Maternal and Child Health Inequities Emerge Even Before Birth

STATE OF BABIES YEARBOOK 2020

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The State of Babies Yearbook: 2020 was produced as part of ZERO TO THREE's *Think Babies*™, with data and indicator analysis powered by Child Trends. Funding partners for the 2020 *Yearbook* include the Perigee Fund and the Tikun Olam Foundation. Data provided by this effort are examined in this brief to better understand the inequities that begin before birth for both infants and mothers.

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Introduction

In 2019, ZERO TO THREE and Child Trends unveiled the first-of-its-kind *State of Babies Yearbook: 2019*, bridging the gap between science and policy with national and state-by-state data on the well-being of America's babies. The data were clear: the state where a baby is born makes a big difference in their chance for a strong start in life. Ensuring that our youngest children have a healthy start requires understanding the influence of race and ethnicity in the care mothers and their babies receive no matter where they are born. To do so, the *State of Babies Yearbook: 2020* disaggregates national and state averages on key indicators of child well-being to explore key subgroups. This brief is focused on the serious disparities in maternal health and birth outcomes among babies and families of color.

Whether infants are born healthy and with the potential to thrive as they grow greatly depends on their mother's well-being—not just before birth, but even prior to conception. To have a healthy pregnancy and positive birth outcomes, women and their infants require access to appropriate health care services, before, during, and after birth. Extensive data indicate serious racial and ethnic disparities in infant and maternal health care and health outcomes. For example, Black, American Indian, and Hispanic women[a] are more likely than their White counterparts to receive late or no prenatal care.[1]

They are also more likely to experience serious health problems[2] or die during or after birth from resulting complications. In comparison to White infants, Black and American Indian infants have a much higher risk of being born preterm and/or with low birthweight,[3] are less likely to be breastfed,[4] and are more likely to die within their first year.[5]

Researchers have explored connections between these disparities and factors such as poverty due to parents not earning a living wage, unemployment, or underemployment; living in under-resourced neighborhoods; or low educational attainment, and numerous studies reach the same conclusion: Even after considering the influence of these factors, racism accounts for huge differences.[6,7] Two women of different ethnicities or races—for example, a Black woman and a White woman—can have otherwise identical demographic characteristics; in this case, though, the Black woman (and her baby) is

[a] As used by the Office of Management and Budget and the Census Bureau, Hispanic ethnicity can be a characteristic of people of any race. In this brief, we use "Black" and "White" to refer to non-Hispanic members of those racial groups. Except where otherwise indicated, the analysis in this brief is limited to Black, White, and Hispanic women and children, because data on other groups, particularly at a state level, are not reliable.

likely to experience much worse outcomes. When it comes to how mothers and their infants fare in pregnancy and delivery, race—or, more precisely, racism—matters.

This brief intentionally focuses on the experiences of both mothers and infants, whose well-being is intrinsically interdependent, although they are often considered separately. This is particularly important when it comes to babies and women of color, due to the intergenerational effects and lived experiences of racism. These factors are influential throughout pregnancy and affect their babies' start in life. The health and well-being of mother and baby are particularly tightly interwoven during the perinatal period. This shared experience, which includes the impact of racism with the particular threats families of color face, is the subject of this brief.

We summarize evidence of serious disparities in infant and maternal outcomes and present potential strategies to ameliorate them. Underlying the stark differences in these outcomes are disparities in access to health care, the experiences women have in the health care setting, and the cumulative effects of stress (including the stress of experienced racism) on women's health. No single strategy will sufficiently achieve greater racial equity in preconception and prenatal care and the outcomes they influence. Instead, to measurably improve these conditions, which have become entrenched over many years, we must identify and address inequities on multiple fronts. States as well as federal policymakers have several opportunities to adopt policies that can address and lessen these inequities. In addition, there are a number of promising practices that programs and/or communities can implement.

We begin by reviewing the evidence of disparities, exemplified by indicators of prenatal care, preterm births, low birthweight, infant and maternal mortality, and breastfeeding, as tabulated from national data sources through September 2019 for the *State of Babies Yearbook: 2020*.[b] Next, we explore possible causes of these disparities, drawing from the literature on 1) the effects of stress related to institutional and interpersonal racism and poverty on women's health, 2) the impact of differential access to medical care and other family support services, and 3) the differential experiences of women with the medical care system.

Finally, we review existing policies and programs that may help to address these disparities (e.g., Medicaid; the Special Supplemental Nutrition Program for Women, Infants, and Children [WIC]; paid family and medical leave; home visiting programs). We also discuss a set of promising practices states can pursue to further examine and address these disparities.

[b] *The State of Babies Yearbook: 2020* was produced as part of ZERO TO THREE's *Think Babies*™, with data and indicator analysis powered by Child Trends. Funding partners for the 2020 *Yearbook* include the Perigee Fund and the Tikun Olam Foundation. Data provided by this effort are examined in this brief to better understand the inequities that begin before birth for both infants and mothers.

Recommendations from promising policies and practices

Policies

- Increase Medicaid eligibility levels for pregnant women, and extend coverage for new mothers through the first year after birth
- Ensure states' Medicaid plans include reimbursement for maternal depression screening and doulas
- Increase participation in WIC
- Ensure protections for pregnant workers that provide job security and prohibit discriminatory practices
- Expand access to paid family and medical leave
- Expand access to home visiting services

Practices

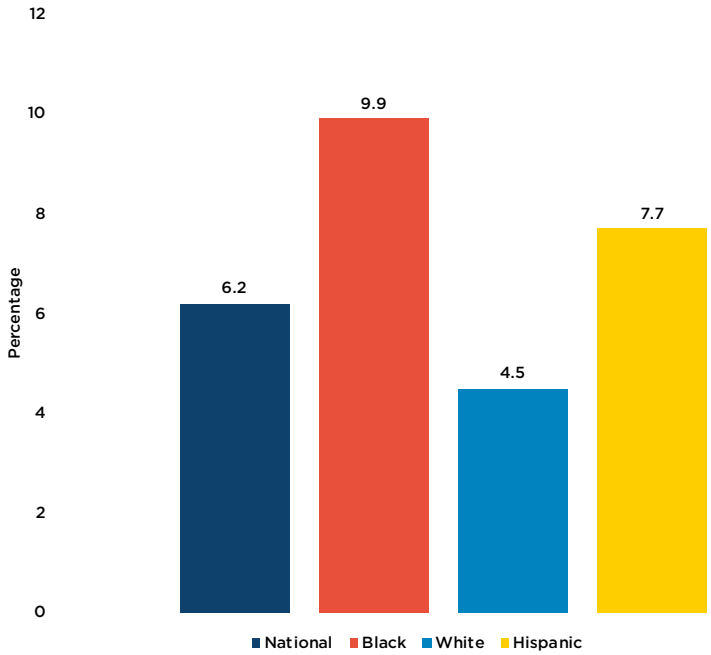
- Implement a comprehensive, multi-disciplinary approach that engages diverse stakeholders and community members in planning and developing solutions
- Expand training for the health care workforce on the experience of racism in medical care, implicit bias (unconscious attitudes that can lead to negative behavior toward Black and Hispanic people) and culturally competent care
- Support more research into promising practice models, such as doula care and breastfeeding support
- Build upon successful public awareness campaigns focusing on safe infant sleep practices
- Expand access to paid sick leave, and paid family and medical leave
- Expand and improve state Maternal Mortality Review Committees
- Improve data collection to facilitate ongoing monitoring of critical indicators and to allow for disaggregation by race and ethnicity

