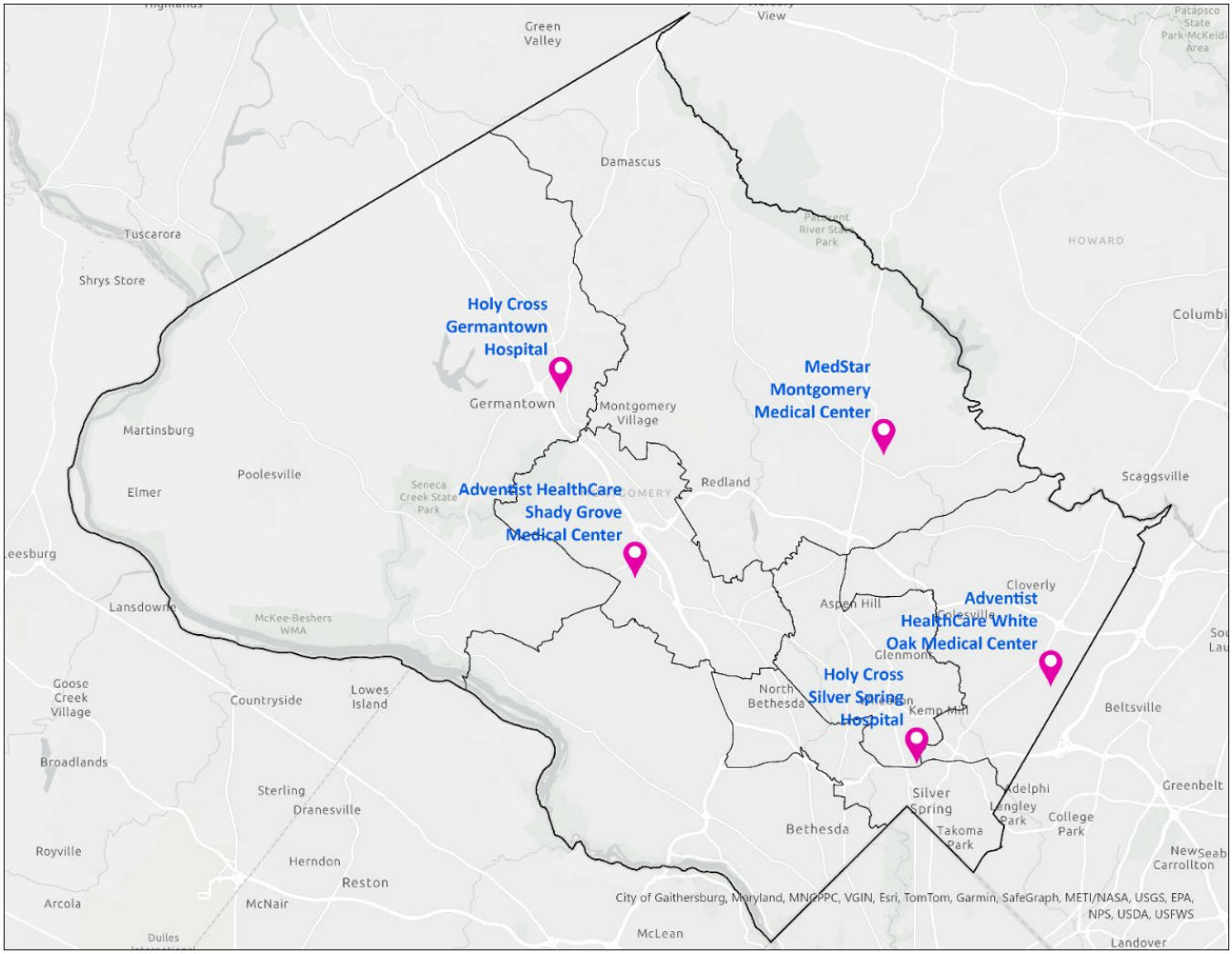
1. Adventist HealthCare Shady Grove Medical Center – 9901 Medical Center Dr, Rockville, MD 20850
2. Adventist HealthCare White Oak Medical Center – 11890 Healing Way, Silver Spring, MD 20904
3. Holy Cross Germantown Hospital – 19801 Observation Dr, Germantown, MD 20876
4. Holy Cross Silver Spring Hospital – 1500 Forest Glen Rd, Silver Spring, MD 20910
5. MedStar Montgomery Medical Center – 18101 Prince Philip Dr, Olney, MD 20832

Births at these five hospitals are attended primarily by OB/GYNs. However, both Adventist HealthCare Shady Grove and Adventist HealthCare White Oak Medical Centers have midwife hospitalists on staff. The midwife hospitalists at Adventist HealthCare Shady Grove attend births for patients at the hospital's Maternal Care Center. Midwife hospitalists at Adventist HealthCare White Oak attend births for patients from Mary's Center and CCI Health Services' prenatal clinics. As described in Section D, Mary's Center and CCI Health Services are two community health centers in the County.

[319] American College of Nurse-Midwives, *Access to Midwifery Care National Chartbook*. Compiled for ACNM by Dr. Jennifer Vanderlaan.

[320] Centers for Disease Control and Prevention, National Center for Health Statistics. National Vital Statistics System, Natality on CDC WONDER Online Database. Data are from Natality Records 2016-2023, as compiled from data provided by the 57 vital statistics jurisdictions through the Vital Statistics Cooperative Program. Accessed on Jan 30, 2025.

Map 7.2. Birthing Hospitals in Montgomery County



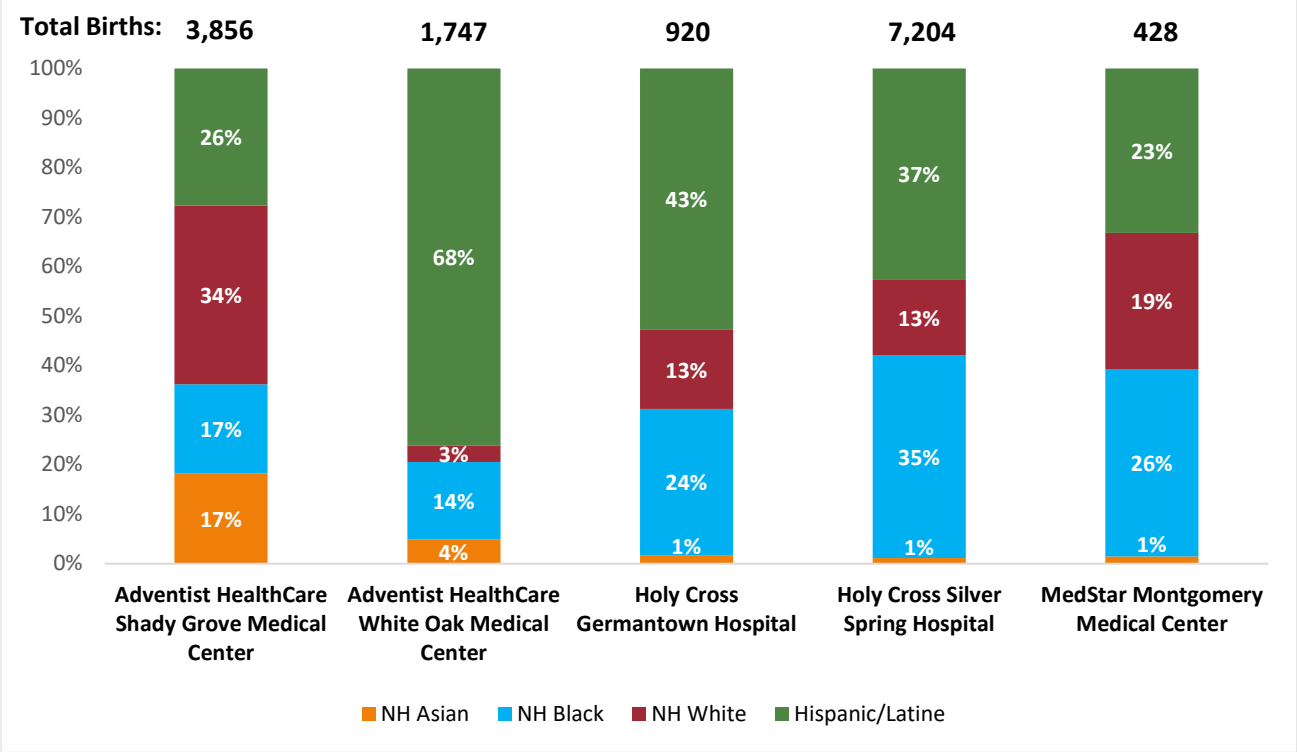
Source: [Resource Map | MD Maternal Health Resource Map]

According to data from the Maryland Health Services Cost Review Commission, 14,155 babies were born in these hospitals in 2024. Figure 7.1 displays the distribution of births by race and ethnicity by hospital. The data reveal large variations in both the volume and demographics of births across hospitals:

- Half of all hospital births in 2024 (7,204 of the total 14,155 births) took place at Holy Cross Silver Spring Hospital;
- Latinx births make up the largest percentages of births at three of the five birthing hospitals – 68% at Adventist HealthCare Shady Grove Hospital, 43% at Holy Cross Germantown Hospital, and 37% at Holy Cross Silver Spring Hospital;
- The largest percentages of Black births occur at Holy Cross Silver Spring Hospital (35%) and MedStar Montgomery Medical Center (26%); and

- Adventist HealthCare Shady Grove is the only hospital in the County where the largest percentage of births are White (34%).

Figure 7.1. Births by Race and Ethnicity by Hospital, Montgomery County, 2024



Source: Maryland Health Services Cost Review Commission, Maryland Department of Health.

Levels of Maternal Care. Developed jointly by the American College of Obstetricians and Gynecologists (ACOG) and the Society for Maternal-Fetal Medicine, levels of maternal care classify maternity facilities based on standardized descriptions of the facility's capabilities and personnel. According to ACOG:

> The goal of levels of maternal care is to reduce maternal morbidity and mortality, including existing disparities, by encouraging the growth and maturation of systems for the provision of risk-appropriate care specific to maternal health needs. Central to systems is the development of collaborative relationships between hospitals of differing levels of maternal care in proximate regions, which ensures that every maternity hospital has the personnel and resources to care for unexpected obstetric emergencies, that risk assessment is judiciously applied, and that consultation and referral are readily available when high-risk care is needed.[321]

[321] "Levels of Maternal Care," The American College of Obstetricians and Gynecologists.

The classification system establishes five levels of care, defined below. Each higher level of care includes and improves upon the capabilities of the lower levels:[322]

- Accredited Birth Center: Care for low-risk women with uncomplicated singleton term vertex[323] pregnancies who are expected to have an uncomplicated birth.
- Level I (Basic Care): Care of low- to moderate-risk pregnancies with the ability to detect, stabilize, and initiate management of unanticipated maternal-fetal or neonatal problems that occur during the antepartum, intrapartum, or postpartum period until the patient can be transferred to a facility at which the specialty maternal care is available.
- Level II (Specialty Care): Level I facility plus care of appropriate moderate- to high-risk antepartum, intrapartum, or postpartum conditions.
- Level III (Subspecialty Care): Level II facility plus care of more complex maternal medical conditions, obstetric complications, and fetal conditions.
- Level IV (Regional Perinatal Health Care Centers): Level III facility plus on-site medical and surgical care of the most complex maternal conditions and critically ill pregnant women and fetuses throughout antepartum, intrapartum, and postpartum care.

Table 7.5 below outlines the level of maternal care provided at each of the County's birthing hospitals. As the table indicates, all five birthing hospitals in Montgomery County are at minimum Level II facilities offering specialty care. Two hospitals – Holy Cross Silver Spring Hospital and Adventist HealthCare Shady Grove Medical Center – are Level III facilities offering subspecialty care.

Table 7.5. Levels of Maternal Care at Birthing Facilities in Montgomery County

Hospital	Level of Maternal Care
Adventist HealthCare Shady Grove Medical Center	Level III (Subspecialty Care)
Adventist HealthCare White Oak Medical Center	Level II (Specialty Care)
Holy Cross Germantown Hospital	Level II (Specialty Care)
Holy Cross Silver Spring Hospital	Level III (Subspecialty Care)
MedStar Montgomery Medical Center	Level II (Specialty Care)

Source: Maryland Maternal Health Innovation Program (MDMOM), Resource Map.

Maryland has two Regional Perinatal Health Care Centers (Level IV facilities), both of which are in Baltimore: University of Maryland Medical Center and Johns Hopkins Hospital. The District of Columbia

[322] Ibid.

[323] The term "vertex" is a medical term describing the ideal position for a fetus to be in for a vaginal birth, namely head down with the chin tucked in and facing the birthing person's spine. "Vertex Presentation: Position, Birth & What It Means," Cleveland Clinic.

has two Level IV maternal facilities: MedStar Georgetown University Hospital and Children's National Hospital.

Hospital Quality and Ratings. Birthing people seeking information on the quality of maternity care at different hospitals in Montgomery County have access to publicly available hospital performance ratings. The Maryland Health Care Commission (MHCC) is an independent state regulatory agency that reports quality of care data on the healthcare system, including maternity care in hospitals.[324] Data are published on their Maryland Quality Reporting website, and include:[325]

- **Overall quality ratings from the Centers for Medicare & Medicaid Services (CMS).** CMS is responsible for ensuring hospitals meet federal quality standards to participate in Medicare and Medicaid programs;
- **Scores for select maternal and infant care measures.** These scores are calculated from data from the Agency for Healthcare Research and Quality (a federal agency within the U.S. Department of Health and Human Services), and from CMS Hospital Care Compare; and
- **"Birthing-Friendly" designation**. CMS developed the "Birthing-Friendly" designation to identify hospitals and health systems that participate in a statewide or national perinatal quality improvement collaborative program and implement evidence-based care to improve maternal health. Hospitals deemed Birthing-Friendly are given a designation icon on CMS's Care Compare online tool.[326] CMS has designated all five birthing hospitals in Montgomery County as Birthing-Friendly. (See Chapter 4 for more information about the CDC Perinatal Quality Collaboratives Program).

Table 7.6 on pages 117-118 displays MHCC's scores for maternal and infant care quality for the five birthing hospitals in Montgomery County. The table presents each hospital's CMS overall quality rating (out of five stars) and compares its performance in eight different maternal and infant care measures to the state average.

As the table shows, three hospitals, Adventist HealthCare Shady Grove Medical Center, Holy Cross Germantown Hospital, and Holy Cross Silver Spring, received a 2-star CMS Overall Quality rating, while the remaining two hospitals received a 3-star CMS Overall Quality rating.

Two hospitals, Adventist HealthCare Shady Grove Medical Center and Holy Cross Silver Spring Hospital, scored worse than the state average in at least one of the eight maternity care quality measures. Adventist HealthCare Shady Grove Medical Center performed worse in its rate of vaginal deliveries after a cesarean section, and Holy Cross Silver Spring Hospital scored worse in its rates of maternal injuries

[324] "About Us," Maryland Health Care Commission.
[325] Maryland Quality Reporting, Maryland Health Care Commission.
[326] "Biden-Harris Administration Launches 'Birthing-Friendly' Designation on Web-Based Care Compare Tool," Centers for Medicare and Medicaid Services, Press Release, Nov. 2023.

after vaginal delivery (with and without assistance with an instrument), its rate of cesarean sections for first-time births, and its overall percentage of cesarean sections. All other birthing hospitals in Montgomery County performed either the same or better than the state average in all eight quality measures.

Notably, Holy Cross Silver Spring Hospital, which handles the majority of births in the County, has the highest rates of cesarean sections for first-time births, injuries to the birthing person after delivery, and deliveries scheduled earlier than medically necessary, of any birthing hospital in the County. However, it should also be noted that Holy Cross Silver Spring Hospital, along with Adventist HealthCare Shady Grove Medical Center, is one of the County's two Level III facilities, meaning it is equipped to handle labor and deliveries involving more complex medical conditions, obstetric complications, and fetal conditions. Therefore, its poorer scores relative to other birthing hospitals in the County may be correlated to serving higher-risk birthing populations.