Evidence of racial and ethnic disparities

State of Babies Yearbook: 2020 data confirm that there are clear racial/ethnic disparities on a number of indicators among infants, toddlers, and their mothers (Table A). These findings highlight the importance of disaggregating outcome data the for discerning the true state of babies.

- **Prenatal care.**[c] (Table A) Nationally, while 4.5 percent of White women fall in this category, 7.7 percent of Hispanic women and 9.9 percent of Black women get late or no prenatal care. Compared with Asian/Pacific Islander women (the racial category with the lowest rate), Black women are more than three times as likely to obtain prenatal care late or not at all. American Indian women are more than two times as likely—and White women 41 percent more likely—than Asian/Pacific Islander women to receive late or no prenatal care.[8]

Figure 1. Women Receiving Late or No Prenatal Care by Race



Racial/ethnic disparities are even more pronounced in some states. For White women, rates of late/no prenatal care range, by state, from 1.2 percent (Rhode Island) to 7.7 percent (New Mexico); for Hispanic women, the range is from 1.9 percent (Rhode Island) to 22.5 percent (Alabama); and for Black women, from 3.2 percent (Rhode Island) to 15.1 percent (Texas). In 26 states[d] and the District of Columbia, the percentage of Black women receiving late or no prenatal care is more than twice the percentage for White women.

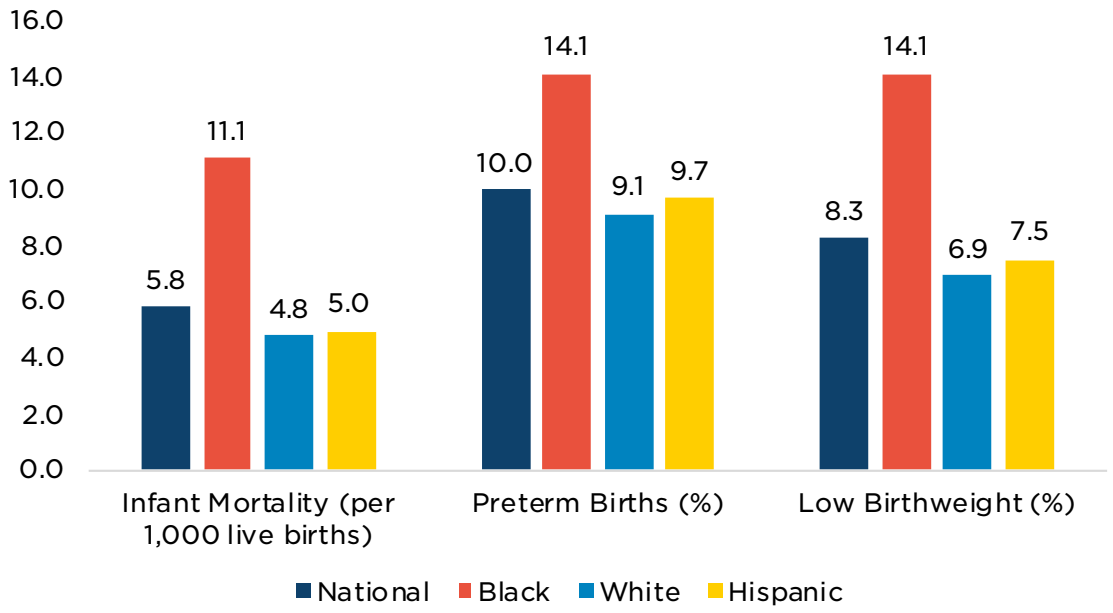
9.9%
of Black women get late or no prenatal care

The rate of preterm births for Black women is
55% higher
than the the rate for White women

The rate of Hispanic women having low-weight births is
7.5%

[c] Data are for 2018.
[d] Arizona, Colorado, Georgia, Idaho, Illinois, Indiana, Iowa, Kansas, Maine, Maryland, Massachusetts, Minnesota, Missouri, Nebraska, New Jersey, New York, North Dakota, Oregon, Pennsylvania, South Dakota, Texas, Utah, Washington, and Wisconsin. Data not available for Montana, Vermont, and Wyoming.