Table 7.6. Maryland Health Care Commission (MHCC) Maternity Care Ratings for Birthing Hospitals in Montgomery County

Hospital Maternal and Infant Care Measure	CMS Overall Rating	Hospital Score	Comparison to Maryland
Adventist HealthCare Shady Grove Medical Center	★★		
Rate of injuries to baby^		7.0	Same as MD
Rate of maternal injuries after vaginal delivery (w/instrument) ^		117.6	Same as MD
Rate of maternal injuries after vaginal delivery (w/out instrument) ^		18.6	Same as MD
Cesarean section rate for first-time mothers		17.1%	Same as MD
Vaginal delivery rate after cesarean section (no complications)		12.5%	Worse than MD
Deliveries scheduled 1-3 weeks earlier than medically necessary		0.0%*	Better than MD
Percentage of births that are cesarean section		30.2%	Same as MD
Birthing-Friendly		✓	-
Adventist HealthCare White Oak Medical Center	★★★		
Rate of injuries to baby^		6.6	Same as MD
Rate of maternal injuries after vaginal delivery (w/instrument) ^		157.9	Same as MD
Rate of maternal injuries after vaginal delivery (w/out instrument) ^		7.4	Better than MD
Cesarean section rate for first-time mothers		14.8%	Better than MD
Vaginal delivery rate after cesarean section (no complications)		19.9%	Same as MD
Deliveries scheduled 1-3 weeks earlier than medically necessary		0.0%*	Better than MD
Percentage of births that are cesarean section		27.3%	Better than MD
Birthing-Friendly		✓	-
Holy Cross Germantown Hospital	★★		
Rate of injuries to baby^		3.9	Same as MD
Rate of maternal injuries after vaginal delivery (w/instrument) ^		24.4	Better than MD
Rate of maternal injuries after vaginal delivery (w/out instrument) ^		10.6	Same as MD
Cesarean section rate for first-time mothers		17.9%	Same as MD
Vaginal delivery rate after cesarean section (no complications)		17.6%	Same as MD
Deliveries scheduled 1-3 weeks earlier than medically necessary		0.0%*	Better than MD
Percentage of births that are cesarean section		27.6%	Better than MD
Birthing-Friendly		✓	-

Source: Maryland Quality Reporting, Maryland Health Care Commission.

* Data submitted were based on a sample of cases/patients.

^ Rate = event per 1,000 cases

Table 7.6., continued

Hospital Maternal and Infant Care Measure	CMS Overall Rating	Hospital Score	Comparison to Maryland
Holy Cross Silver Spring Hospital	★★		
Rate of injuries to baby^		6.4	Same as MD
Rate of maternal injuries after vaginal delivery (w/instrument) ^		178.6	Worse than MD
Rate of maternal injuries after vaginal delivery (w/out instrument) ^		21.4	Worse than MD
Cesarean section rate for first-time mothers		19.4%	Worse than MD
Vaginal delivery rate after cesarean section (no complications)		16.7%	Same as MD
Deliveries scheduled 1-3 weeks earlier than medically necessary		7.0%*	Same as MD
Percentage of births that are cesarean section		31.4%	Worse than MD
Birthing-Friendly		✓	-
MedStar Montgomery Medical Center	★★★		
Rate of injuries to baby^		3.8	Same as MD
Rate of maternal injuries after vaginal delivery (w/instrument) ^		0.0	Better than MD
Rate of maternal injuries after vaginal delivery (w/out instrument) ^		20.6	Same as MD
Cesarean section rate for first-time mothers		13.3%	Better than MD
Vaginal delivery rate after cesarean section (no complications)		19.4%	Same as MD
Deliveries scheduled 1-3 weeks earlier than medically necessary		5.0%	Same as MD
Percentage of births that are cesarean section		28.2%	Same as MD
Birthing-Friendly		✓	-

Source: Maryland Quality Reporting, Maryland Health Care Commission.

* Data submitted were based on a sample of cases/patients.

^ Rate = event per 1,000 cases

C. Freestanding Birth Centers

A freestanding birth center is a health facility where a person gives birth separate from a hospital or the person's home. Freestanding birth centers typically provide perinatal care and labor and birth services for low-risk pregnancies using the midwifery model of care (described in Chapter 5). However, freestanding birth centers partner with nearby hospitals and doctors to provide more specialized or emergency care when needed.[327] There are no freestanding birth centers in Maryland. The last freestanding birth center in the state was closed by Luminis Health in January 2023. Luminis Health has since re-opened the facility but as part of its Anne Arundel Medical Center.[328]

D. Community Health Centers

Birthing people with low incomes or who are uninsured can receive some services at community health centers throughout the County. Three of the five birthing hospitals in the County are safety-net providers, meaning they deliver a significant level of health care and other services to community members who are uninsured or Medicaid-enrolled, and other at-risk populations.[329] Adventist HealthCare Shady Grove Medical Center in Rockville, Holy Cross Hospital in Silver Spring, and MedStar Montgomery Medical Center in Olney each operate community health centers where individuals who are pregnant or want to become pregnant may seek women's health services. Two community health centers in the County, Mary's Center and CCI Health Services, offer prenatal services.

[327] "What is a Birth Center?," American Association of Birth Centers; Karen S. Fennell, Summary Presentation, Maryland Midwives Work Group, American Association of Birth Centers, August 2012.
[328] "Find a Birth Center," American Association of Birth Centers; "Petition: Reopen Luminis Health Midwifery's Birth Center (formerly Bay Area Midwifery)," Change.org; "Frank Family Birth Center at Luminis Health Anne Arundel Medical Center," Luminis Health.
[329] "Topic: Safety Net," Agency for Healthcare Research and Quality.

Chapter 8. County Government Maternal and Infant Health Programs

The County Department of Health and Human Services (DHHS) Maternal and Child Health (MCH) Program provides preventative health care services to pregnant and parenting families primarily through home-based case management and educational programs. As DHHS describes in *Maternal and Infant Health in Montgomery County, Maryland 2012-2021*:

> Providing case management during home visits can help build trusting relationships between home visitors and families providing the optimal environment to support young families. The home visitor can provide in-person education on topics such as how to have a safe pregnancy, signs and symptoms of labor, breastfeeding, infant safe sleep, and the warning signs of postpartum [depression] among many others.[330]

In addition to home visitation services, classes, and trainings, the MCH Program also provides screening and care coordination for new Medicaid enrollees, reviews of fetal and infant deaths through the Fetal and Infant Mortality Review Program (FIMR), and immunizations for infants and children.[331] The MCH Program's total approved FY25 operating budget is $9,212,188.[332]

This chapter describes three of MCH's maternal home visiting programs, as follows:

- **Section A** discusses the Montgomery Perinatal Program (MPP);
- **Section B** discusses the Babies Born Healthy (BBH) Program;
- **Section C** discusses the Start More Infants Living Equally (SMILE) Program; and
- **Section D** summarizes perspectives from a BBH and SMILE participant focus group.

BBH and SMILE specifically target Black and African American families. BBH prioritizes serving pregnant Black individuals who receive Medicaid and live in areas of the County where the population is at the highest risk for adverse pregnancy-related outcomes. Eligibility for the SMILE Program is restricted to Black and African American families but open to all income levels. MPP, which is MCH's largest maternal home visiting program, is not aimed at a particular racial or ethnic group but primarily serves Medicaid-enrolled birthing people of Latinx origin.[333] Figure 8.1 and Table 8.1 on page 122 summarize the number of birthing people served by these three programs each year and the services they offer.

All three home visiting programs are administered by registered nurses and community health workers (CHWs), who are classified as Community Service Aids (CSAs). CSAs undergo an

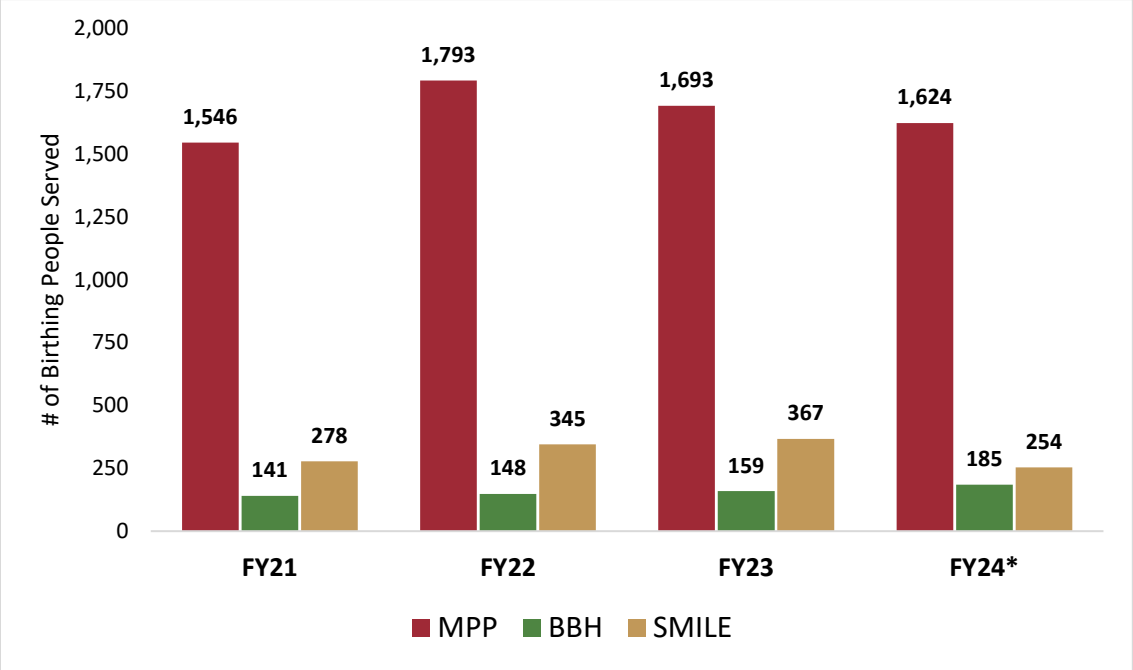
[330] DHHS, Maternal and Infant Health in Montgomery County, 2012-2021.
[331] Ibid.
[332] FY2025 Approved Operating Budget, Montgomery County, Maryland, Office of Management and Budget, July 2024.
[333] Interviews with DHHS staff.

approximately six-month training process that includes shadowing nurses and other CSAs, familiarizing themselves with the communities they will serve, and performing supervised home visits. All current CSAs have completed a Community Health Worker and Home Visiting training program accredited by the Maryland Department of Health.[334] Additionally, two MCH staff members are International Board Certified Lactation Consultants[335] and ten staff members are Certified Lactation Counselors.[336]

MCH strives to hire CSAs from within the communities that the position will serve.[337] For example, all CSAs in the BBH Program are African or African American. Additionally, MCH works to maintain a balance of speakers on staff who represent the diverse languages spoken by the communities they serve. Currently, MCH employs nurses and CSAs who speak Amharic, French, Haitian Creole, Portuguese, Spanish, Swahili, and Tigrinya.

[334] "Home Visiting Training Program | UMBC MIECHV," University of Maryland, Baltimore County ; "Community Health Worker Certification Training Program Accreditation," Maryland Department of Health, Community Health Workers.
[335] The International Board Certified Lactation Consultant credential is issued by the International Board of Lactation Consultant Examiners (IBLCE). "About IBLCE," International Board of Lactation Consultant Examiners.
[336] DHHS, Maternal and Infant Health in Montgomery County, 2012-2021.
[337] MCH staff underscored that all CSA recruitment and hiring follows Montgomery County fair hiring protocols.

Figure 8.1. Birthing People Served by MCH Home Visiting Programs, FY21-FY24



Source: DHHS, Maternal and Child Health Program and African American Health Program
*First year of Healthy Babies Equity Act

Table 8.1. Summary of Services Provided by MPP, BBH, and SMILE

Services
Case management and care coordination
Classes/resources/support for pregnancy, childbirth, and parenting
Health screenings/assessments
Home visits (by public health nurses, community health workers, and/or lactation consultants)
Medicaid assistance as needed (i.e., enrollment, information, etc.)
Mental and behavioral health support/resources
Referrals to healthcare providers (i.e., prenatal, postpartum, and primary care)
Referrals to social/community services
Wrap-around support services (e.g., transportation, childcare)

Source: DHHS, *Maternal and Infant Health in Montgomery County, 2012-2021.*

A. Montgomery Perinatal Program (MPP)

The Montgomery Perinatal Program (MPP) provides home-based case management and prenatal classes to low-income pregnant and parenting families in the County who receive Medicaid or are without health insurance. MPP's total approved operating budget for FY25 is $5,239,511.[338] The program offers the following services:[339]

- Help accessing prenatal, postpartum, and primary care;
- Help with Medicaid enrollment;
- Health screenings and assessments (e.g., depression, intimate partner violence, substance abuse, social determinants of health);
- Home visits by public health nurses and/or Community Health Workers;
- Social service and health referrals (e.g., WIC, dental, behavioral health, food, housing, substance abuse services, crisis services);
- Classes on prenatal and postpartum care, postpartum danger signs, infant health, parenting, and family planning;
- Support preparing for the baby (including equipment), and breastfeeding support;
- Helping parents return to work/school; and
- Coordinating care with providers throughout a client's pregnancy.

Program History and Healthy Babies Equity Act. Between 1989 and 2024, MPP was known as the Maternity Partnership Program, a public-private partnership between DHHS, Holy Cross Hospital, Adventist Hospital, and Mary's Center that provided healthcare services to uninsured pregnant and postpartum individuals with low incomes. As explained in *Maternal and Infant Health in Montgomery County, MD, 2012-2021*, "DHHS provided the enrollment services, home based case management services, in-person prenatal classes, and dental care, while the hospitals and clinics provided comprehensive prenatal care."[340] The program served approximately 1,600 uninsured pregnant and postpartum individuals in the County each year. Because most of the County's uninsured population were undocumented individuals who did not qualify for Medicaid, 95% of the Maternity Partnership Program's participants were Latinx immigrants from Central America.[341]

On July 1, 2023, the Healthy Babies Equity Act went into effect, expanding Medicaid eligibility to all pregnant individuals living in Maryland who are 250% or below the federal poverty level, regardless of immigration status. Now, all uninsured pregnant people with low incomes in the County who would have otherwise received perinatal services through the Maternity Partnership Program can enroll in

[338] DHHS program data.
[339] DHHS, Maternal and Infant Health in Montgomery County, 2012-2021.
[340] Ibid.
[341] Dr. Kisha Davis, Chief Health Officer, Department of Health and Human Services, Bi-Annual Update from the Health Officer, Board of Health, Montgomery County Government, June 11, 2024 [hereinafter "Bi-Annual Update from the Health Officer, June 11, 2024"].

Medicaid and receive comprehensive medical care during their pregnancies and up to four months after their babies are born. This includes prenatal care, dental services, behavioral health services, hospitalization, and specialty care. Because the new law made the Maternity Partnership Program redundant, MCH ended the program and worked with participants to enroll in Medicaid.[342]

To ensure all Medicaid-eligible birthing people receive timely access to prenatal care and continue to receive home visiting services, MCH created the Perinatal Administrative Care Coordination Team (PACCT). The PACCT contacts newly eligible Medicaid recipients to educate them about their Medicaid benefits, help them select an OB/GYN, and connect them to other local health resources. The PACCT also screens individuals for high-risk factors such as depression, intimate partner violence, social determinants of health, and/or medical issues, and refers to them to the appropriate MCH home visiting program – MPP, BBH, or SMILE.[343] In a June 2024 presentation to the Board of Health, the County's Health Officer reported that since starting the PACCT, MCH has seen an increase in the number of Black moms and birthing people referred to BBH and SMILE.[344]

The Montgomery Perinatal Program (MPP) replaced the Maternity Partnership Program. The MPP continues to provide home-based case management services and prenatal and postpartum classes for pregnant people and parents with low incomes. However, because participants now receive comprehensive prenatal care under Medicaid, the program no longer partners with local hospitals and clinics to provide these services. The program now helps pregnant individuals enroll in Medicaid and access primary care once their Medicaid eligibility ends after four months. MPP retains the same budget for staff and other associated administrative costs as the previous program, but no longer reimburses clinics to provide prenatal care, the cost of which was approximately $1.5 million annually.