Figure 2. Birth Outcomes by Race

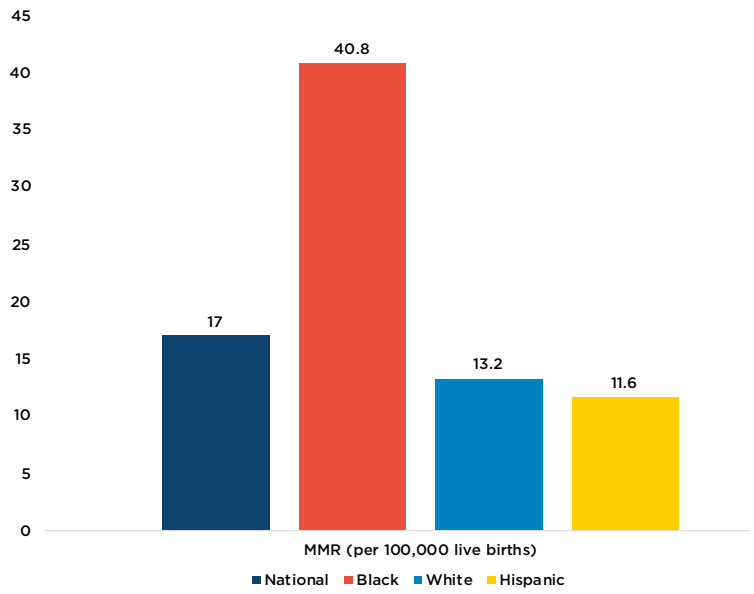


- **Preterm births.**[e] Nationally, the preterm birth rate for Black women (14.1 percent) is 55 percent higher than the rate for White women (9.1 percent), and the rate for Hispanic women (9.7) is 7 percent higher than the rate for White women. (Table B) Preterm birth rates for White women range by state, from 6.3 percent (District of Columbia) to 11.8 percent (West Virginia); for Hispanic women, the range is from 5.8 percent (Maine) to 11.1 percent (Iowa and Utah); and for Black women, from 7.7 percent (South Dakota) to 17.3 percent (Mississippi). In Arkansas, Louisiana, Michigan, and Wisconsin, preterm birth rates for Black women are more than 6 percentage points higher than rates for White women. However, in Idaho, Minnesota, and North Dakota, preterm births are slightly less prevalent among Black women than among White women.
- **Low birthweight.**[f] Nationally, the rate of Black women at risk for having low-weight births (14.1 percent) is more than twice that for White women (6.9 percent); the rate for Hispanic women (7.5 percent) is 9 percent higher than the rate for White women. (Table C) For White women, rates of low birthweight vary, by state, from 4.8 percent (Alaska) to 9.7 percent (Wyoming); for Hispanic women, rates range from 5.8 percent (Alaska) to 10.4 percent (Montana); and for Black women, from 8.4 percent (South Dakota) to 16.4 percent (Alabama). In 17 states[g] and the District of Columbia, the low birthweight rate for Black women is more than double that for White women.
- **Infant mortality.**[h] Mortality is more than twice as high for Black infants (11.1 per thousand births) as it is for White infants (4.8). (Table D) Mortality is slightly higher

[e] Data are for 2018.
[f] Data are for 2018.
[g] Alabama, Alaska, Arkansas, Georgia, Illinois, Louisiana, Michigan, Mississippi, Missouri, Nebraska, Oklahoma, Pennsylvania, South Carolina, Tennessee, and Wisconsin. Data not available for Montana, Vermont, and Wyoming.
[h] 2015-2017 data.

for Hispanic infants (5.0) than for White infants. For White infants, infant mortality ranges, by state, from 2.9 per thousand births (New Jersey and the District of Columbia) to 7.2 (Arkansas); for Hispanic infants, the range is from 4.1 (Washington) to 10.4 (Montana); and for Black infants, from 7.6 (Massachusetts) to 15.0 (Wisconsin). In every state (and the District of Columbia) except Kentucky, Massachusetts, Minnesota, and Washington,[i] the mortality rate for Black infants is at least twice that for White infants.

Figure 3. Maternal Mortality Rate by Race



- **Maternal morbidity and mortality.** Nationally, maternal mortality among Black women (40.8 per 100,000 live births) is more than three times higher than among White women (13.2 per 100,000 live births).[j] (Table F) Moreover, this gap has not decreased over multiple decades.[9] Leading causes of deaths among Black women are heart and circulatory problems; among White women, mental health problems (including suicide and overdose/poisoning) predominate. Complications from cesarean deliveries also play a major role in maternal mortality, along with medical errors, ineffective treatments, and poor care coordination.[10,11]

  Black and Hispanic women also are much more likely than White women to have one or more chronic health conditions that put them at risk for serious birth-related complications.[12] (Table E) For all women, mental health problems are an under-recognized factor in maternal mortality and morbidity, and excessive stress contributes to their vulnerability to life-threatening conditions around pregnancy and childbirth.[13]

- **Breastfeeding.**[k] The national proportion of mothers who ever breastfed their babies is 85.7 percent among Hispanic mothers, 85.2 percent among White mothers, 68.9 percent among Black mothers, and 82.5 percent among mothers of other races[l] despite the known

In a national poll, nearly one-third of Black Americans reported they had personally experienced racial discrimination during a visit with a health care provider.

[i] Data not available for Idaho, Maine, Montana, New Hampshire, New Mexico, North Dakota, Vermont, and Wyoming.
[j] Data are for 2015-2016.
[k] Data are for the cohort of infants born in 2017
[l] Counts of mothers identified as belonging to races other than White or Black were too small to produce reliable separate estimates. As a result, we created an "other" category to include all such groups.

health, nutritional, and economic benefits. (Table G) The difference between the percentages of any two groups is statistically significant, except for the difference between Hispanic and White mothers. Nationally, the proportion of mothers who still breastfeed at six months post-delivery is 58.4 percent among White mothers, 52.5 percent among Hispanic mothers, 42.4 percent among Black mothers, and 57.5 percent among non-Hispanic mothers of other races. (Table H) Looking at state-level data, differences by race/ethnicity in rates of breastfeeding *at any point post-delivery* are statistically significant in only a few states. For example:

- In Pennsylvania, Texas, and the District of Columbia, the rate for Black mothers is significantly lower than the rate for White mothers.
- In Louisiana, the rate for White mothers (73.0 percent) is lower than the rates for mothers of other races (91.6 percent).
- In New Jersey, the rates for Hispanic and White mothers (75.6 and 83.7 percent, respectively) are significantly lower than the rate for mothers of other races (97.7 percent).

Looking at the state-level data for any breastfeeding *at six months*, differences by race/ethnicity in rates are also statistically significant in only a few states. For example:

- In Arizona, Nevada, New Jersey, New York, Rhode Island, and Texas, rates for Hispanic mothers are lower than for White mothers.
- In the District of Columbia, the rate for White mothers (84.1 percent) is double the rate for Black mothers (39.4 percent).
- In New Jersey, therate for Hispanic (39.2 percent) and White mothers (61.6 percent) is significantly lower than the rate for mothers of other races (78.7 percent).

Causes of racial and ethnic inequities

Effects of stress related to institutional and interpersonal racism and poverty on women's health

Many Hispanic and Black women have an exceptional number of stressful experiences that threaten their health. Research consistently finds a correlation between the cumulative stress associated with racism and socioeconomic disadvantage, on the one hand, and health challenges, on the other.[14,15] Discriminatory policies and individual acts of racism throughout our nation's history have limited or blocked opportunities for Black and Hispanic people, and the impacts of historical policy decisions and the chronic stress associated with racism and discriminatory practices persist today.

Even before some of them become mothers, Black women can experience the daily emotional stress of racism, accumulating wear and tear on their health (referred to as "weathering"[16]) that is substantially greater than that of their White counterparts.[17] Looking at mothers and babies, particularly, evidence suggests that Black women's lifelong exposure to interpersonal discrimination may be an independent risk factor for preterm births[18] and infant mortality.[19]

In addition to racism, Black women and their families disproportionately experience a number of risks associated with poverty. They are more likely to live in poor-quality and unstable housing, and to be exposed to environmental toxicants, interpersonal and neighborhood violence,[20] and inadequate resources.[21] The direct effect of these circumstances, as well as the stress they create, threaten maternal and child well-being, beginning prenatally.