Populations Served. Program data received from MCH shows demand for MPP's services has held steady since the Healthy Babies Act went into effect. In FY24 (the first year of the law) MPP served 1,624 clients compared to 1,693 the year before. The program's clientele continues to be predominantly birthing people and parents of Latinx origin: in FY24, 83% of MPP's clients were Latinx. However, because the program can now serve birthing people and parents on Medicaid, MPP has seen an increase in Black participants. In FY24, 7.4% of MPP's clients were Black compared to 3.3% in both FY23 and FY22, and 2.2% in FY21.[345]

Program Outcomes. Recent MPP program outcomes across several key maternal, fetal, and infant health indicators are displayed in Table 8.2 on page 126. MCH staff report that MCH home visiting program goals are linked to Medicaid pregnancy-related outcomes. As such, the table compares

[342] DHHS, Maternal and Infant Health in Montgomery County, 2012-2021; *Maryland Medicaid House Bill 1080 (Healthy Babies Equity Act) Overview*, Maryland Department of Health, June 13, 2023.
[343] MCH staff report that most of its home visiting clients come through the PACCT, but currently all three programs also accept direct referrals from the community, physicians, and hospitals.
[344] Bi-Annual Update from the Health Officer, June 11, 2024; DHHS, Maternal and Infant Health in Montgomery County, 2012-2021.
[345] Bi-Annual Update from the Health Officer, June 11, 2024

program outcomes to birth outcomes for Latinx and Black mothers in the County who are enrolled in Medicaid, as well as for the Latinx and Black birthing populations generally, and for the County's overall birthing population. Program outcomes for maternal deaths are compared to state data, although no MPP participant died due to pregnancy-related complications. Of note, the MPP program data OLO received are not disaggregated by race or ethnicity.

The data in Table 8.2 show the following:

- MPP participants had higher rates of preterm births compared to Latinx and Black mothers with Medicaid, the County's Latinx and Black birthing populations, and the overall birthing population in the County;
- MPP participants had a higher percentage of low birthweight (LBW) babies than Latinx mothers with Medicaid, the County's Latinx birthing population, and the general birthing population; and
- MPP participants had higher fetal mortality rates compared to the County's Latinx and Black birthing populations, as well as the overall birthing population in the County.

These outcomes are consistent with the higher risk factors experienced by MPP clients due to their race, ethnicity, socioeconomic status, health insurance coverage, and immigration status.[346] However, MPP participants did perform better than certain County populations across the following health indicators:

- MPP participants had a lower percentage of LBW babies than both Black mothers with Medicaid and the County's Black birthing population overall;
- MPP participants had a lower percentage of cesarean births than Black mothers both with Medicaid and overall, as well as the general birthing population in the County. Participants had similar cesarean birth rates to the County's Latinx birthing population, but higher rates than Latinx mothers with Medicaid; and
- MPP participants had better outcomes for hospitalizations with severe maternal morbidity (SMM) than both Black birthing people and the birthing population overall in the County.

[346] Ornelas, I.J. et al., *The Health of Undocumented Latinx Immigrants: What We Know and Future Directions*, National Library of Medicine, NIH, *Published in final edited form as:* Annu Rev Public Health. 2020 Apr 2;41:289–308.; *Understanding Population Health and Its Determinants* from *The Future of the Public's Health in the 21st Century*, Institute of Medicine (US) Committee on Assuring the Health of the Public in the 21st Century, National Academies Press, 2002 [hereinafter "*Understanding Population Health and Its Determinants*, National Academies, 2002"]; Improving Care for Socially At-Risk Populations from *Systems Practices for the Care of Socially At-Risk Populations*, Committee on Accounting for Socioeconomic Status in Medicare Payment Programs, National Academies Press, 2016 [hereinafter "*Improving Care for Socially At-Risk Populations*, National Academies, 2016"].

Table 8.2. Program Outcomes, Montgomery Perinatal Program (MPP), FY24 YTD

Health Indicator	MPP	Latinx Medicaid 2016-2023	Black Medicaid 2016-2023	Latinx 2012-2021	Black 2012-2021	Montgomery County 2012-2021
YTD Total Births	904	18,234	9,419	-	-	-
Fetal Deaths per 1,000 Births	7.74	N/A	N/A	3.6	7.2	4.3
Preterm Births	15.4%	9.59%	9.93%	9.8%*	10.3%	9.0%
LBW Babies	8.3%	6.95%	9.48%	7.5%	9.9%	7.4%
Cesarean Births	30.2%	28.7%	40.7%	30.8%	42.0%	34.5%
SMM Hospitalizations	1.99%	N/A	N/A	N/A	3.2%	2.4%
				Latinx in Maryland 2011-2020	**Black in Maryland 2011-2020**	**Maryland 2011-2020**
Maternal Deaths	0%	N/A	N/A	0%	0.01%	0%

Sources: Centers for Disease Control and Prevention, National Center for Health Statistics. National Vital Statistics System, Natality on CDC WONDER Online Database. Data are from Natality Records 2016-2023, as compiled from data provided by the 57 vital statistics jurisdictions through the Vital Statistics Cooperative Program. Accessed on Jan 30, 2025; DHHS, Health Planning and Epidemiology. *Maternal and Infant Health in Montgomery County, MD, 2012-2021*, Montgomery County, Maryland, 2024; Maryland Maternal Mortality Review 2022 Annual Report, Maryland Department of Health.
MPP data is as of August 2024.
*Latinx preterm birth data are from 2017-2021.

B. Babies Born Healthy (BBH)

The Montgomery County Babies Born Healthy (BBH) program is a comprehensive care coordination program initiated by the Maryland Department of Health. The program is aimed at reducing disparities in infant mortality, especially among Black infants. As cited in Chapter 6, Black babies in the County are five times more likely than White babies to die before their first birthday. To address this disparity, BBH connects pregnant and postpartum Black residents who have low incomes with resources to help them stay healthy during and after their pregnancies.

BBH employs public health nurses, community health workers, and lactation consultants to provide clients with case management, home visits, group classes, and mental health check-ins starting at any stage in their pregnancy and ending when their babies are six months old. Program services include:[347]

- Home visitation;
- In-person and virtual education and classes on prenatal care, childbirth, nutrition, breastfeeding/infant feeding, perinatal warning signs, and infant safety;
- Support and resources on parenting and caregiving, postpartum depression, breastfeeding/infant feeding, mental health, substance use, intimate partner violence, and family planning;
- Links to community and social services;
- Transportation and childcare assistance for prenatal care appointments;
- Access to baby gear and care products; and
- Community-based events and classes that involve fathers, grandparents, and other children in pregnancy, childbirth, and family education.

The program began in FY19 and is funded through two grants from the Maryland Department of Health: The Babies Born Healthy Grant and the Home Visiting Expansion Grant.[348] In FY25, the County's total approved operating budget for BBH was $770,973.[349]

BBH reaches the fewest participants of MCH's three home visiting programs. In FY24, BBH served 185 participants (comparatively, MPP served 1,624 participants in FY24, and SMILE served 367 participants

[347] DHHS, Maternal and Infant Health in Montgomery County, 2012-2021; Fiscal Year 2022 Annual Report, Montgomery County, MD Improved Pregnancy Outcomes Program, Fetal & Infant Mortality Review Board Community Action Team [hereinafter "Fiscal Year 2022 Annual Report, FIMR CAT"]; Staff Memorandum, HHS Committee Worksession, Montgomery County Council, March 13, 2023.
[348] DHHS, Maternal and Infant Health in Montgomery County, 2012-2021; Staff Memorandum, HHS Committee Worksession, Montgomery County Council, March 13, 2023.
[349] This amount is inclusive of grant funding and funding for County staff who work with the program.

in FY23.[350]). According to the County Health Officer, there is high demand for BBH's services, and the program often has a wait list. When the BBH program is full, MCH staff refer residents to the MPP.[351]

Populations Served. BBH serves pregnant and postpartum Black individuals enrolled in Medicaid who live in one of the following seven ZIP codes where the population is at highest risk for adverse pregnancy outcomes:

- 20902 (Wheaton);
- 20903 (Hillandale/White Oak);
- 20904 (White Oak/Colesville);
- 20905 (Cloverly);
- 20906 (Aspen Hill);
- 20910 (Silver Spring); and
- 20912 (Takoma Park).

Three of the program's seven targeted ZIP codes, 20903, 20904 and 20905, are in County Council District 5. District 5 has the highest share of Black residents in the County. It also has the second fewest maternal healthcare providers (behind District 2), representing just 11% of total providers in the County.

The remaining four targeted ZIP codes are distributed among District 4 (20910 and 20912), which has one of the highest concentrations of maternal healthcare providers in the County (21% of total providers), and District 6 (20902 and 20906), which has about 16% of all maternal healthcare providers in the County.

[350] Bi-Annual Update from the Health Officer, June 11, 2024
[351] Ibid.

Disparity Hot Spots in the County

A 2019 study published by the DHHS's African American Health Program titled *Racial Disparities in Health Care* finds that the seven ZIP codes BBH serves are also "disparity hot spots." According to the report, disparity hot spots are regions where at least 20% of the population is Black and/or African American, and where, compared to White residents, Black residents experience inequitable outcomes across key health areas including in maternal and infant health.

Notably, the report also identified four ZIP codes in the Upcounty (20886, 20879, 20876, and 20874) and one ZIP code in the East County (20866) as disparity hotspots for maternal, fetal, and infant morbidities and mortality.[352] BBH does not currently serve these areas. These five ZIP codes are in Council Districts with the fewest maternal healthcare providers in the County, namely Districts 2 (3% of total providers), 5 (11% of total providers), and 7 (11% of total providers).

The following summarizes demographic characteristics of BBH participants:[353]

- **All BBH clients are Black.** From FY21 to FY24, 100% of BBH participants identified as Black and/or African American. In FY21 and FY22, no participants identified as Latinx. However, in FY23 and FY24, 1% of participants also identified as Latinx.
- **The majority of BBH clients are immigrants.** 65% of participants were born outside of the United States. Most participants who are foreign born (60%) come from African countries, while 3% are from Caribbean countries and 2% are from Asian countries. These numbers align with data showing immigrants have the majority of births (61%) among Black women in the County.[354]
- **BBH clients tend to be older.** An evaluation of BBH participants from FY22[355] found that more than half (57%) were ages 30 to 39. Data show the risk for pregnancy-related morbidity and mortality increases with age, especially for Black women.[356] This suggests the program is reaching individuals who are at higher risk for poor pregnancy-outcomes.
- **Most BBH clients do not have college degrees.** 47% of Black women in the County have attained a bachelor's degree or higher,[357] compared with 29% of BBH clients from FY22. Since Black birthing people with less education experience higher rates of maternal mortality than

[352] Montgomery County, Maryland, Department of Health and Human Services, Office of Community Affairs, African American Health Program (AAHP), AAHP Geographic Hot Spot Report: Racial Disparities in Health Care, The Health Disparity Hot Spot Identification Initiative (HDHSII), June 2019.
[353] DHHS program data; Uniformed Services University evaluation, *Maternal and Infant Health Indicators- Babies Born Healthy and S.M.I.L.E.*, December 2023.
[354] U.S. Census Bureau, 2023 ACS 1-Year Estimates Selected Population Profiles, Table S0201
[355] The FY22 study population included 147 total participants.
[356] https://www.cdc.gov/nchs/data/nhsr/nhsr166.pdf
[357] U.S. Census Bureau, 2023 ACS 1-Year Estimates Selected Population Profiles, Table S0201

Black birthing people with higher education, this finding suggests the program predominantly serves a higher-risk population. However, Black birthing people with a higher education still experience worse outcomes than White and Latinx birthing people with less education. Data show that college educated Black women are more likely to die from pregnancy-related causes than both White and Latinx women with less than a high school education.[358]

Program Outcomes. The table below displays recent BBH program outcomes across several key maternal and infant health indicators. When compared to outcomes for Black mothers enrolled in Medicaid, Black birthing people overall, and the general birthing population in the County, BBH participants had worse outcomes for percent preterm births and LBW babies. Participants also had a higher percentage of hospitalizations with SMM than the Black birthing population and the general birthing population. As with MPP, these outcomes are consistent with the greater risk factors experienced by BBH clients.[359]

Notably, the data also show that BBH participants experienced a lower percentage of cesarean births than Black mothers enrolled in Medicaid, the overall Black birthing population, and the general birthing population in the County. No BBH participants died of pregnancy-related causes.[360]

[358] See Pregnancy-related mortality rates* by Educational Attainment and by Race and Ethnic Origin, United States, 2007–2016, *Maternal Mortality in the United States: A Primer*, The Commonwealth Fund, December 2020.
[359] *Understanding Population Health and Its Determinants*, National Academies, 2002; *Improving Care for Socially At-Risk Populations*, National Academies, 2016.
[360] DHHS, Maternal and Infant Health in Montgomery County, 2012-2021.

Table 8.3. Program Outcomes, Babies Born Healthy (BBH), FY24 YTD*

Health Indicator	BBH	Black Medicaid in Montgomery County 2016-2023	Black in Montgomery County 2012-2021	Montgomery County 2012-2021
YTD Total Births	122	9,419	-	-
Preterm Births	17.0%	9.93%	10.3%	9.0%
LBW Babies	12.0%	9.48%	9.9%	7.4%
Cesarean Births	33.0%	40.7%	42.0%	34.5%
Hospitalizations with SMM	5.0%	N/A	3.2%	2.4%
			Black in Maryland 2011-2020	**Maryland 2011-2020**
Pregnancy-related Deaths	0%	N/A	0.011%	0.02%

Sources: Centers for Disease Control and Prevention, National Center for Health Statistics. National Vital Statistics System, Natality on CDC WONDER Online Database. Data are from Natality Records 2016-2023, as compiled from data provided by the 57 vital statistics jurisdictions through the Vital Statistics Cooperative Program. Accessed on Jan 30, 2025; DHHS, Health Planning and Epidemiology. *Maternal and Infant Health in Montgomery County, MD, 2012-2021*, Montgomery County, Maryland, 2024; Maryland Maternal Mortality Review 2022 Annual Report, Maryland Department of Health.
*BBH data is as of August 2024.

C. Start More Infants Living Equally (SMILE) Program

The African American Health Program's (AAHP) SMILE Program works to decrease the high rate of Black infant mortality and improve the likelihood of good pregnancy outcomes among Black women in the County. The program is operated by registered nurse case managers with specialized maternal and child health credentials. The program provides free prenatal and postpartum services to Black birthing people from pregnancy through a child's first birthday. SMILE's nurses work in conjunction with AAHP's social worker, nurse supervisor, clinical director, and community health workers to tailor personalized care plans based on each client's individual risk for experiencing poor pregnancy outcomes.

SMILE program services include:[361]

- Case management of pregnant people, infants, and families, which facilitate healthcare access and coverage, care coordination, performing health screenings, and one-on-one nursing support at doctor's appointments;
- Childbirth and breastfeeding classes as well as ongoing support after birth from certified lactation consultants;

[361] DHHS, Maternal and Infant Health in Montgomery County, 2012-2021; Fiscal Year 2022 Annual Report, FIMR CAT; Montgomery County, Maryland, Department of Health and Human Services, Office of Community Affairs, African American Health Program (AAHP), On a Mission to E.R.A.S.E. Health Disparities: FY23 Annual Report; SMILE Program Staff

- Health classes and resources including dental resources, nutrition counseling, weight and chronic disease prevention management classes, and remote monitoring services;
- Integrated wraparound services, including risk assessments and personalized care plans to address whole person care;
- Nurse home visits for birthing people and infants;
- Physical health guidance and mental health and social work services;
- Referrals to public and private community resources including doulas, social workers, free clinics, and food assistance;
- Support groups and networking for families, including "Brother to Brother," which targets fathers; and
- Telehealth consultations, which are available after hours as needed.

SMILE is a signature program of the AAHP, which is one of the County's three Minority Health Initiatives. AAHP is contracted to be fully implemented by the County-based firm, McFarland & Associates, Inc. This organization has executed this contract for the last eight years. The actual expenditures for SMILE-related activities in FY24 was $724,000.[362]

The SMILE program served 278 clients in FY21, 345 in FY22, 367 in FY23, and 254 in FY24.[363] By FY24, each nurse handled a caseload of approximately 55 clients (mothers and infants). Currently, the average caseload for SMILE nurses in FY25 is 58 clients (mothers and infants).[364] In a conversation with OLO, SMILE nurses reported that their caseloads can feel overwhelming due to higher acuity patients, meaning individuals who have more complex medical and social needs and who are at increased risk for health complications, and increased demand for services.[365] SMILE staff report that its FY25 budget provides additional funding to better meet current demand, including a full-time nurse supervisor position.