Differential access to medical care and family support services, and barriers to breastfeeding

The history of racism in the United States includes discriminatory practices intended to exclude incarcerated, mentally ill, Black, Hispanic, and other minority women from appropriate health care, and includes coercion of these women into unwanted medical procedures, such as sterilization or abortion.[22] This history, together with a broader legacy of mistreatment of Hispanic and Black people by the health care system, has influenced a still-pervasive distrust of the medical establishment among racial-minority women.[23] These circumstances likely account for some portion of the disparity in receiving timely prenatal care. Indeed, in a national poll, nearly one-third of Black Americans reported they had personally experienced racial discrimination during a visit with a health care provider, and 22 percent said they had avoided getting care because they were wary of discrimination.[24]

Furthermore, Black and Hispanic women continue to have poorer access, compared with White women, to comprehensive reproductive health services, including family planning, abortion, and screening for sexually transmitted infections and cervical cancer.[25] Consequently, rates of unintended pregnancy, which is associated with increased maternal morbidity and poorer infant health, are higher among Hispanic and Black women.[26]

Even when mothers-to-be can access health care, Black or Hispanic women do not always receive equitable treatment from providers.

For some women, the cost of care may pose particular barriers to getting timely prenatal care. A recent study linked a temporary increase in Medicaid reimbursement rates to a boost in Black and White women's utilization of prenatal care during the first trimester of pregnancy, but this change was not noted for Hispanic women or non-Hispanic women of other races.[27]

Cultural and systemic barriers to Black women's breastfeeding include inadequate information, the need to return to work soon after delivery, work environments that are not supportive of breastfeeding,

and public stigma. Persistently low rates of breastfeeding among Black mothers also reflect, in part, earlier eras of racism, when enslaved Black women were "wet nurses" for White women's infants.[28]

Differences by race/ethnicity in the percentages of women who initiate breastfeeding are relatively small. However, these differences are much greater among women who are still breastfeeding six months after delivery. For example, 58 percent of all infants in the United States receive any breastfeeding at six months of age, but only 42 percent of Black infants receive any breastfeeding at six months. (Table H) Moreover, breastfeeding disparities between Black mothers and White mothers have widened in recent years.[29]

Among the barriers to sustained breastfeeding are stressful life events,[30] and workplace and community policies or laws that restrict women's ability to breastfeed (including those regarding maternity leave, and employer provisions for mothers who need to express milk[31]). Additionally, babies born preterm are less likely than full-term babies to be breastfed, and Black and American Indian/Alaska Native mothers of preterm infants are less likely than their White counterparts to receive breast milk in the first few days of life.[32]

In one study that compared Black and White mothers, Black mothers were disproportionately more likely to lack knowledge about breastfeeding, as well as social support (including from peers and family) for breastfeeding; they were also less likely to have access to evidence-based practices within health care facilities that support breastfeeding (such as the WHO/UNICEF model practices, Ten Steps to Successful Breastfeeding[33]). In addition, the Black mothers in this study were more likely than White mothers to return to work early (before 12 weeks post-delivery), which can exacerbate challenges to their breastfeeding.[34]

Differential experiences of women with the medical care system

Over the course of several decades, a growing body of research has established that Black and Hispanic women experience disparities in the health care they receive, including notable differences in obstetrical care. Even when mothers-to-be can access health care, Black or Hispanic women do not always receive equitable treatment from providers. They are more likely to experience interactions with health care providers as unhelpful and disempowering. Specifically, they note that the information provided to them can be misleading or slanted in a way that suggests bias and lack of respect.[35] Black and Hispanic women may also be disproportionately exposed to unnecessary (and potentially risky) testing, such as medical imaging using radiation,[36] and cesarean section.[37]

Mothers and their babies who are from racial minority groups are more likely than their White peers to receive lower-quality hospital care, as indexed by rates of maternal mortality and delivery complications, as well as poorer overall health care for a number of risk conditions that can affect pregnancy and/or life expectancy.[38,39] Exploration of patients' and providers' attitudes, expectations, and behavior[40] yields similar findings. For example, Black women with limited incomes express concern that access to fewer resources has a negative impact on the quality of care and medications they receive from providers.[41]

Current approaches for promoting policies that promote greater health equity in the pre-, peri-, and postnatal periods

A number of policies available to states are helping to decrease race-linked differences in maternal health and birth outcomes. Most of these focus on ensuring equitable access to essential health care, including nutrition, and extending supports to expectant and new parents. Policies that are influential in addressing the equity gap include those in Medicaid, WIC, paid family and medical leave, and home visiting.

Medicaid

Extended/continuous eligibility of pregnant women and infants. Medicaid covers nearly half (45 percent) of all births in the United States.[42] While coverage is important at the time of delivery, women should have access to health care throughout their childbearing years, including pre-pregnancy, throughout pregnancy, and in the postnatal period. As the American College of Obstetricians and Gynecologists has emphasized, continuous coverage enables women "to increase preventive care, reduce avoidable adverse obstetric and gynecologic health outcomes, increase early diagnosis of disease, and reduce maternal mortality rates."[43]

While the rate of uninsured children has declined in the last decade, rates are twice as high among Hispanic and American Indian/Alaska Native children—at 10 and 16 percent, respectively—as those for White (5 percent) and Black (5 percent) children.

As of September 2019, 36 states and the District of Columbia have adopted Medicaid expansion, which has extended coverage to 11 million additional adults—many of them parents or future parents.[44,45] (Table I) When coverage is extended to low-income parents who would otherwise not have access to care, both mother and child benefit. Specifically, mothers covered by Medicaid are more likely to have a regular source of care, have doctor visits, and receive preventive care.[46] States that expanded Medicaid for adults saw nearly twice the decline in rates of uninsured children as non-expansion states, with parents enrolling more children in Medicaid/the Children's Health Insurance Program (CHIP).[47]

Continuous coverage also benefits infant health. States currently have the option to extend Medicaid eligibility for 12 months, regardless of changes in a family's income or size. Some advocates urge states to pursue a federal waiver that would allow them to provide five years of continuous Medicaid coverage, avoiding disruptions in young children's care.[48]

The role that Medicaid can play in reducing racial disparities in maternal and infant health is illustrated in initiatives such as North Carolina's Pregnancy Medical Homes Program, a partnership between the state's Medicaid, community care networks, and Division of Public Health. This program provides participating health care providers with incentives to screen all Medicaid-eligible pregnant women, and to refer those identified as at-risk for preterm delivery to a pregnancy care manager from the local public health department, who coordinates their care throughout the pregnancy.[49]

Screening for maternal depression. Expanded Medicaid coverage for adults has also improved access to mental and behavioral health treatment, including for conditions such as maternal depression.[50] Nearly 30 percent of adults who receive health insurance coverage through Medicaid expansion have either a mental disorder or a substance use disorder that, when left untreated, can have a detrimental impact on their young children's social-emotional development.[51,52] The Medicaid plans of 36 states and the District of Columbia allow, recommend, or require reimbursement of screening for maternal depression as part of infants' well-child visits.[53] (Table J) The remaining 14 states' Medicaid plans do not include reimbursement of this important screening.

Access to well-child visits/child health care. More than 37 million children in low-income families are insured by Medicaid, a vital source of coverage for preventive and early intervention services that families would otherwise find unaffordable.[54] Medicaid plays a particularly important role for children, covering more than half of all Black, Hispanic, and American Indian/Alaska Native children.[55] Approximately 5 percent of the nation's low-income infants and toddlers are uninsured.[56] (Table K) While the rate of uninsured children has declined in the last decade, rates are twice as high among Hispanic and American Indian/Alaska Native children—at 10 and 16 percent, respectively—as those for White (5 percent) and Black (5 percent) children.[57]

During their first three years, children should have 12-13 well-child visits, as recommended by the American Academy of Pediatrics. More than half of these visits should occur during the child's first year.[58] The frequency of these visits provides an important opportunity for babies to receive regular preventive medical, mental health, dental, vision, and other specialty care, as well as any needed prescription medication. States also use Medicaid funding to provide critical early intervention

services to children from birth to age 3 who have developmental delays or disabilities. This funding helps states ensure that babies and young children have access to health services that provide opportunities for early detection, and connection to special education support services that prepare them to learn and thrive.

Special Supplemental Nutrition Program for Women, Infants, and Children (WIC)

Black households are disproportionately affected by food insecurity. In 2018, nearly one-quarter, or 21.2 percent, were food-insecure—nearly double the national average of 11.1 percent, and more than twice the 8.1 percent rate for White households.[59] By providing nutritious foods, breastfeeding support, and other services, WIC improves child health on a range of measures and supports long-term development. Participation in WIC is associated with better outcomes for women and babies, with the most significant improvements seen in birth outcomes for Black women.[60] Specifically, Black mothers who were WIC participants experienced markedly lower infant mortality than those who did not participate (9.6 versus 21.0 deaths per 1,000 births). Nearly 86 percent of eligible infants and toddlers receive this assistance, with participation rates ranging by state from 54 percent to 100 percent.[61] (Table L)

Accommodations for pregnant workers

Although job discrimination on the basis of pregnancy, childbirth, or related medical conditions is prohibited under federal law, many women encounter discrimination, including being denied workplace accommodations in their job-related duties that protect their health during pregnancy. Women of color and immigrant women are at greater risk for unhealthy work environments because they are more likely to have jobs that are physically demanding and offer less flexibility, compounding the risks for pregnancy complications. Twenty-five states and the District of Columbia have pregnancy accommodation laws.[62] National legislation could help more women gain these protections.

Paid family and medical leave

Black and Hispanic workers have less access to paid family and medical leave than their White counterparts.[63] They are more likely to work in low-wage jobs that offer few or no employer-sponsored benefits (such as paid time off, retirement plans, or health insurance).[64] They are among the millions of workers who, because they cannot afford to take unpaid leave, are forced to return to work within weeks of giving birth. Paid leave reduces economic uncertainty for parents by providing job security and consistent income during a time when it is essential for them to focus on their new families. Being at home with a newborn not only helps parents build secure early attachments, but also allows time to facilitate breastfeeding, and attend well-child medical visits, which include immunizations important in reducing mortality and illness[65,66,67] Parents and caregivers may need additional time with a new baby to identify and address a variety of developmental difficulties, a concern particularly for babies born preterm or at low birthweight and those with illnesses or birth defects.[68]

Because parental leave is tied to so many positive maternal and child outcomes[69,70]—increased rates of breastfeeding, decreased incidence of maternal depression, lower rates of low birthweight and infant mortality, and higher-quality mother-infant interactions—we recommend increasing access, particularly to low-income parents who currently are less likely to have paid leave.[71] The most effective way to extend paid family and medical leave is to enact a national comprehensive policy, rather than relying on a state-by-state approach. However, states should be encouraged to help build a critical mass for a national policy, while offering coverage and benefits that may go beyond those that any federal floor may establish.

> States already taking action include California, which raised wage replacement rates[m] for those taking family leave to 70 percent for lower-wage workers and 60 percent for all other workers.[72] In another example, in 2019 New Jersey lawmakers expanded paid family leave to 12 weeks and extended requirements to smaller employer.[73]

As of September 2019, eight states and the District of Columbia provide paid family and medical leave for working families: California, Connecticut, District of Columbia, Massachusetts, New Jersey, New York, Rhode Island, Oregon, and Washington.[74] (Table M)

Home visiting

Home visiting is a two-generation approach to serving the varied needs of families with children, primarily prenatally through age 3. Trained home visitors can support families in several ways. For example, home visitors may teach parents about milestones of early development and other appropriate expectations for very young children; they may also help parents promote good health, keep their homes safe for babies and toddlers, prevent child abuse and neglect, use effective parenting practices, and access additional resources within their communities.

At the same time, research suggests that receptiveness to home visits can vary, with some racial and ethnic groups preferring home visitors from the same race/ethnicity,

[m] The percentage of a worker's normal wages that is provided for by a paid leave program.

community, and culture, or to receive support through different approaches, such as community partners and doulas.[75] (Table N) In part, these differences reflect past disempowering experiences with outside advisors, concern that parenting practices will be misunderstood or negatively judged, and a perception that home visitors do not have backgrounds and experiences similar to their own. Increasing the cultural awareness and related training of home visitors can help overcome some of these challenges. However, strategies should draw from the preferences and experiences of the communities served by home visitors. There is no one-size-fits-all approach, and the judgment of experts about the desirability of using a particular approach should not be substituted for the preferences of the women who need support. The focus should be on the types of services and support women and their babies need, offering a range of approaches, that could include home visiting, if that is what the community wants.

A number of home visiting programs have been shown to improve one or more aspects of family well-being.[76] For example, through Ohio's Maternal Depression Screening and Response Program, pediatricians, mental health and substance-abuse treatment providers, and home visitors collaborate to identify and coordinate services for expectant, first-time, and other parents at highest risk for depression.[77] Other benefits to maternal and child health that have been associated with home visits include reduced infant mortality, preterm births, and emergency room utilization.[78] Additional benefits include increased initiation and duration of breastfeeding, as seen in the success of Alaska's Maternal, Infant, and Early Childhood Home Visiting (MIECHV). Under the umbrella of the All Alaska Pediatric Partnership, the "Help Me Grow" program focuses on helping home visitors develop skills, understanding, and access to resources so they can support mothers to plan for, initiate, and continue breastfeeding.[79]

Promising strategies to promote equity in health outcomes

Building on these promising efforts underway in many states, we offer the following recommendations to move the nation toward greater equity in the all-important areas of preconception, prenatal, and postnatal health.