Populations Served. Eligibility for the SMILE Program is restricted to Black and/or African American pregnant people and families, regardless of income levels. In FY24, 100% of SMILE clients were Black.[366] In a conversation with OLO, SMILE nurses reported that program participants come from various socio-economic and language backgrounds but face common medical and social risks. These include obesity, hypertension and diabetes, unemployment, food and housing insecurities, and significant barriers related to transportation and mental wellness. They noted that participants with the highest medical

[362] African American Health Program (AAHP).
[363] SMILE program data. FY24 data sourced from AAHP FY24 Annual Report, as reported by SMILE staff.
[364] As reported by SMILE Program staff.
[365] Bi-Annual Update from the Health Officer, June 11, 2024; OLO interview with SMILE nurses.
[366] Bi-Annual Update from the Health Officer, June 11, 2024.

risks rely heavily on SMILE's wrap-around services such as support groups, referrals to public and private resources, and chronic disease prevention and management programs.

The following summarizes additional demographic characteristics of SMILE participants:

- **Like with MPP and BBH, SMILE reaches many immigrant families.** SMILE staff report that in FY24, 68% of SMILE participants were foreign born (60% from African countries and 8% from the Caribbean) and 32% were born in the U.S.
- **SMILE clients tend to be older.** SMILE's nurses told OLO they serve clients ranging from ages 13 to 54. However, an analysis of SMILE's FY22 cohort showed that over half (53%) of program participants were between the ages of 30 and 49. The program has continued to serve a similar age demographic in FY24.[367] Data show that Black individuals in this age group are at much higher risk for severe pregnancy-related complications and/or death than White individuals in the same age group.[368] This suggests that SMILE generally serves Black individuals from higher risk age groups.
- **SMILE clients tend to have less education.** In FY22, 19% of SMILE clients had attained a bachelor's degree or higher, compared to 47% of Black women in the County overall. As with BBH, these data suggest SMILE serves a population with lower levels of higher education, and hence a higher risk population group. The program reports the percentage of SMILE clients with a bachelor's degree or higher has remained consistent through FY24.
- **SMILE clients tend to have higher rates of unemployment.** Unemployed individuals accounted for 48% of program participants in FY22. This is higher than the County rate, where 36% of Black women over the age of 16 are unemployed or not in the labor force.[369] Since research finds unemployed individuals tend to have lower incomes, this statistic suggests SMILE serves Black women with lower incomes.[370]

Program outcomes. The following table shows program outcomes for two key maternal and infant health indicators: percentages of preterm births and low birthweight births. Compared to the Black mothers with Medicaid, the Black birthing population overall, and the general birthing population in the County, SMILE participants had a lower percentage of preterm births and a lower or similar percentage of LBW babies.

[367] SMILE Program staff
[368] Maryland Maternal Mortality Review 2022 Annual Report, Maryland Department of Health
[369] U.S. Census Bureau, 2023 ACS 1-Year Estimates Selected Population Profiles, Table S0201
[370] Zedlewski, S. and Nichols, A., *What Happens to Families' Income and Poverty after Unemployment?*, Urban Institute Brief 25, May 2012.

Table 8.4. Program Outcomes, Start More Infants Living Equally (SMILE), FY24

Health Indicator	SMILE	Black Medicaid in Montgomery County 2016-2023	Black in Montgomery County 2012-2021	Montgomery County 2012-2021
Total Births	105	9,419	-	-
Preterm Births	8.6%	9.9%	10.3%	9.0%
LBW Babies	7.6%	9.5%	9.9%	7.4%

Sources: SMILE Program data; DHHS Office of Planning and Epidemiology; Centers for Disease Control and Prevention, National Center for Health Statistics. National Vital Statistics System, Natality on CDC WONDER Online Database. Data are from Natality Records 2016-2023, as compiled from data provided by the 57 vital statistics jurisdictions through the Vital Statistics Cooperative Program. Accessed on Jan 30, 2025.

A key focus of SMILE is the encouragement of breastfeeding among clients. The program employs a lactation consultant who works closely with nurses and clients to provide education, personalized support, and clinical assessments to address physiological barriers to breastfeeding. The program also facilitates referrals to clinical specialists for ongoing lactation care and has initiated support programs where participants share and learn from each other's experiences such as the "Breastfeeding Support Circle" and the "Mommy Chat" virtual group forum. Between fiscal years 2021 and 2024, the program has seen the following changes in the percentage of participants breastfeeding their babies after birth:

Table 8.5. Breastfeeding Duration for SMILE Participants, FY21-FY24

Breastfeeding Duration	2021	2022	2023	2024
Up to 3 months	85%	88%	85%	87%
Up to 6 months	81%	84%	79%	86%
Up to 12 months	73%	71%	53%	50%

Source: Fetal and Infant Mortality Review Board CAT 2022 Annual Report.pdf; SMILE Program Data

The American Academy of Pediatrics (AAP) recommends exclusive breastfeeding for approximately six months after birth and supports breastfeeding "as long as mutually desired by mother and child for 2 years or beyond."[371] These recommendations align closely with those from the World Health Organization, who encourages breastfeeding as "one of the most effective ways to ensure child health

[371] Meek, J.Y. and Noble, L., Policy Statement: Breastfeeding and the Use of Human Milk, The American Academy of Pediatrics, June 27, 2022.

and survival," noting that breastmilk "is safe, clean and contains antibodies which help protect against many common childhood illnesses."[372]

However, researchers point to various systemic barriers to breastfeeding, chief among them workplace policies that do not support breastfeeding or expressing breast milk. As discussed in Chapter 5, in the United States, only one in four workers has access to paid parental leave from their employers, and only half of working parents are eligible to take unpaid leave under the Family and Medical Leave Act (FMLA). And while federal law requires employers provide new parents reasonable break time and a place to express milk for up to one year after their child's birth, employers with fewer than 50 employees are exempt, and certain professions are ineligible (e.g., airline, railroad, and motorcoach workers).[373] Moreover, some parents may feel pressured to forego breast pumping during work if their jobs do not easily accommodate such breaks.

Black parents breastfeed their babies at lower rates than parents in other racial and ethnic groups. A study of data from the National Immunization Survey-Child found that from 2014-2015:[374]

- 75.2% of Black infants ever breastfed, compared to 81% of White infants, 88.7% of Latinx infants, 78.6% of Asian infants, and 79.3% of American Indian or Alaskan Native (AIAN) infants;
- 21% of Black infants exclusively breastfed up to six months, compared to 25.5% of White infants, 27.2% of Latinx infants, 26.2% of Asian infants, and 24.7% of AIAN infants; and
- 30.3% of Black infants continued to breastfeed at 12 months, compared to 34% of White infants, 37.8% of Latinx infants, 37.1% of Asian infants, and 31.4% of AIAN infants.

Researchers point to various factors that drive racial disparities in breastfeeding. For example, studies have found Black mothers are twice as likely than White mothers to receive formula for their babies after giving birth, and birthing hospitals that serve larger Black populations are less likely to offer lactation support to new mothers.[375] Notably, research also shows that Black, Latinx, and Asian women are significantly less likely to have access to paid leave than White women.[376]

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[372] The World Health Organization recommends children "be exclusively breastfed for the first 6 months of life," "infants should be breastfed on demand," and "from the age of 6 months, children should begin eating safe and adequate complementary foods while continuing to breastfeed for up to two years of age or beyond," "Breastfeeding," World Health Organization.

[373] U.S. Department of Labor, Wage and Hour Division, Fact Sheet #73: FLSA Protections for Employees to Pump Breast Milk at Work, revised January 2023.

[374] Rates are adjusted for various socioeconomic and demographic factors. Li, R. et al., *Breastfeeding Trends by Race/Ethnicity Among US Children Born From 2009 to 2015*, JAMA Pediatrics, 2019; 173(12).

[375] Laura Santhanam (2019), "Racial disparities persist for breastfeeding moms. Here's why." PBS News; Mieso, B.R. et al., *Beyond Statistics: Uncovering the Roots of Racial Disparities in Breastfeeding*, American Academy of Pediatrics, 2021.

[376] Child Trends, *Recommendations for Creating Equitable and Inclusive Paid Family Leave Policies*, Research Brief, 2023.

D. Participant Perspectives – BBH and SMILE

In March of 2024, MCH and AAHP conducted a focus group with 13 Black and African American pregnant and postpartum County residents to understand their experiences receiving perinatal care and services.

The following describes participant demographics:[377]

- Seven of the 13 total participants were enrolled in BBH, five were enrolled in SMILE, and one participant was not enrolled in any MCH home visiting program;
- The average age of participants was 32 years, and they had an average of 1.6 children;
- 84% of participants were Black/African American, 8% were White, and 8% were Latinx;
- Most participants (63%) were native born; the remaining 37% were born in four different foreign countries;
- The largest percentage of participants (46%) had only a high school diploma or their GED; 2 participants (16%) had their bachelor's degree;
- Every participant earned $50,000 or less a year; nearly 70% earned less than $20,000 a year;
- Most participants (61%) were single, but had a significant other, 23% were married, and 16% were single but had other sources of support; and
- None of the focus group participants had a doula during their pregnancies, birth, or postpartum.

Participants shared their perspectives on the quality of care, support, and information they received from maternal healthcare providers and County home visiting programs. The following themes emerged from their feedback:[378]

1. **Participants often felt dismissed or ignored by their maternal healthcare providers, leading many to feel forced to advocate for themselves and their care. Examples of feedback within this theme include:**
    - "We are looked at as 'strong,' which equates to us not being listened to…"
    - "You speak up, but they don't care."

[377] Montgomery County FIMR Community Action Team, Babies Born Healthy, SMILE Program, Focus Group Presentation, March 2024.
[378] Montgomery County FIMR Community Action Team, Babies Born Healthy, SMILE Program, Focus Group Presentation, March 2024.

- "…we have to force our hands to be seen/heard."
- One participant shared that hospital staff did not take her pain seriously during childbirth because she was not presenting symptoms "as she should."
- "I wish you had to have a doula like you have to have an OB or midwife."

2. **Participants felt their doctors did not take enough time to educate or inform them about their care. Healthcare providers often seemed overworked, and some participants felt their providers rushed or coerced them into certain care decisions. Examples of feedback within this theme include:**
    - "They [healthcare providers] were nonchalant about my concerns and there was a long wait time."
    - One participant felt their doctor gave information too quickly and did not care about taking enough time during appointments.
    - A participant observed her labor and delivery nurse seemed overworked and was worried he would not be able to provide quality care.
    - One participant felt coerced into inducing her childbirth so that her doctor could schedule the delivery before a vacation.
3. **Participants appreciated that BBH and SMILE provided a sense of belonging and social support before, during, and after their pregnancies. The programs became a trusted source of information and gave participants the knowledge and confidence to speak up during prenatal appointments and childbirth. Examples of feedback within this theme include:**
    - One participant said the home visiting program helped them understand why things were happening during their pregnancies and postpartum and what to do.
    - One participant observed that home visits helped increase their confidence.
    - A participant stated that BBH gave them the confidence to ask questions and/or express concerns during medical appointments.
    - One participant appreciated getting support with breastfeeding.

Chapter 9. Stakeholder Observations on Perinatal Services and Addressing Racial Disparities

OLO interviewed DHHS Maternal and Child Health (MCH) Program staff, partner organization staff, policy experts, healthcare providers, and community birth workers regarding:

- The services and care available to birthing people and families in Montgomery County; and
- What efforts may help improve maternal and infant health outcomes and reduce racial disparities, especially for Black birthing people and babies.

This chapter summarizes the themes OLO identified based on the insights shared by stakeholders.

1. The County's perinatal health programs effectively serve Latinx immigrant populations with low incomes but underserve Black birthing people relative to their needs.

MCH staff observed that the County's perinatal home visiting programs are well-resourced to serve birthing people of Latinx origin who have immigrated to the U.S. and have lower incomes. The Montgomery Perinatal Program (MPP), the County's largest maternal and infant health program, which reaches approximately 1,600 clients a year, was specifically designed to serve the County's uninsured population. Since undocumented individuals from Central America represent most of the uninsured population in Montgomery County, the majority of MPP's participants have been Latinx birthing people with lower incomes. As a result, the County has targeted many of its perinatal health resources to this population. For instance, MCH staff note that the County's community health clinics are well-equipped with resources to serve patients who speak Spanish and have limited English language proficiency. Although the Healthy Babies Act has now opened MPP to Medicaid enrollees, the program's clientele remains predominately birthing people of Latinx origin who have immigrated to the U.S. (83% in FY24).

Conversely, MCH staff observed Black birthing people overall are underserved by the County's perinatal programs relative to their needs. As data in Chapter 6 show, Black women and infants disproportionately experience adverse pregnancy-related health outcomes. However, the two County programs that target Black birthing people and babies, BBH and SMILE, have much smaller capacities compared to MPP. In FY24, BBH served 185 clients and SMILE served 254 clients; together, these two programs reached just over a quarter of the total clients MPP reached in FY24. At the same time, community demand for services is outpacing both programs' capacities. MCH staff note there is often a waiting list for BBH, and SMILE nurses report having large, medically complex caseloads, making it difficult to provide optimal care.[379]

[379] Bi-Annual Update from the Health Officer; Montgomery County Government, June 11, 2024; SMILE program data

Additionally, there may be opportunity for the County's perinatal programs to more effectively serve populations at higher risk for certain adverse pregnancy-related outcomes. For example, the majority of BBH and SMILE clients are foreign born, however, data show native born Black mothers in the County are more likely than foreign born Black mothers to deliver preterm, low birthweight babies, and to require blood transfusions during delivery.[380]

Furthermore, MCH staff underscored how Black birthing populations who typically do not engage with County services but are still at high risk for adverse pregnancy-related outcomes may benefit from targeted interventions. For example, Black birthing people who are highly educated and have higher incomes still experience worse pregnancy-related outcomes than their White peers. Because these populations tend to be privately insured, they are ineligible for BBH and MPP, both of which require participants to qualify for Medicaid. But even when individuals with higher incomes are eligible for County programs, like in the case of SMILE, they may not know about the program, or if they do, find its format or requirements for participation unappealing. In fact, MCH staff report SMILE has a difficult time recruiting higher income participants. According to the County's Health Officer, MCH is working to re-align department resources to more effectively serve Black birthing populations relative to their needs.[381]

2. The County hopes to strengthen collaboration with hospitals, especially Holy Cross, to facilitate data sharing and improve maternal health services.

MCH is working to strengthen its relationships with hospitals in the County to enhance sharing of maternal health data. MCH staff told OLO that a major challenge in understanding disparities in perinatal health outcomes locally is that the County lacks jurisdiction over private health provider data, which limits its ability to track maternal and infant health trends by hospital. MCH attempted to engage Nexxus Montgomery, a coalition of County hospitals, to improve maternal health data coordination, however the effort stalled because not all hospitals in the area provide labor and delivery services. Despite this setback, the County is eager to partner with hospitals, in particular Holy Cross, which delivers the majority of babies in the County. MCH staff report the County Executive requested a meeting with hospital leadership to discuss how they can better align efforts to enhance maternal health outcomes.

Nurse case managers from the SMILE program also told OLO that closer collaboration with hospitals would help them serve their clients more effectively, particularly those with complex clinical conditions who require coordinated care during pregnancy, childbirth, and postpartum. For example, if hospitals

[380] Centers for Disease Control and Prevention, National Center for Health Statistics. National Vital Statistics System, Natality on CDC WONDER Online Database. Data are from Natality Records 2016-2023, as compiled from data provided by the 57 vital statistics jurisdictions through the Vital Statistics Cooperative Program. Accessed on Jan 30, 2025; Tiffany L. Green, "Black and Immigrant: Exploring the Effects of Ethnicity and Foreign-Born Status on Infant Health" (Washington: Migration Policy Institute, 2012), available at available at https://www.migrationpolicy.org/research/CBI-infant-health.

[381] Bi-Annual Update from the Health Officer; Montgomery County Government, June 11, 2024

communicated directly with SMILE nurses, they could refer clients to the appropriate extended care providers.

3. Data challenges such as incomplete information, inconsistent monitoring practices, and limited research on community-based interventions hinder efforts to improve equitable maternal and infant health outcomes.