1. Recognize the presence of racism in health inequities and develop a shared understanding

Combating the role of racism in perpetuating health inequities requires first acknowledging its presence, and building a common understanding of its current and historical consequences. This process may start with getting an overall look at the data, which as *State of Babies Yearbook: 2020* and other research shows, gives a startling portrait of disparities. A shared understanding can lay the groundwork

for often-difficult discussions that must precede action. These conversations should acknowledge where the centers of power over health services decisions now lie, and how to shift these toward the women of color and their babies who are affected.[80]

2. Implement a comprehensive, multi-disciplinary approach that engages diverse stakeholders and community members in planning and developing solutions.

Well-informed, comprehensive solutions are necessary to address the complex social, interpersonal, and systemic factors that contribute to inequities in maternal and infant health. A growing number of these initiatives are being implemented at state and community levels, drawing on the multi-disciplinary expertise of health providers, community members, and families. To ensure success, these efforts include women and families from the community as central participants in the planning and implementation of solutions.

Minnesota's Comprehensive, Racially-Equitable Plan for Universal Healthy Child Development offers an example of a community-led approach that targets policy opportunities toward infants, toddlers, and families who experience racial, economic, and geographic disparities.[81]

3. Expand training for the health care workforce in implicit bias and culturally competent care.

Implicit racial bias—the unconscious, racially framed attitudes or beliefs expressed through behavior—can inhibit access to care, the quality of treatment received, and outcomes in the health care setting.[82] The American Academy of Pediatrics recommends that pediatric practices address implicit bias and provide training in care that meets standards for linguistically and culturally appropriate services,[83] and similar efforts are being made by the American College of Obstetricians and Gynecologists through symposia addressing racial disparities and implicit bias in obstetrical care.[84]

Some states, including New York[85] and California,[86] have implemented efforts that require perinatal and pediatric providers to participate in implicit bias and anti-racism training.

4. Improve patient knowledge and provider awareness of low-cost preventive treatments for preterm birth.

Access to resources—a measure that includes both the affordability and availability of health care—affects pregnancy and birth outcomes. While treatments are available to prevent preterm labor and birth (including progesterone therapy, vitamin supplements, and bedrest), associated costs can be prohibitive for many women. However, some interventions can be provided at little cost. For example, if women have access to a health care provider between pregnancies, they can more easily get help to quit smoking, improve their nutrition, or manage chronic conditions, such as hypertension or diabetes.[87] Black women, especially those with a personal or family history of high blood pressure (hypertension), first-time mothers, and those who are poor and obese, face an increased risk for pre-eclampsia and other hypertensive health problems.

5. Support more research into promising practices.

Innovative approaches, such as group prenatal care, doula care, and breastfeeding support groups, show promise for improving maternal care and birth outcomes for women at risk. It is important that solutions be drawn from the community, and particularly from what women say would be most helpful.

Group prenatal care. As reported by the March of Dimes, group prenatal care has been effective in closing the maternal and infant equity gap. Specifically, their Supportive Pregnancy Care model reduced preterm birth among Black women by 41 percent and by 33 percent among all women. The model also improved psychological outcomes, including readiness for labor and delivery, empowered women, and increased satisfaction with care.[88]

Doulas. Doulas are community members trained to provide nonmedical support to pregnant and birthing women. There is promising evidence that doula care can result in lower rates of cesarean and preterm births, as well as significant cost savings.[89] Some women are more comfortable with and benefit from receiving supports through sources other than traditional medical providers, and some states are developing related policy goals. For example, Minnesota's 2019 goal was to increase Medicaid reimbursement rates for doulas and community health workers, to ensure that supports are in place for the state's Integrated Care for High Risk Pregnancies initiative to assist Black and Native American women and families through pregnancy and early parenting.[90] The initiative provides grants to community-led councils and supports interdisciplinary perinatal collaboratives that address the specific elevated risks that are unique to medical assistance enrollees in each of these communities.

Breastfeeding support groups. Research indicates that the barriers to initiating and sustaining breastfeeding by Black women can be reduced through increased access to information from health care providers and the individual direct support available through breastfeeding support groups within their communities.[91] These groups of peers meet to discuss challenges and facilitators to successful breastfeeding and to provide encouragement and support. Individual mentoring and

having accommodations available in the workplace are also important factors that contribute to Black women's success in breastfeeding their babies.

6. Build upon successful public awareness campaigns focusing on safe infant sleep practices.

Promoting safe infant sleep practices can prevent injuries and save babies' lives. Many infant deaths can be prevented if parents and other caregivers consistently follow recommended practices regarding safe sleep; however, this information is not universally known. Some of the racial and ethnic disparities in infant mortality may be linked to inadequate information in some communities. Studies have shown that when health care providers tell mothers about sleep practices, they are more likely to place their baby on their back to sleep, use safe containment for their infant (like a playpen, bassinet, or crib), avoid sharing a bed with their infant, and remove soft objects from the baby's sleep environment.[92]

7. Expand/strengthen state Maternal Mortality Review Committees.

In response to disproportionately high rates of maternal and infant mortality among Black and American Indian/Alaska Native families, nearly all states have implemented or are in the process of implementing Maternal Mortality Review Committees and/or maternal and perinatal outcomes committees. These multi-disciplinary panels comprehensively review each maternal death, analyzing relevant data to develop recommendations and implement strategies to eliminate preventable maternal deaths and improve birth outcomes. However, significant improvements (such as a common case-review system) are required to make the data interpretable within and across states.[93]

8. Improve data collection to facilitate ongoing monitoring of critical indicators and their disaggregation by race and ethnicity.

A serious response to reducing disparities in the pre-, peri-, and postnatal outcomes for women and their infants must include improving data collection practices to monitor and assess well-being. First though, states need to address the many methodological and conceptual issues raised by this goal. Such challenges include agreeing on basic definitions and terminology, modeling complex systems involving both biological and social mechanisms, and creating data sets adequate to the task of disaggregating by multiple sub-groups, even when those represent relatively small numbers.[94]

The work required to collect, disaggregate, analyze, and report maternal health and birth outcomes data by race is complex; however, guiding principles for government policies that enable and enhance data disaggregation, such as those outlined by PolicyLink for *Counting a Diverse Nation*, provide a roadmap for improvement in this area.[95] Similarly, the National Research Center on Hispanic Children & Families has several useful overviews of issues related to improving data disaggregation.[96]

Conclusion

The inequities that disproportionately jeopardize the health of Black and Hispanic families in the United States throughout the lifespan begin even before conception. Due to the cascading effects of early disparities, efforts to achieve greater equity must also begin long before a young child's first pediatric visit. Effective strategies are being instituted at the state and local levels and should be brought to scale. All babies deserve equal opportunities for a healthy start in life; as a society, we can learn from successful efforts to help make the potential of every baby our national priority.