Stakeholders emphasized the importance of collecting maternal and infant health data by race and ethnicity to improve equity in care, identify gaps in services, and reduce disparities. However, several stakeholders OLO spoke with mentioned that missing or incomplete information often hinders efforts to improve maternal and infant health outcomes. Some observed key demographic details are often underreported in maternal and infant health data, making it difficult to identify and address disparities within different communities. Others noted that a general lack of data around social determinants of health such as housing, food security, and access to transportation limits more comprehensive analyses that could inform targeted interventions to improve maternal and infant outcomes.

Many hospitals, healthcare providers, and public health agencies have begun to focus efforts on preventing SMM through innovations in data collection and analysis (see page 87 for a discussion on MDMOM's SMM Surveillance and Review Program). However, the absence of clear benchmarks has led to wide variations in the criteria different hospitals use to monitor SMM. Additionally, resource constraints complicate the ability for facilities to monitor SMM effectively. Stakeholders also mentioned that missing or incomplete information about race and ethnicity in SMM cases hinders accurate analyses of disparities between different racial groups. Some healthcare providers also emphasized a need for better risk adjustment when comparing SMM outcomes between racial groups so that outcome rates are compared accurately despite differences in each group's risk factors.

Policy experts voiced a desire for more empirical research on community-based interventions aimed at improving maternal health outcomes, especially regarding protective factors that benefit Black birthing people and babies. As discussed in Chapter 5, there are several community initiatives around the country that have shown promise in improving maternal and infant health outcomes in Black communities. However, many of these initiatives face significant limitations in funding, which restricts their ability to conduct large-scale evaluations that could help establish long-term efficacy.

4. Barriers to healthcare access contribute to gaps in services and poor maternal and infant health outcomes, especially for Black, Indigenous, and other pregnant and birthing people of color and those living in rural or underserved areas of the County.

Community stakeholders identified several barriers to healthcare access that they believe contribute to poor maternal and infant health outcomes, especially for BIPOC and lower income communities who have historically been excluded due to structural racism and systemic inequities. A key challenge highlighted by stakeholders is the limited number of maternal healthcare providers located in rural areas like the Upcounty and areas with predominantly BIPOC residents like the East County. Pregnant

people in these areas can face long travel times for essential perinatal care, which can increase the likelihood of skipped appointments and undetected health issues, especially during the critical prenatal and postpartum periods.[382] Some stakeholders advocate for policies to attract and retain healthcare professionals in the County, such as financial incentives like college loan repayment, housing incentives, and tax reductions.

Stakeholders also note that there is a widespread knowledge gap regarding available maternal health services in the region, as well as limited health insurance literacy, particularly among foreign born and undocumented residents. One stakeholder pointed out that birthing people in these communities are often unaware of their eligibility for public health insurance coverage through Medicaid and are also unprepared for the loss of that coverage four months after childbirth.[383] Moreover, stakeholders observe a shortage of culturally concordant healthcare providers in the region, particularly for Spanish-speaking communities.

Another key challenge is the affordability of doula services, especially for pregnant people with lower incomes. Several doulas who spoke with OLO reported that while there is some potential for private insurance reimbursement for doula services, the process is complicated and often unsuccessful. Maryland Medicaid does reimburse for doula services,[384] however, the doulas who spoke with OLO noted that Medicaid's reimbursement rate is too low to cover their expenses. Most pregnant people pay for doula services out of pocket or use flexible spending accounts (FSA) or health savings accounts (HSA).[385] However, this is not always an option for pregnant people and families with lower incomes.

Finally, stakeholders highlighted inequitable access to healthy food as a driver of poor maternal and infant health outcomes for BIPOC birthing people. As described in Chapter 3, social determinants of health (SDOH) are "the conditions in the environments in which people are born, live, learn, work, play, worship, and age"[386] that influence health outcomes. Research has found that BIPOC experience, on average, more adverse SDOH than White people. For example, predominantly Black and Latinx neighborhoods tend to have fewer affordable and nutritious food options. This is of particular concern for people in these neighborhoods who are pregnant or planning to get pregnant since limited access

[382] Of note, stakeholders emphasized that in general, postpartum care is often insufficient, with many new parents receiving only one follow-up visit with their healthcare provider. This creates significant gaps in care – especially for mental health – during the critical period after childbirth. One community birth worker explained that it is often during this period that the most serious maternal and infant health issues go undetected, especially when new parents are unable to attend follow-up appointments due to distance.

[383] The Healthy Babies Equity Act, which went into effect on July 1, 2023, expands Medicaid eligibility to all pregnant individuals living in Maryland who are 250% or below the federal poverty level, regardless of citizenship status. Now, all uninsured pregnant people with low incomes in Maryland can enroll in Medicaid and receive comprehensive medical care during their pregnancies and up to four months after their babies are born. HB1080 One-Pager (6.13.2023).pdf

[384] Doulas must have a state-approved certification to be reimbursed for services provided to Medicaid enrollees.

[385] The Internal Revenue Service (IRS) considers doula services a qualifying medical expense that can be paid for using FSA or HSA dollars.

[386] Ending Unequal Treatment, p. 51

to healthy food impacts prenatal nutrition and can negatively affect maternal and infant health outcomes.

5. Reducing racial disparities in pregnancy-related health outcomes, especially for Black birthing people, requires a coordinated, patient-centered approach that fosters trust, informed decision-making, and culturally concordant care.

When asked what efforts may help reduce racial disparities in pregnancy-related health outcomes, especially for Black communities in the County, stakeholders emphasized the need for patient-centered care that establishes trust between patients and their healthcare providers. This approach empowers patients to have informed discussions with their healthcare team and actively participate in decision-making. This is especially important for Black birthing people, who often face racial bias and stereotyping from healthcare providers. Studies have shown providers often dismiss Black mothers as uninformed or unintelligent and often overlook their concerns and questions.[387] Stakeholders also noted that birthing people of color, especially single birthing people, often face challenges with informed consent and are more likely to be pressured by their providers into compliance with medical decisions – like C-sections – without adequate discussion.

Fostering a more diverse perinatal workforce, particularly in leadership and clinical roles, is key to this effort. Healthcare providers who reflect the racial and cultural demographics of the communities they serve are better able to build trust with their patients and deliver culturally concordant care. Stakeholders also advocated for creating more opportunities for bilingual individuals to enter maternal health professions, particularly in nursing, doula services, and midwifery.

According to stakeholders, personalized, coordinated care from multidisciplinary teams is also important to supporting healthy pregnancies and reducing disparities in health outcomes for Black birthing people. Several stakeholders recognized Washington, D.C.-based nonprofit Mamatoto Village[388] as an example of a program that takes a holistic approach to supporting Black families before, during, and after pregnancy. Each client is assigned a team of specialists to address their individual care needs. The program also offers clients education, advocacy, and resources to mitigate the broader SDOH that drive racially inequitable health outcomes, such as access to transportation, mental wellness support, and nutrition and fitness resources. Stakeholders observed that the County would benefit from collaborating with community-based organizations like Mamatoto Village, who have close ties with local BIPOC communities and are experts in providing culturally concordant perinatal care.

[387] The intersection of traumatic childbirth and obstetric racism: A qualitative study - Dmowska - 2024 - Birth - Wiley Online Library

[388] Mamatoto Village works with BIPOC families in Washington, D.C. and Prince George's County, Maryland. Pregnancy & Postpartum - Mamatoto Village

Additionally, maternal health practitioners who spoke with OLO emphasized the need to expand comprehensive support services during the critical postpartum period, when new parents often receive insufficient care. Several highlighted Family Connects in Frederick County, Maryland as a promising practice that provides anyone with a newborn in Frederick County with a free postpartum visit from a registered nurse.[389] Stakeholders also recommended improved coordination between hospitals and home care services to enhance access to perinatal mental health and substance abuse services for expectant and new parents.

Finally, several stakeholders recognized alternative birth practices, such as non-hospital births, midwifery-led care, and integrating doulas into perinatal care teams, as strategies for improving maternal care, particularly for Black and other birthing people of color. Stakeholders specifically mentioned Birth Detroit, a Black-led, free-standing birth center, as an example for how alternative birth practices can be more holistic and culturally sensitive. Birth Detroit offers not just birth services, but also housing, food assistance, and support for fathers.

However, financial and insurance barriers, as well as fear surrounding the safety of giving birth outside of hospital settings, remain significant obstacles to non-hospital births. Moreover, stakeholders note that hospitals are often the only option for birthing people, as evidenced by the absence of birth centers in Montgomery County or in Maryland. Several stakeholders also described the important role of doulas, especially Black doulas, in enhancing the birth experience. They described how important it is for Black birthing people to be cared for by providers who share similar cultural backgrounds and experiences.

6. Healthcare institutions must acknowledge the role of structural racism in causing inequitable perinatal health outcomes and create systems to hold themselves accountable for reducing racial disparities and create lasting change.

Finally, stakeholders underscored the need for healthcare institutions to acknowledge the role of structural racism in inequitable maternal and infant health outcomes and to work toward systemic change by creating processes that hold themselves accountable for reducing disparities. This includes requiring hospitals to address racial disparities in perinatal health within their policies, such as by mandating healthcare provider training in anti-racist practices, cultural sensitivity, and implicit bias. It also requires hospitals to regularly track their progress toward reducing racial disparities in perinatal outcomes against key metrics such as maternal morbidity and mortality rates among Black pregnant and birthing people. Holding healthcare institutions accountable also includes creating consequences for failing to address inequitable perinatal outcomes. One example would be to implement a grading system based on a facility's commitment to racial equity. Lastly, stakeholders advocate for establishing

[389] Family Connects | Free At-Home Newborn Visit Frederick County, MD

zero-tolerance policies for inequitable treatment within healthcare institutions and enforcing those policies through financial incentives and penalties.

Chapter 10. Findings and Recommended Discussion Issues

The phrase, "maternal and infant health" typically refers to the health of pregnant and birthing people and their babies during pregnancy, childbirth and up to a year after birth. The U.S. has the highest maternal mortality rate of any high-income country in the world. On infant mortality, the U.S. ranks 33 out of 38 countries who are part of the Organisation for Economic Co-operation and Development (OECD). Black and Indigenous mothers and babies in the U.S. experience the worst outcomes. Disparities in outcomes by race are significantly larger than disparities by income.

The County Council requested this Office of Legislative Oversight (OLO) report to gather information on the causes of racial disparities in pregnancy-related maternal and infant health outcomes, local data on disparities in Montgomery County, communities that have made improvements in racial disparities and factors that have driven those improvements, and whether Montgomery County has such factors in place. **Section A** of this chapter presents OLO's findings, and **Section B** presents OLO's four recommended discussion issues for the Council.

A. Findings

This section presents OLO's findings on:

- The federal and state maternal and infant health policy framework;
- Initiatives in other jurisdictions that have shown promise in reducing racial disparities in maternal and infant health;
- Local data on racial disparities in maternal and infant health outcomes;
- Roots of racial disparities in maternal and infant health outcomes;
- Perinatal services and providers in Montgomery County; and
- County government maternal and infant health programs and their alignment with research-supported initiatives in other jurisdictions.

The Federal and State Maternal and Infant Policy Framework

Finding #1. The federal government and states jointly fund four major programs that fund perinatal care and related services.

Four major joint federal and state programs directly serve pregnant and birthing people and their babies. The table below describes these programs.

Program	Description
Medicaid and the Children's Health Insurance Program (CHIP)	These are the two primary public medical assistance programs for populations with low incomes in the U.S. Some states, including Maryland, administer Medicaid and CHIP as a single program. Maryland's Medicaid program covers basic health services for enrollees, including pregnancy care, labor and delivery, and postpartum care.
The Title V Maternal and Child Health Services Block Grant	Federal grant matched with state dollars that supports state-led efforts to improve public health systems for pregnant and birthing people, children, and their families.
Special Supplemental Nutrition Program for Women, Infants, and Children (WIC)	WIC provides food, nutrition guidance, breastfeeding support, and referrals for other services. In Maryland, pregnant people with household incomes up to 185% of the federal poverty level (or about $48,000 for a family of three in 2024) are eligible throughout pregnancy and up to one year after the baby's birth (or six months if not breastfeeding). Children are eligible up to age five.

Finding #2. The federal government and the State of Maryland each fund multiple initiatives aimed at improving perinatal care quality and birth outcomes. Some initiatives have specific components that target racial equity in maternal and infant health. However, these initiatives do not explicitly aim to advance equity as their overall goal.

The following table summarizes federal initiatives aimed at improving the quality of perinatal care. Of note, the information is reflective of programs in place as of January 2025.

Initiative	Description
Federal	
CDC Perinatal Quality Collaboratives (PQC) Program	Funds state or regional networks that use quality improvement strategies to improve maternal and infant health outcomes.
HRSA Alliance for Innovation on Maternal Health (AIM)	Develops "patient safety bundles," which are sets of evidence-based or recommended practices for reducing maternal mortality and severe maternal morbidity.
Birthing-Friendly Hospital Designation	Recognizes hospitals that participate in a perinatal quality improvement collaborative program and implement evidence-based quality interventions to improve maternal health.
State Maternal Health Innovation Grant	Funds public health organizations, universities, community-based organizations, and other groups that implement new strategies to address the maternal health crisis.
The Center for Maternal and Child Health Medicaid Partnerships (CMMP)	Supports collaboration among state Medicaid, CHIP, and Title V programs to improve maternal and child health outcomes.
State	
Maryland Perinatal Neonatal Quality Collaborative (MDPQC)	Works with hospitals to implement AIM patient safety bundles and other evidence-based practices.
Maryland Maternal Health Innovation Program (MDMOM)	Promotes innovation in data collection and analysis, resource availability and hospital and community care.
Maryland Patient Safety Center (MPSC) Perinatal Safety Work	Works with healthcare providers, patients and families to improve patient safety and promote equity in perinatal care.
Maternal Mortality Review Program (MMR)	Identifies and reviews all cases of maternal death among Maryland residents from any cause.
Fetal and Infant Mortality Review Program (FIMR)	Teams in seven jurisdictions (including Montgomery County) review fetal and infant deaths to better understand the issues associated with fetal and infant mortality and morbidity.

Promising Initiatives in Other Jurisdictions

Finding #3. Research on reducing racial disparities in maternal and infant health outcomes is promising but not conclusive, and researchers recommend a broad approach.

Because numerous factors drive racial disparities in maternal and infant outcomes, policy experts recommend a broad approach to addressing them. Additionally, most strategies described in this report are backed by promising evidence, but more research is needed to fully understand their role in reducing racial disparities in maternal and infant health outcomes. OLO examined four approaches for reducing racial disparities in maternal and infant health outcomes, summarized in the table below.

Approach	Description
Community-Based Models that Integrate Health and Social Care	Models incorporate some or all the following: • Community partnerships, leadership and advocacy • Community health workers and home visiting • Community-based doulas • Workforce training
Racially Congruent Midwifery Care and Alternative Birth Settings	Midwifery care focuses on facilitating birth without medical intervention and emphasizes relationship-building. Alternative birth settings like freestanding birth centers often offer more flexibility than hospitals for midwifery care. BIPOC-led birth centers aim to increase access to racially congruent midwifery services.
Racially Equitable Paid Family Leave Systems	Access to paid parental leave is associated with lower rates of infant mortality, low birthweight, and preterm birth, fewer maternal and infant rehospitalizations, and increased attendance at postpartum and pediatric health care visits. Black, Latinx, and Asian women are significantly less likely to have access to paid leave than White women. Experts offer recommendations for increasing access to paid leave for BIPOC parents.
Anti-Bias and Shared Decision-Making Training for Healthcare Providers	Most anti-bias trainings have not been shown to measurable decrease bias in healthcare delivery. Experts have identified some promising examples of anti-bias trainings, including those based on Transformative Learning Theory (TLT). Training healthcare providers on shared-decision making has also shown promise for improving outcomes.

Finding #4. Community-based initiatives that integrate health and social care may significantly reduce racial disparities in maternal and infant health outcomes.

OLO identified three examples of community-based initiatives that integrate health and social care that have shown promise in reducing racial disparities in maternal and infant health outcomes. They employ several research-supported tools for addressing inequities in social determinants of health, or SDOH, including:

- Community leadership, partnerships, and advocacy;
- Community health workers and home visiting;
- Community-based doulas; and
- Workforce training.