Appendix A: Summary data tables

Table A. Percentage of women receiving late/no prenatal care, by race/ethnicity: 2018

State	Non-Hispanic White	Non-Hispanic Black	Hispanic
Alabama	5.5%	8.7%	22.5%
Alaska	4.8%	6.3%	7.3%
Arizona	5.9%	11.0%	11.9%
Arkansas	7.1%	10.1%	14.0%
California	2.6%	5.1%	4.1%
Colorado	4.4%	9.3%	8.2%
Connecticut	2.6%	6.1%	4.3%
Delaware	5.3%	9.4%	9.4%
District of Columbia	1.6%	13.1%	5.6%
Florida	7.0%	10.5%	7.4%
Georgia	5.4%	11.6%	12.0%
Hawaii	6.4%	5.3%	8.3%
Idaho	3.8%	10.0%	5.8%
Illinois	3.7%	12.1%	7.2%
Indiana	5.0%	11.7%	9.6%
Iowa	3.4%	8.2%	6.2%
Kansas	2.9%	7.5%	6.7%
Kentucky	5.0%	8.3%	11.0%
Louisiana	4.4%	8.6%	10.5%
Maine	3.6%	14.6%	6.3%
Maryland	3.9%	9.2%	9.1%
Massachusetts	3.3%	10.8%	5.8%
Michigan	3.8%	8.0%	7.6%
Minnesota	2.1%	6.7%	6.5%
Mississippi	3.5%	6.0%	8.3%
Missouri	4.7%	12.5%	11.6%
Montana	4.2%	NA	7.4%
Nebraska	3.1%	9.2%	8.4%
Nevada	6.6%	10.8%	9.7%
New Hampshire	3.5%	6.6%	5.2%
New Jersey	4.0%	11.5%	7.4%
New Mexico	7.7%	11.2%	11.9%
New York	3.1%	9.9%	5.8%
North Carolina	5.0%	8.9%	8.7%
North Dakota	3.5%	8.8%	8.6%

State	Non-Hispanic White	Non-Hispanic Black	Hispanic
Ohio	5.1%	9.4%	8.7%
Oklahoma	5.9%	9.4%	6.9%
Oregon	3.9%	9.9%	5.5%
Pennsylvania	4.9%	10.6%	8.4%
Rhode Island	1.2%	3.2%	1.9%
South Carolina	5.4%	8.6%	11.4%
South Dakota	2.8%	8.7%	9.1%
Tennessee	5.3%	7.7%	8.5%
Texas	6.3%	15.1%	10.5%
Utah	3.2%	9.9%	6.8%
Vermont	1.8%	NA	NA
Virginia	3.7%	7.2%	7.6%
Washington	4.7%	9.7%	6.7%
West Virginia	6.4%	9.8%	8.3%
Wisconsin	3.0%	8.1%	6.0%
Wyoming	5.5%	NA	11.1%
United States	4.5%	9.9%	7.7%

Source: *United States Department of Health and Human Services (US DHHS), Centers for Disease Control and Prevention (CDC), National Center for Health Statistics (NCHS), Division of Vital Statistics, Natality public-use data 2018, on CDC WONDER Online Database,* September 2019. Retrieved October 2019 from http://wonder.cdc.gov/natality-expanded-current.html

Table B. Percentage of births preterm, by race/ethnicity: 2018

State	Non-Hispanic White	Non-Hispanic Black	Hispanic
Alabama	10.9%	16.5%	9.4%
Alaska	7.6%	10.8%	9.5%
Arizona	8.9%	12.6%	9.6%
Arkansas	10.4%	16.6%	10.2%
California	7.7%	12.3%	9.1%
Colorado	8.7%	10.7%	9.7%
Connecticut	8.1%	13.2%	10.2%
Delaware	8.7%	12.9%	8.3%
District of Columbia	6.3%	13.5%	9.4%
Florida	9.2%	14.0%	9.1%
Georgia	10.0%	14.6%	9.8%
Hawaii	7.6%	13.2%	8.9%
Idaho	8.8%	9.4%	9.6%
Illinois	9.5%	14.9%	10.4%
Indiana	9.5%	14.3%	10.0%
Iowa	9.6%	11.2%	11.1%
Kansas	9.2%	13.6%	9.3%
Kentucky	11.2%	14.2%	9.4%
Louisiana	10.6%	17.0%	10.8%
Maine	8.5%	9.4%	5.8%
Maryland	8.7%	12.9%	9.1%
Massachusetts	8.3%	11.2%	9.8%
Michigan	8.8%	14.9%	9.9%
Minnesota	8.6%	9.5%	9.8%
Mississippi	12.2%	17.3%	10.9%
Missouri	9.8%	15.2%	10.4%
Montana	8.3%	NA	10.8%
Nebraska	10.2%	13.5%	9.8%
Nevada	9.3%	13.0%	9.4%
New Hampshire	8.1%	9.1%	9.1%
New Jersey	8.2%	13.4%	9.8%
New Mexico	9.1%	13.4%	10.1%
New York	7.6%	12.7%	9.6%
North Carolina	9.4%	13.8%	9.1%
North Dakota	9.0%	9.9%	10.1%
Ohio	9.5%	14.0%	9.6%
Oklahoma	11.1%	15.8%	10.7%

State	Non-Hispanic White	Non-Hispanic Black	Hispanic
Oregon	7.2%	10.6%	9.2%
Pennsylvania	8.6%	13.7%	10.0%
Rhode Island	8.2%	11.3%	9.8%
South Carolina	9.7%	15.2%	9.4%
South Dakota	8.5%	7.7%	10.3%
Tennessee	10.3%	14.7%	9.4%
Texas	9.6%	14.6%	10.8%
Utah	8.8%	11.0%	11.1%
Vermont	8.7%	8.5%	8.3%
Virginia	8.4%	13.2%	8.8%
Washington	7.7%	10.2%	8.7%
West Virginia	11.8%	14.2%	9.8%
Wisconsin	9.0%	15.6%	10.0%
Wyoming	10.0%	NA	8.6%
United States	9.1%	14.1%	9.7%

Source: United States Department of Health and Human Services (US DHHS), Centers for Disease Control and Prevention (CDC), National Center for Health Statistics (NCHS), Division of Vital Statistics, Natality public-use data 2018, on CDC WONDER Online Database, September 2019. Retrieved October 2019 from http://wonder.cdc.gov/natality-expanded-current.html