Initiative and Year Started	Components	Results
B'more for Healthy Babies (Baltimore, Maryland), 2009	• Centralized intake system • Home visiting • Focused outreach by community health workers in three neighborhoods • Community advisory board • Hospital system partnership • Policy advocacy	From 2009 to 2021, Baltimore's infant mortality rate decreased from 13.5 to 7.5 deaths per 1,000 births, and to 4 deaths per 1,000 births in focus neighborhoods.
Cradle Cincinnati (Cincinnati, Ohio), 2013	• Community health workers • Healthcare and social services learning collaborative • Publishing hospital data and scores • Advisory board with representatives from healthcare, public health, social services and the community • Policy advocacy • Queen's Village community for Black women	The infant mortality rate in Hamilton County decreased from 10.2 deaths per 1,000 births in 2008-2012 to 5.5 deaths per 1,000 births in 2023. The Black infant mortality rate decreased from 16.5 to 9.0 deaths per 1,000 births.
Mamatoto Village (Washington, D.C.), 2013	• Medicaid-funded home visiting program • Black-owned and led • Comprehensive supports including care coordination, wellness coaching, support during social services visits, emergency food supplies, and lactation support. • Doula training and services	Clients' babies had higher gestational ages than a comparison group.

Finding #5. Efforts to increase access to racially congruent midwifery care by establishing BIPOC-led birth centers have shown benefits for Black birthing people.

In the U.S., physicians (commonly obstetricians) attend nearly 9 out of 10 births, and 98% of births occur in hospitals. However, researchers find that midwifery care, which prioritizes facilitating birth without medical interventions, is comparable or superior to care by an obstetrician for individuals with healthy pregnancies. Additionally, alternative birth settings, such as homes and freestanding birth centers, allow flexibility not always available in hospital settings to practice the midwifery model of care.

As noted in Finding #2, the medical establishment in the U.S. has a history of denigrating and suppressing the work of Black and Indigenous midwives. Today, the midwifery workforce in the U.S. is disproportionately White. Efforts to establish BIPOC-led birth centers that offer midwifery care in the U.S. are growing. The Roots Community Birth Center (RCBC) in North Minneapolis is the only Black-owned birth center in Minnesota and is one of few birth centers in the state that welcomes publicly insured patients. A study that conducted focus groups and interviews with Black RCBC clients identified the following themes regarding why they chose RCBC and how they described their birth experiences:[390]

- **Agency**. Clients expressed a need for control and autonomy during prenatal care and childbirth, with some sharing that having the agency increased their self-esteem. A client shared that being allowed to bring in her own cultural and spiritual items to the birth center allowed her to feel "safe".
- **Addressing Communal and Individual Trauma**. Clients shared that the care provided at RCBC reflected an awareness of communal and individual trauma of Black birthing people, so clients did not have to "spell it out" to them.
- **Relationship-Centered Racially Concordant Care**. Clients cited strong and supportive relationships with their clinicians and the importance of having racially concordant care: "For many respondents, having a Black woman provider meant not only that they would be truly seen and acknowledged by their clinician, but also that they would be loved and taken care of."

[390] J'Mag Karbeah, Rachel Hardeman, Numi Katz, Dimpho Orionzi, and Katy Backes Kozhimannil, "From a Place of Love: The Experiences of Birthing in a Black-Owned Culturally-Centered Community Birth Center," *Journal of Health Disparities Research and Practice* 15, no. 2 (2022).

Local Data on Racial Disparities in Maternal and Infant Health Outcomes

This section describes OLO's findings regarding maternal and infant health outcomes in Montgomery County and the State of Maryland by race and ethnicity. Overall, OLO finds stark racial disparities in every health outcome examined. Among the County's different racial and ethnic groups, Black women, birthing people and infants experience the most adverse health outcomes. If unaddressed, the County's maternal and infant health outcomes are likely to worsen as the County's BIPOC population continues to grow.

Finding #6. In Maryland, Black individuals experience a disproportionate share of pregnancy-related deaths. They are also twice as likely to die from pregnancy-related causes than their White counterparts.

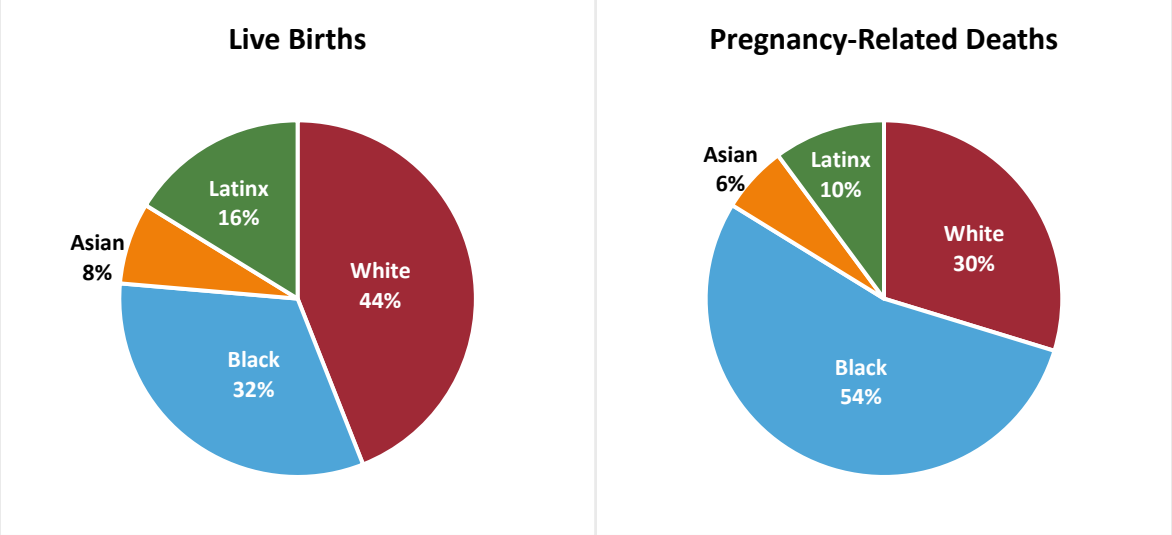
Pregnancy-related deaths include deaths that occur during or within *one year* of pregnancy from any cause related to or aggravated by the pregnancy or its management, excluding accidental or incidental causes.[391] In Montgomery County, the total number of pregnancy-related deaths each year is small: there were three pregnancy-related deaths recorded in the County in 2020.[392] Because the small numbers make it difficult to calculate reliable rates, County-level pregnancy-related mortality rates are unavailable.

State-level pregnancy-related mortality rates are reported by the Maryland Maternal Review (MMR) Program. The data in the figure below show that Black individuals experience a disproportionate share of pregnancy-related deaths in the state. Between 2011-2020, Black individuals represented 32% of live births but 54% of pregnancy-related deaths. Comparatively, White individuals represented 44% of live births but just 30% of pregnancy-related deaths. Both Asian and Latinx individuals were also underrepresented in pregnancy-related deaths.

[391] 2022 Maryland Maternal Mortality Review, pg. 9.

[392] Maryland Maternal Mortality Review 2022 Annual Report, Maryland Department of Health

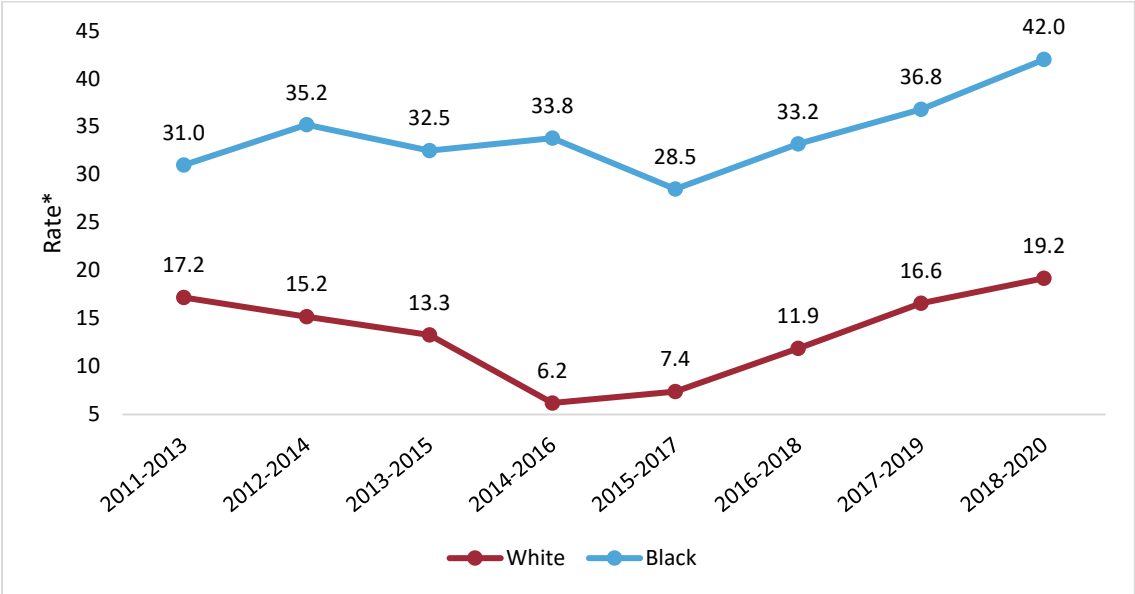
Live Births and Pregnancy-Related Deaths by Mother's Race and Ethnicity, Maryland, 2011-2020



Source: Maryland Maternal Mortality Review 2022 Annual Report, Maryland Department of Health

Additionally, statewide trends in pregnancy-related mortality rates for White and Black individuals – shown in the next figure as rolling three-year averages – highlight how, since 2011, the Black pregnancy-related mortality rate has been consistently higher than the White rate. In 2018-2020, the rate for Black individuals (42 deaths per 100,000 live births) was more than twice the rate for White individuals (19.2 deaths per 100,000 births).

Pregnancy-Related Mortality Rates by Race, Maryland, 2011-2020



Source: Maryland Maternal Mortality Review 2022 Annual Report, Maryland Department of Health
Data unavailable for Asian and Latinx pregnancy-related deaths.
*Pregnancy-related mortality rate = number of pregnancy-related deaths per 100,000 live births.

Finding #7. Black individuals in Montgomery County experience the highest rates of severe maternal morbidity, cesarean births, preterm births, low birthweight babies, and fetal and infant deaths.

In addition to maternal mortality rates, common measures of maternal, fetal, and infant health include percents of severe maternal morbidity (SMM), cesarean births (or C-sections), preterm births, low birthweight babies, and rates of fetal and infant deaths. The table below displays these outcomes for women and babies in the County by race and ethnicity. The data show that overall, Black individuals in the County experience higher rates of adverse pregnancy-related outcomes than any other racial or ethnic group. Specifically:

- The percentage of delivery hospitalizations with **SMM** is more than one and a half times higher for Black individuals than for White individuals. SMM generally involves life-threatening conditions or complications during pregnancy and/or childbirth and is about 70 to 80 times more common than maternal mortality.
- On average, 42% of Black individuals in the County have **cesarean births**, compared to 33% of White individuals, and 34% Countywide. Cesarean births are generally safe and can be medically necessary at times. However, they also place birthing people at higher risk for issues such as infection, blood clots, and complications in a later pregnancy.[393]
- Black individuals experience the highest share of preterm births in the County (10.1% of live births). Babies who are born **preterm** (before 37 weeks of gestation) can experience several health and developmental problems. Preterm birth is also a leading cause of infant death.[394]
- Black individuals have the highest percentage of **low birthweight** babies than any other racial or ethnic group in the County (9.8%). Low birthweight, defined as when a baby is born weighing less than 5 pounds, 8 ounces, may pose serious health risks to an infant, including death.
- From 2017-2021, the Black **fetal mortality** rate in the County was 7.9 compared to 4.3 for White individuals, 5.2 for Latinx individuals, and 3.5 for Asian individuals. Fetal mortality[395] refers to the death of a fetus at 20 weeks of gestation or more.
- The Black **infant mortality** rate in the County is three times higher than the Latinx infant mortality rate, and five times higher than the White infant mortality rate. Infant mortality refers to the death of an infant before one year of age.

[393] https://www.mayoclinic.org/tests-procedures/c-section/about/pac-20393655
[394] A profile of prematurity of United States | PeriStats | March of Dimes
[395] Other terms used to describe fetal death include miscarriage, pregnancy or fetal loss, or stillbirth.

Health Outcome	County	Black	White	Asian	Latinx
Percent SMM (2019-2022)	2.4	3.2	1.9	N/A	N/A
Percent cesarean births (2012-2021)	34.5	42.1	33.2	34.5	30.6
Percent preterm births (2017-2021)	8.9	10.1	7.5	8.4	9.8
Percent low birthweight (2017-2021)	7.5	9.8	5.9	8.4	7.1
Fetal death rate (2017-2021)	5.4	7.9	4.3	3.5	5.2
Infant death rate (2012-2021)	4.9	8.6	3.2	N/A	4.5

Sources: DHHS Health Planning and Epidemiology and MDH Vital Statistics Administration
Data are unavailable for some Asian and Latinx outcomes.

Finding #8. National, state, and local data suggest that efforts to improve maternal health outcomes by targeting individual-level factors, like increasing access to healthcare, reducing adolescent births, improving educational outcomes, and promoting early prenatal care, have not reduced racial disparities or improved overall outcomes for Black women and birthing people.

Racial differences in health outcomes, influenced by maternal circumstances like healthcare coverage, age at childbirth, educational attainment, and prenatal care timing, suggest that efforts targeting these individual factors have not improved racial disparities or overall outcomes for Black women and birthing people. This indicates that structural inequities, not individual characteristics or behaviors, drive differences in outcomes.

- **Health Insurance Coverage:** In Montgomery County, 46% of births to Black individuals were covered by Medicaid. Black and Latinx individuals are more likely than White individuals to be uninsured or enrolled in Medicaid and to experience difficulties accessing primary care providers. For pregnant people, this can translate to inadequate access to prenatal care, which is associated with adverse birth outcomes. However, County data from 2016-2023 show that generally, birth outcomes for Black mothers enrolled in Medicaid were either the same or better than for all Black mothers.

	Black Births	Black Medicaid Births
Total Births	20,386	9,419
% Cesarean	41.0%	41.0%
% Maternal ICU	0.26%	0.31%
% Maternal Transfusion	0.87%	0.87%
% Preterm Births	10.4%	9.93%
% Low Birth Weight	10.0%	9.00%

Source: CDC WONDER Online Database
Birth data are based on where the mother resides.

- **Maternal age:** Efforts to reduce poor maternal outcomes often target adolescents due to their higher risk for negative birth outcomes.[396] However, research finds that Black adolescents have *better* pregnancy and birth outcomes than Black women in their early twenties, supporting the theory of "weathering" – that prolonged exposure to the cumulative stresses of living in a racially unjust society adversely affects Black women's health.[397]
    - Data from Maryland shows Black women experience higher pregnancy-related mortality rates than White women at all ages, with rates for Black women sharply increasing with age: from 16.7 for those under 25 to 42.8 for those 30-34.
    - In contrast, pregnancy-related mortality rates for White women decrease from 12.2 for those under 25 to 8.1 for those 30-34.[398]
- **Educational attainment:** Although education generally reduces health risks, it does not protect Black individuals from maternal mortality in the same way it does for White and Latinx individuals.
    - Nationally, pregnancy-related mortality rates for Black individuals reduce only slightly with educational attainment: from 45.6 for those with less than a high school education to 40.2 for those with a college education.[399]
    - The rate for Black individuals with less than a high school education is two times higher than their White counterparts, while the rate for college educated Black individuals is *five times* higher than their White counterparts.[400]
    - Maternal deaths are more common among college educated Black individuals (40.2 deaths per 100,000 births) than they are among both White and Latinx individuals with

[396] Adolescent pregnancy
[397] Geronimus, Arline T. "THE WEATHERING HYPOTHESIS AND THE HEALTH OF AFRICAN-AMERICAN WOMEN AND INFANTS: EVIDENCE AND SPECULATIONS." *Ethnicity & Disease* 2, no. 3 (1992).
[398] Maryland Maternal Mortality Review 2022 Annual Report, Maryland Department of Health
[399] Maternal Mortality in the United States: A Primer, The Commonwealth Fund
[400] Ibid.

less than a high school education (25 deaths and 12.6 deaths per 100,000 births, respectively).[401]

- **Early prenatal care:** Prenatal care has shown to be most effective when accessed early in pregnancy.[402]
    - In Montgomery County, 10.2% of Black births had late or no prenatal care, compared with 6.9% of all births, 9.2% of Latinx births, 4.9% of Asian births, and 3.6% of White births.[403]
    - However, Maryland data show that even when Black pregnant people start prenatal care early, they are still almost three times more likely to die from pregnancy-related causes than their White peers.[404]

Finding #9. Differences in outcomes exist between native and foreign born Black and Latinx mothers in the County. Understanding how perinatal health disparities are distributed among racial and ethnic subpopulations could help the County target resources and address service gaps.

According to data from the Centers for Medicare and Medicaid Services, from 2016-2023, the majority of births among Black and Latinx mothers in Montgomery County were to foreign born individuals (61% and 77%, respectively). Comparing maternal health outcomes between native and foreign born Black and Latinx mothers show that:

- Foreign born Black mothers have higher rates of cesarean births and delivery hospitalizations than native born Black mothers, but lower rates of blood transfusions, preterm births, and low birthweight babies.
- Foreign born Latinx mothers have the same or better maternal and infant health outcomes than native born Latinx mothers, especially in rates of preterm births.

	Black Native Born	Black Foreign Born	Latinx Native Born	Latinx Foreign Born
Total Births	7,736	12,537	6,740	22,319
% Cesarean Births	38%	44%	30%	30%
% Maternal ICU	0.22%	0.30%	0.19%	0.16%
% Maternal Transfusion	0.94%	0.84%	0.49%	0.47%
% Preterm Births	12.20%	8.59%	10.12%	9.55%
% Low Birth Weight	12%	8%	8%	7%

Source: CDC WONDER Online Database. Data exclude a small number of births to individuals of unknown ethnicity.

[401] Ibid.
[402] Eunice Kennedy Shriver National Institute of Child Health and Human Development - NICHD
[403] DHHS, Maternal and Infant Health in Montgomery County, 2012-2021
[404] Maryland Maternal Mortality Review 2022 Annual Report, Maryland Department of Health

These outcomes by country of birth are important for the County's efforts to improve maternal and infant health. Currently, the County's maternal and infant health home visiting programs primarily serve immigrant populations. Understanding how perinatal health disparities are distributed among racial and ethnic subpopulations could help the County better target resources and address service gaps.

Finding #10. The County hopes to strengthen collaboration with hospitals to facilitate data sharing and improve maternal and infant health services. Comparing maternal and infant health outcomes across hospitals is complex and requires expertise and collaboration.

According to staff in the Maternal and Child Health Program (MCH) in the Department of Health and Human Services, a major challenge in understanding disparities in maternal and infant health outcomes locally is that the County lacks jurisdiction over private health provider data. This limits the County's ability to track maternal and infant health trends by hospital. DHHS is eager to partner with hospitals in the County, in particular Holy Cross, which delivers a majority of babies in the County.

As part of this project, OLO requested and received data on maternal and infant health outcomes disaggregated by hospital and by race and ethnicity from the Maryland Health Services Cost Review Commission (HSCRC), which collects administrative data from medical records across hospitals in Maryland. OLO identified potential differences in how the data was collected for newborns and mothers, which we were unable to fully resolve due to the complex and technical nature of the database from which it was sourced. Additionally, OLO concluded that further study, beyond the scope of this project, is needed to establish consistent and meaningful measures for comparing hospitals in terms of maternal and infant health. Consequently, OLO has decided not to publish this data at this time.

However, OLO notes that hospital partnerships and data sharing are key components of initiatives in other jurisdictions that have shown promise in reducing racial disparities in maternal and infant health outcomes. In particular, the Cradle Cincinnati initiative incorporates an effort entitled Mama Certified, which collects data and publishes scores informed by community and institutional perspectives regarding local hospitals' maternal and infant health equity efforts.

Roots of Racial Disparities in Maternal and Infant Health Outcomes

This section describes OLO's findings regarding the roots or drivers of racial disparities in maternal and infant health outcomes in the U.S. Overall, OLO finds that racial disparities in maternal and birth outcomes result from three drivers: a legacy of racist pseudoscientific theories that blame Black bodies for racial disparities in health outcomes, contemporary medical racism, and racial disparities in structural determinants of health.

Finding #11. Contemporary medical racism is rooted in a legacy of racist pseudoscientific theories about Black bodies developed beginning in the 1700s and 1800s that impacts perinatal care for Black birthing people and their babies today.

During the 1700s and 1800s, enslaved Black Americans in the southern U.S. bore the brunt of disease and of primitive and harmful medical treatments. Slaveholders commonly accused enslaved people of feigning illness ("malingering") to avoid work, so some physicians advocated for medical violence (e.g. intentional overdoses of drugs to cause pain) to shock them out of their "performances." In addition, physicians purchased or hired enslaved people for conducting experiments that were often violent and brutal. Physicians and medical schools then used their purported expertise with the bodies of enslaved Black Americans to develop pseudoscientific arguments about biological differences between White and Black bodies. For example, they argued that:

- Black bodies could better tolerate hot weather and tropical diseases than White bodies and did not experience pain; and
- Black people were inherently hypersexual, dishonest, lazy and cognitively inferior.

Today, scientists concur that race is a social construct. According to a 2023 National Academies report, "race makes for a poor proxy of human biological variation."[405] However, researchers note that contemporary medical education and practices often reflect inaccurate perceptions of patient race as a biological category. In perinatal care specifically, OLO identified three medical guidelines developed since 2007 (and have since been revised) that initially treated race as biological and that impact decisions about whether to allow vaginal births after cesarean section (VBAC), calculate risk for preeclampsia, and provide treatment for anemia.

In addition, numerous studies show healthcare professionals exhibit similar levels of racial bias to those in the general population, and racial bias impacts quality of healthcare. In one study, Black birthing people reported the providers that attended their births held stereotypes about Black people

[405] National Academies, *Using Population Descriptors in Genetics and Genomics Research*, 76.

and their bodies. These stereotypes echoed the pseudoscientific theories of the 1700s and 1800s in suggesting Black birthing people were:

- Uneducated, unintelligent or uninformed;
- Negligent;
- Intolerant to pain, and
- Dramatic and unreasonably anxious.

Finding #12. The underrepresentation of Black providers in the healthcare workforce prevents Black birthing people in the U.S. from receiving racially concordant care.

In the 1800s and 1900s, medical institutions restricted the work of Black physicians and excluded them from medical specialties and research. Medical institutions also created strict licensing requirements for midwives and created stigma around midwifery, which severely impacted access to reproductive care in Black and Indigenous communities that relied on midwives.

Today, research demonstrates that racially concordant care, meaning care from providers whose race or ethnicity matches that of the patient, can improve health outcomes for BIPOC patients.[406] However, Black, Latinx, Indigenous and Hawaiian and Pacific Islander providers are underrepresented in clinical health professions nationally. The racial and ethnic distribution of medical school graduates from 2003 to 2019 did not change.[407] Black students face the following barriers to access to medical school:[408]

- Financial/socioeconomic burdens;
- Lack of access to preparatory materials and academic enrichment programs;
- Lack of exposure to the medical field;
- Poor mentorship/advising experiences;
- Systemic and interpersonal racism; and
- Limited support systems.

In the perinatal care workforce specifically, studies have found that Black and Latinx individuals are underrepresented in obstetrics and gynecology residencies (postgraduate training programs for doctors). Data suggest the disparities are lower in obstetrics and gynecology than in other fields.[409] The midwifery workforce in the U.S. is 85% White,[410] which is notable given traditions of Black and Indigenous midwifery.

[406] National Academies, *Ending Unequal Treatment*, 186.
[407] National Academies, *Ending Unequal Treatment*, 180-181, 185.
[408] Rattani, Mian, et al., "A systematic review of barriers to pursuing careers in medicine among Black premedical students."
[409] López, Wilson, et al., "Racial and Ethnic Diversity Among Obstetrics and Gynecology, Surgical, and Nonsurgical Residents."
[410] GAO, "Midwives."

Finding #13. Racism outside the health care sector is a key driver of racial disparities in maternal and infant health outcomes because it impacts social determinants of health and has measurable biological effects on Black birthing people's bodies.

Researchers often highlight racial disparities in the social determinants of health (SDOH) – defined as "the conditions in the environments which people are born, live, learn, work, play, worship, and age"[411] – as drivers of disparities in health outcomes. SDOH are unequally distributed by race and ethnicity, with BIPOC experiencing, on average, more adverse SDOH than White people. Adverse SDOH result in unmet health-related social needs (HRSN). Examples of HRSN are employment, housing, nutrition, safety, transportation, and affordable utilities.

More recently, researchers have emphasized *structural* determinants of health – in other words, high-level factors such as laws, institutional practices, and social norms that drive the distribution of social determinants of health – as the causes of disparities in SDOH. Structural determinants of health include structural racism. The Anti-Drug Abuse Act of 1986 is one example of a structural determinant of health that continues to negatively impact SDOH in Black communities. This law mandated harsher sentences for the use of crack cocaine, more commonly used in Black communities, compared to those for use of the powder cocaine more common in White communities. The mass incarceration that resulted from this law limited employment opportunities for Black people and has caused long-term housing insecurity, food insecurity, and violence in Black communities.

Additionally, over the past two decades, researchers led by Arline Geronimus have studied "weathering," which refers to the biological impact of stress on the human body. Evidence suggests that racism causes Black women of all income levels to experience weathering at a faster rate than their White and male counterparts, and that weathering is a significant driver of racial disparities in maternal and infant health outcomes.

[411] National Academies*, Ending Unequal Treatment*, 51

Perinatal Providers and Services in Montgomery County

Finding #14. OB/GYN physicians comprise the majority of perinatal care providers and attend the vast majority of births in the County. Providers are concentrated in the Mid and Downcounty areas. Areas of the County with large Black populations have relatively few perinatal care providers.

Perinatal care providers in Montgomery County include OB/GYN physicians, maternal-fetal medicine (MFM) specialists, OB/GYN nurse practitioners, midwives, and doulas. Most perinatal providers in the County are OB/GYNs (74%), who, in turn, attend the vast majority of births (over 90%). Midwives have a limited presence by comparison, constituting just 4% of all perinatal providers and attending just 5% of births on average.[412] Notably, data in the table below show that White mothers in the County use midwives at over twice the rate of other racial or ethnic groups.

	Physician Attended	Midwife Attended
Total Births	90,733	4,339
Asian	97%	3%
Black	96%	3%
White	92%	8%
Latinx	96%	3%

Source: CDC WONDER Online Database. Birth data are based on where the mother resides. Data exclude a small number of births to individuals of unknown ethnicity.

As the table below demonstrates, Council Districts 1, 3, and 4 have the most perinatal providers in the County. Notably, Council Districts with large BIPOC, especially Black, populations have relatively few providers. District 2, which is 67% BIPOC, has the fewest maternal healthcare providers in the County (11 of a total 387 providers). District 5 has the second fewest maternal healthcare providers in the County (41 of a total 387 providers) and has the highest share of Black residents in the County (37% compared to 18% in the County overall).

[412] Centers for Medicare and Medicaid Services (CMS) National Plan and Provider Enumeration System (NPPES); CDC WONDER Online Database. Data are from Natality Records 2016-2023.

Council District	Provider Totals	% of Pop. Latinx	% of Pop. White	% of Pop. Black	% of Pop. Asian	% of Pop. Other	% of Pop. BIPOC*
1	67	8%	65%	5%	16%	6%	35%
2	11	17%	33%	19%	24%	5%	67%
3	85	22%	38%	14%	20%	5%	62%
4	80	18%	47%	21%	9%	6%	53%
5	41	21%	25%	37%	12%	5%	75%
6	60	35%	31%	17%	12%	5%	69%
7	43	23%	44%	15%	12%	6%	56%
County	**387**	**21%**	**40%**	**18%**	**15%**	**5%**	**59%**

Sources: Centers for Medicare and Medicaid Services (CMS) National Plan and Provider Enumeration System (NPPES); Montgomery County Council District geodatabase file

*OLO's calculation of BIPOC constituents includes the Latinx population and Non-Latinx Black, Asian, and Other race populations.

Finding #15. The large numbers of Black registered nurses in the County presents an opportunity to diversify the midwifery workforce and increase access to racially congruent midwifery care.

Local data on provider demographics show that Black registered nurses constitute 36% of all registered nurses in the County and are overrepresented compared to the County's Black population (19%).[413] These data highlight an opportunity to increase and diversify the County's midwifery workforce. Specifically, the large numbers of Black registered nurses currently in the County presents a potential pipeline for more trained Black nurse midwives. As noted in Finding #8, increased access to racially congruent midwifery care is a promising strategy for reducing racial disparities in perinatal health outcomes for Black birthing people.

Data from the American College of Nurse-Midwives show that midwifery is already diversifying at the national level: although the workforce is still predominantly White (84%), recently certified midwives – meaning those certified between 2016-2020 – were more likely to identify as Black, Latinx, or Asian than midwives certified prior to 2016.[414]

[413] Source: U.S. Census Bureau, 2018 American Community Survey 5-Year Estimates Equal Employment Opportunity, Tables EEOALL1W, and 2023 ACS 1-Year Estimates Selected Population Profiles, Table S0201

[414] American College of Nurse-Midwives, Access to Midwifery Care National Chartbook. Compiled for ACNM by Dr. Jennifer Vanderlaan.

Finding #16. Five hospitals in the County provide labor and delivery services, with variations in birth volume, birthing person demographics, levels of maternal care, and overall quality ratings.

The majority of births in Montgomery County occur at one of the following five hospitals that offer labor and delivery services. Births at these hospitals are attended primarily by OB/GYNs.

1. Adventist HealthCare Shady Grove Medical Center;
2. Adventist HealthCare White Oak Medical Center;
3. Holy Cross Silver Spring Hospital;
4. Holy Cross Germantown Hospital; and
5. MedStar Montgomery Medical Center.

The table below shows that 14,155 babies were born at these hospitals in 2024, with Holy Cross Silver Spring accounting for half (7,204 or 51%). Additionally:

- The demographics of birthing people at different hospitals vary significantly, with Holy Cross Silver Spring serving the largest percentage of Black individuals (35%), and Adventist HealthCare White Oak serving the largest percentage of Latinx individuals (68%).
- All five hospitals are at minimum Level II facilities, meaning they have the capabilities and personnel to care for low, moderate, and high-risk pregnancies. Holy Cross Silver Spring Hospital and Adventist HealthCare Shady Grove Medical Center are Level III facilities with the ability to care for more complex maternal and fetal conditions.[415]
- Adventist HealthCare Shady Grove Medical Center, Holy Cross Germantown Hospital, and Holy Cross Silver Spring received a 2-star CMS Overall Quality rating, while the remaining two hospitals received a 3-star CMS Overall Quality rating. Additionally, CMS has designated all five birthing hospitals as Birthing-Friendly, meaning they participate in a perinatal quality improvement collaborative program and implement evidence-based care to improve maternal health.[416]

[415] "Levels of Maternal Care," The American College of Obstetricians and Gynecologists.
[416] "Biden-Harris Administration Launches 'Birthing-Friendly' Designation on Web-Based Care Compare Tool," Centers for Medicare and Medicaid Services, Press Release, Nov. 2023.

	All	Adventist Shady Grove	Adventist White Oak	Holy Cross Silver Spring	Holy Cross Germantown	MedStar Montgomery
Demographics						
Number of Births, 2024	14,155	3,856	1,747	7,204	920	428
% Black Birthing Person	27%	17%	14%	35%	24%	26%
% Latinx Birthing Person	38%	26%	68%	37%	43%	23%
Quality and Care						
Level of Maternal Care		Level III	Level II	Level III	Level II	Level II
CMS Overall Rating		★★	★★★	★★	★★	★★★
Birthing Friendly		✓	✓	✓	✓	✓

Sources: Maryland Health Services Cost Review Commission, Maryland Department of Health; The American College of Obstetricians and Gynecologists; Maryland Quality Reporting, Maryland Health Care Commission.

County Government Maternal and Infant Health Programs

Finding #17. The County Government offers three home-based case management and educational programs that serve low-income pregnant people and their babies. Montgomery Perinatal Program is the largest program, and it serves a population that is predominantly Latinx.

Montgomery Perinatal Program (MPP), Babies Born Healthy (BBH), and Start More Infants Living Equally (SMILE) Program are home-based case management and educational programs for pregnant people and their babies. The Maternal and Child Health Program (MCH) in the Department of Health and Human Services administers these programs and manages MPP and BBH. The African American Health Program (AAHP) operates SMILE. These programs provide the following services:

- Case management and care coordination;
- Classes/resources/support for pregnancy, childbirth, and parenting;
- Health screenings/assessments;
- Home visits (by public health nurses, community health workers, and/or lactation consultants);
- Medicaid assistance (i.e., enrollment, information, etc.) – MPP and SMILE only;
- Mental and behavioral health support/resources;
- Referrals to healthcare providers (i.e., prenatal, postpartum, and primary care);
- Referrals to social/community services (e.g., doulas, social workers, and food assistance); and
- Wrap-around support services (e.g., transportation, childcare).

The following table compares the programs. It shows that MPP has the largest budget and serves, by far, the most clients. Additionally, 83% of MPP clients in FY24 were Latinx while 7% were Black. The programs predominantly serve people with low incomes, though SMILE is open to all income levels.

Program	MPP	BBH	SMILE
FY25 Budget	$5.2 million	$771,000	$724,000 (FY24 expenditures)
FY24 # of clients	1,624	185	254
FY24 client race/ethnicity	83% Latinx, 7% Black	100% Black from designated zip codes	100% Black
Eligible population	Uninsured or enrolled in Medicaid	Black pregnant and postpartum people enrolled in Medicaid who reside in designated zip codes	Black pregnant people and families of all income levels.
Home visits provided by	Community health workers	Community Health Workers	Registered Nurse Case Managers

Finding #18. In recent years, the services provided by the County's largest program for maternal and infant health, the MPP, have changed due to a statewide expansion of Medicaid.

Between 1989 and 2024, MPP was known as the Maternity Partnership Program, a public-private partnership between DHHS, Holy Cross Hospital, Adventist Hospital, and Mary's Center that provided healthcare services to uninsured pregnant and postpartum individuals with low incomes. Because most of the County's uninsured population were undocumented individuals who did not qualify for Medicaid, 95% of the Maternity Partnership Program's participants were Latinx immigrants from Central America.[417]

On July 1, 2023, the Healthy Babies Equity Act went into effect, expanding Medicaid eligibility to all pregnant individuals living in Maryland who are 250% or below the federal poverty level, regardless of immigration status. Now, all uninsured pregnant people with low incomes in the County who would have otherwise received perinatal services through the Maternity Partnership Program can enroll in Medicaid and receive comprehensive medical care during their pregnancies and up to four months

[417] Dr. Kisha Davis, Chief Health Officer, Department of Health and Human Services, Bi-Annual Update from the Health Officer, Board of Health, Montgomery County Government, June 11, 2024 [hereinafter "Bi-Annual Update from the Health Officer, June 11, 2024"].

after their babies are born. Because the new law made the Maternity Partnership Program redundant, MCH ended the program.

The Montgomery Perinatal Program (MPP) replaced the Maternity Partnership Program. The MPP continues to provide home-based case management services and prenatal and postpartum classes for pregnant people and parents with low incomes. However, because participants now receive comprehensive prenatal care under Medicaid, the program no longer partners with local hospitals and clinics to provide these services. To ensure all Medicaid-eligible birthing people receive timely access to prenatal care and continue to receive home visiting services, MCH created the Perinatal Administrative Care Coordination Team (PACCT). The PACCT contacts newly eligible Medicaid recipients to educate them about their Medicaid benefits, help them select an OB/GYN, and connect them to other local health resources.

MPP retains the same budget for staff and other associated administrative costs as the previous program, but no longer reimburses clinics to provide prenatal care, the cost of which was approximately $1.5 million annually. In a June 2024 presentation to the Board of Health, the County's Health Officer reported that since starting the PACCT, MCH has seen an increase in the number of Black individuals referred to BBH and SMILE.[418]

Finding #19. The County's maternal and infant health programs effectively reach Latinx individuals with low incomes but underserve Black individuals relative to their needs.

Staff in the Maternal and Child Health Program (MCH) observed that the County targets many of its perinatal resources to Latinx pregnant and postpartum people with lower incomes who have immigrated to the U.S. This is because its largest maternal and infant health program, MPP, has historically served and continues to serve a population that is predominantly Latinx.

Conversely, staff observed that Black birthing people are underserved by the County's perinatal programs relative to their needs. Data show Black individuals and infants disproportionately experience adverse pregnancy-related health outcomes. However, the two County programs aimed at Black birthing people and babies – Babies Born Healthy (BBH) and Start More Infants Living Equally (SMILE) – have significantly smaller capacities than MPP, even though they face high demand for services.

There may be opportunity for the County's perinatal programs to more effectively reach populations at higher risk for certain adverse pregnancy-related outcomes. For example, the majority of BBH and SMILE clients are foreign born, however, data show native born Black mothers in the County are more likely than foreign born Black mothers to deliver preterm, low birthweight babies, and to require blood

[418] Bi-Annual Update from the Health Officer, June 11, 2024; DHHS, Maternal and Infant Health in Montgomery County, 2012-2021.

transfusions during delivery.[419] MCH reports that it is working to re-align department resources to more effectively serve Black birthing populations relative to their needs.[420]

Finding #20. BBH and MPP participants experience some worse maternal and infant health outcomes compared with comparison groups. SMILE participants experience better infant health outcomes than Countywide rates for Black women and birthing people. The extent to which these differences reflect participant risk factors and/or program effectiveness is unclear.

The table below summarizes birth outcomes for each of the three County-supported home-based case management and educational programs that serve pregnant people, mothers, and babies who are predominantly low income. The data show:

- BBH, and to a lesser extent MPP, showed higher preterm birth and low birthweight rates in FY24 than the comparable County rates for 2012-2021;
- MPP participants' cesarean section rates are similar to the 2012-2021 County cesarean section rate for Latinx individuals and significantly lower than the comparable rate for Black individuals;
- The FY24 rate of SMM for MPP participants was lower than the 2012-2021 Countywide rate;
- BBH participants had a lower cesarean section rate in FY24 than the 2012-2021 Countywide cesarean section rate for Black individuals, but a higher rate of SMM (5% versus 3%); and
- SMILE participants' preterm birth and low birthweight rates are similar to County rates, and data on other measures such as cesarean births and SMM are not available.

MCH staff note that pregnant people are recruited into home visiting programs based on being identified as "high-risk" by the PACCT. Therefore, adverse BBH and MPP outcomes may be reflective of participant risk factors.

[419] Centers for Disease Control and Prevention, National Center for Health Statistics. National Vital Statistics System, Natality on CDC WONDER Online Database. Data are from Natality Records 2016-2023, as compiled from data provided by the 57 vital statistics jurisdictions through the Vital Statistics Cooperative Program. Accessed on Jan 30, 2025; Tiffany L. Green, "Black and Immigrant: Exploring the Effects of Ethnicity and Foreign-Born Status on Infant Health" (Washington: Migration Policy Institute, 2012), available at available at https://www.migrationpolicy.org/research/CBI-infant-health.
[420] Bi-Annual Update from the Health Officer; Montgomery County Government, June 11, 2024

FY24 Outcomes*	MPP	BBH	SMILE	Latinx 2012-2021	Black 2012-2021	Montgomery County 2012-2021
YTD Total Births	904	122	105			
Fetal Deaths per 1,000 births	7.74			3.6	7.2	4.3
Preterm Births	15.4%	17.0%	8.6%	9.8%*	10.3%	9.0%
LBW Babies	8.3%	12.0%	7.6%	7.5%	9.9%	7.4%
Cesarean Births	30.2%	33.0%	N/A	30.8%	42.0%	34.5%
SMM Hospitalizations	1.99%	5.0%	N/A	N/A	3.2%	2.4%

* MPP and BBH data are as of August 2024

Finding #21. MPP, BBH and SMILE participants report important benefits from the programs. The programs include many components similar to those of programs in other jurisdictions that have shown promise in reducing racial disparities in maternal and infant health outcomes.

The County's maternal and infant health programs include some components similar to those of programs in other jurisdictions that integrate health and social care and have shown promise in reducing racial disparities in outcomes. In a focus group led by MCH and AAHP staff, BBH and SMILE participants said they appreciated that the programs provided a sense of belonging and social support before, during, and after their pregnancies. The programs became a trusted source of information and gave participants the knowledge and confidence to speak up during prenatal appointments and childbirth. The table below shows similarities between the County's programs and promising initiatives in other jurisdictions.

Promising Initiatives Components	County Programs
Community leadership, partnerships, and advocacy	• MCH staff meet quarterly with Community Action Team that encompasses local hospitals, clinics, nonprofit organizations and other government programs. • SMILE is operated by AAHP and has an Executive Committee and an Executive Coalition with representation from the community. • Programs receive referrals from hospitals and other organizations working with pregnant people.
Community health workers and home visiting	• BBH and MPP offer home visiting by community health workers or Community Health Nurses

Promising Initiatives Components	County Programs
	recruited from the community who are racially and culturally congruent with program participants. • Racially congruent registered nurses conduct SMILE home visits.
Workforce training	Community health workers in MCH programs undergo a six-month training process.

Finding #22. Opportunities may exist to add additional elements to the County's programs.

The table below summarizes areas where County programs are different from promising initiatives in other jurisdictions. These areas may represent opportunities to add new elements to County programs.

Promising Initiatives Components	County Programs
Community leadership, partnerships, and advocacy	• BBH and MPP do not have a governance structure that includes community members or organizations. • County programs do not have formal policy advocacy components. • The County does not receive maternal or infant health outcome data from local hospitals.
Community health workers	Unlike some promising initiatives, County programs do not leverage Medicaid to fund community health worker services due to limitations in Maryland's Medicaid program.
Community-based doulas	County programs do not currently offer doula services or provide doula training. The SMILE program refers participants to doulas funded by Medicaid.

B. Recommended Discussion Issues

This report finds Black birthing people experience considerably worse maternal and infant health outcomes than other birthing people in Montgomery County. Black individuals experience the highest rates of SMM, cesarean births, preterm births, low birthweight babies, and fetal and infant deaths compared with other women and birthing people in the County. National research shows that racism in and outside of healthcare drives racial disparities in maternal and infant health outcomes, which are larger than income disparities. Because numerous factors drive racial disparities in maternal and infant outcomes, policy experts recommend a broad approach to addressing them.

The County Government offers three home-based case management and educational programs that serve pregnant people - primarily those with lower incomes - and their babies: Montgomery Perinatal Program (MPP), Babies Born Healthy (BBH), and Start More Infants Living Equally (SMILE) Program. Staff in the Maternal and Child Health Program (MCH) observed that the County targets many of its perinatal resources to Latinx individuals who have immigrated to the U.S. This is because its largest maternal and infant health program, MPP, has historically served and continues to serve a population that is predominantly Latinx.

OLO offers the following recommended discussion issues for Council consideration:

Discussion Issue #1. What can the County learn from existing data on the outcomes of the County's maternal health programs, and what additional data are needed?

OLO found that BBH and MPP participants experience some worse maternal and infant health outcomes compared with comparison groups (see Finding #20 above). SMILE participants experience better infant health outcomes than Countywide rates for Black or African American women and birthing people. Specifically:

- BBH, and to a lesser extent MPP, showed higher preterm birth and higher low birthweight rates in FY24 than the comparable County rates for 2012-2021;
- MPP participants' cesarean section rates are similar to the 2012-2021 County cesarean section rate for Latinx individuals and significantly lower than the comparable rate for Black individuals;
- The FY24 rate of SMM for MPP participants was lower than the 2012-2021 Countywide rate;
- BBH participants had a lower cesarean section rate in FY24 than the 2012-2021 Countywide cesarean section rate for Black individuals, but a higher rate of SMM (5% versus 3%).
- SMILE participants' preterm birth and low birthweight rates are similar to County rates, and data on other measures such as cesarean births and SMM are not available.

The extent to which these differences reflect participant risk factors and/or program effectiveness is unclear. The Council may wish to discuss with Executive Branch and AAHP representatives how these data can inform future programming decisions and what additional data should be collected.

Discussion Issue #2. Following the recent Medicaid expansion, how could the Montgomery Perinatal Program (MPP) better serve Black birthing people?

As detailed above in Finding #18, between 1989 and 2024, MPP was known as the Maternity Partnership Program, a public-private partnership between DHHS, Holy Cross Hospital, Adventist Hospital, and Mary's Center that provided healthcare services to uninsured pregnant and postpartum individuals with low incomes. On July 1, 2023, the Healthy Babies Equity Act went into effect, expanding Medicaid eligibility to all pregnant individuals living in Maryland who are 250% or below the federal poverty level, regardless of immigration status. Now, all uninsured pregnant people with low incomes in the County who would have otherwise received perinatal services through MPP can enroll in Medicaid and receive comprehensive medical care during their pregnancies and up to four months after their babies are born.

Finding #19 above highlights that MCH staff observed that Black birthing people are currently underserved by the County's perinatal programs relative to their needs. Data show Black women and infants disproportionately experience adverse pregnancy-related health outcomes. However, the two County programs aimed at Black birthing people and babies – Babies Born Healthy (BBH) and Start More Infants Living Equally (SMILE) – have significantly smaller capacities than MPP, even though they face high demand for services. MCH is working to re-align department resources to more effectively to serve Black birthing populations relative to their needs. *The Council may wish to discuss the status of this realignment with Executive Branch staff.*

Discussion Issue #3. What opportunities are available to add additional elements to the County's existing maternal health programs?

OLO found that MPP, BBH and SMILE participants report important benefits from these County programs. The programs include many components similar to those of programs in other jurisdictions that have shown promise in reducing racial disparities in maternal and infant health outcomes (see Finding #21). OLO also identified potential opportunities to add elements present in other jurisdictions' initiatives that have shown promise in reducing racial disparities in maternal and infant health outcomes (see Finding #22). Relatedly, the County hopes to strengthen collaboration with hospitals to facilitate data sharing and improve maternal and infant health services. Comparing maternal and infant health outcomes across hospitals is complex and requires expertise and collaboration (refer to Finding #13).

The Council may wish to discuss with Executive Branch and AAHP staff the feasibility of:

- Adding community leadership through a community advisory board for MPP and BBH programs;
- Incorporating a policy advocacy component into MPP, BBH and/or SMILE programs, such as a policy committee inclusive of community members with lived experience similar to that of Cradle Cincinnati;
- Establishing a process to work with the state's Health Services Cost Review Commission, the state's MDMOM and MDPQC initiatives, local hospitals and community members to identify appropriate ways to measure and publish data on hospital performance and equity in maternal and infant health;
- Expanding access to community-based doula services for program participants; and/or
- Advocating for changes to the state's Medicaid program to allow the County's programs to leverage Medicaid funding to increase resources available to serve participants.

Discussion Issue #4. Could Montgomery County work collaboratively with County and BIPOC community stakeholders, including birth workers, partner organizations, and healthcare providers, to expand access to racially congruent midwifery services?

In the U.S., physicians (commonly obstetricians) attend nearly 9 out of 10 births, and 98% of births occur in hospitals. However, researchers find that midwifery care, which prioritizes facilitating birth without medical interventions, is comparable or superior to care by an obstetrician for individuals with healthy pregnancies. Additionally, alternative birth settings, such as homes and freestanding birth centers, allow flexibility not always available in hospital settings to practice the midwifery model of care. OLO found White mothers in the County use midwives at over twice the rate of other racial or ethnic groups.

As noted above, the medical establishment in the U.S. has a history of denigrating and suppressing the work of Black and Indigenous midwives. Today, the midwifery workforce in the U.S. is disproportionately White. Efforts to establish BIPOC-led birth centers that offer midwifery care in the U.S. are growing. The County currently has no freestanding birth centers.

The Council may wish to discuss with County and BIPOC community stakeholders, opportunities to expand access to racially congruent midwifery in Montgomery County, such as by:

- Exploring how to expand access to postsecondary midwifery education for County residents;
- Examining and addressing local barriers for BIPOC midwives; and
- Supporting the development of a BIPOC-led birth center in Montgomery County.

Chapter 11. Agency Comments

The Office of Legislative Oversight (OLO) shared the draft of this report with staff from Montgomery County Government. OLO appreciates the time taken by County Government staff to review the draft report and to provide technical feedback. This final report incorporates technical corrections and feedback received from County Government staff.

The written comments memorandum received from the Montgomery County Chief Administrative Officer is attached in its entirety on the following pages.