Table C. Percentage of babies born with low birthweight, by race/ethnicity: 2018

State	Non-Hispanic White	Non-Hispanic Black	Hispanic
Alabama	8.1%	16.4%	7.6%
Alaska	4.8%	12.5%	5.8%
Arizona	7.0%	12.4%	7.3%
Arkansas	7.7%	16.0%	7.4%
California	5.8%	12.1%	6.7%
Colorado	8.6%	13.4%	9.6%
Connecticut	6.0%	12.6%	8.1%
Delaware	7.3%	13.7%	7.0%
District of Columbia	5.2%	14.6%	6.8%
Florida	7.1%	13.9%	7.1%
Georgia	7.3%	14.8%	7.3%
Hawaii	5.6%	11.8%	6.5%
Idaho	7.0%	11.2%	7.6%
Illinois	6.9%	14.5%	7.5%
Indiana	7.1%	13.8%	7.1%
Iowa	6.3%	11.3%	7.6%
Kansas	6.7%	13.4%	7.3%
Kentucky	8.3%	14.5%	7.2%
Louisiana	7.5%	16.0%	8.8%
Maine	7.1%	9.3%	8.1%
Maryland	6.7%	12.6%	6.9%
Massachusetts	6.5%	11.0%	8.6%
Michigan	6.8%	14.9%	7.3%
Minnesota	5.9%	10.2%	7.6%
Mississippi	8.6%	17.0%	7.1%
Missouri	7.3%	15.9%	7.3%
Montana	6.9%	NA	10.4%
Nebraska	6.8%	13.9%	7.7%
Nevada	7.7%	12.7%	7.7%
New Hampshire	6.3%	12.4%	7.9%
New Jersey	6.2%	12.9%	7.5%
New Mexico	8.2%	13.7%	9.4%
New York	6.3%	12.9%	8.2%
North Carolina	7.4%	14.4%	7.5%
North Dakota	6.0%	9.0%	7.7%
Ohio	7.2%	14.0%	7.5%

State	Non-Hispanic White	Non-Hispanic Black	Hispanic
Oklahoma	7.8%	15.3%	7.0%
Oregon	6.2%	11.5%	7.3%
Pennsylvania	6.9%	13.9%	9.0%
Rhode Island	6.6%	11.7%	7.9%
South Carolina	7.0%	15.2%	7.3%
South Dakota	6.1%	8.4%	7.4%
Tennessee	7.8%	15.1%	7.2%
Texas	7.0%	13.9%	7.9%
Utah	6.6%	10.6%	8.6%
Vermont	6.9%	NA	9.9%
Virginia	6.6%	13.3%	6.9%
Washington	5.7%	9.8%	6.7%
West Virginia	9.2%	13.6%	7.9%
Wisconsin	6.4%	16.1%	7.5%
Wyoming	9.7%	NA	7.9%
United States	6.9%	14.1%	7.5%

Source: United States Department of Health and Human Services (US DHHS), Centers for Disease Control and Prevention (CDC), National Center for Health Statistics (NCHS), Division of Vital Statistics, Natality public-use data 2018, on CDC WONDER Online Database, September 2019. Retrieved October 2019 from http://wonder.cdc.gov/natality-expanded-current.html

Table D. Infant mortality rate (deaths per 1,000 live births), by race/ethnicity: 2015-2017

State	Non-Hispanic White	Non-Hispanic Black	Hispanic	Non-Hispanic AI/AN
Alabama	6.0	13.3	5.9	NA
Alaska	4.2	NA	NA	10.2
Arizona	4.7	10.6	5.3	8.2
Arkansas	7.2	12.2	4.8	NA
California	3.4	8.5	4.4	6.4
Colorado	4.0	8.6	5.0	NA
Connecticut	3.1	11.5	5.5	NA
Delaware	5.7	12.8	7.4	NA
District of Columbia	2.9	12.4	6.0	NA
Florida	4.8	10.8	4.5	NA
Georgia	5.1	11.6	5.9	NA
Hawaii	4.2	13.5	5.2	NA
Idaho	4.7	NA	6.3	NA
Illinois	4.6	12.5	5.4	NA
Indiana	6.5	12.8	7.2	NA
Iowa	4.6	10.5	6.1	NA
Kansas	5.5	11.3	5.6	NA
Kentucky	6.4	10.4	5.9	NA
Louisiana	5.1	11.4	5.7	NA
Maine	6.0	NA	NA	NA
Maryland	4.2	10.8	5.0	NA
Massachusetts	3.0	7.6	5.4	NA
Michigan	5.0	12.8	6.7	NA
Minnesota	4.0	8.7	5.0	12.1
Mississippi	6.9	11.8	5.5	NA
Missouri	5.4	12.1	5.6	NA
Montana	4.6	NA	NA	12.4
Nebraska	5.2	11.6	5.6	NA
Nevada	4.7	9.9	4.9	NA
New Hampshire	3.5	NA	NA	NA
New Jersey	2.9	9.7	4.5	NA
New Mexico	5.4	NA	5.3	6.6
New York	3.6	8.9	4.4	NA
North Carolina	5.5	12.4	5.4	9.0

State	Non-Hispanic White	Non-Hispanic Black	Hispanic	Non-Hispanic AI/AN
North Dakota	4.9	NA	NA	11.4
Ohio	5.7	14.2	6.9	NA
Oklahoma	6.4	13.4	6.4	9.3
Oregon	4.9	9.8	5.0	NA
Pennsylvania	4.8	11.1	6.2	NA
Rhode Island	4.3	14.1	6.0	NA
South Carolina	5.1	10.4	5.6	NA
South Dakota	5.7	NA	NA	10.8
Tennessee	6.1	11.4	5.8	NA
Texas	4.9	10.2	5.4	5.7
Utah	5.1	11.2	5.6	NA
Vermont	3.9	NA	NA	NA
Virginia	4.8	10.0	4.4	NA
Washington	4.0	8.1	4.1	7.5
West Virginia	6.9	13.5	NA	NA
Wisconsin	4.7	15.0	5.8	12.3
Wyoming	4.7	NA	NA	NA
United States	4.8	11.1	5.0	8.4

Source: Centers for Disease Control and Prevention (2019). Infant mortality in the United States, 2017: Data from the period linked birth/infant death file. National Vital Statistics Reports 68 (10). Retrieved October 2019 from https://www.cdc.gov/nchs/data/nvsr/nvsr68/nvsr68_10_tables-508.pdf

Table E. Number of cases involving severe maternal morbidity, per 10,000 delivery hospitalizations, by race/ethnicity: 2015

State	Non-Hispanic White	Non-Hispanic Black	Hispanic	Non-Hispanic Asian/ Pacific Islander
United States	113.6	240.7	161.3	138.7
Percent higher than Whites	N/A	112%	42%	22%

Source: Fingar, K. R., Hambrick, M. M., Heslin, K. C., & Moore, J. E. (2006). Trends and disparities in delivery hospitalizations involving severe maternal morbidity, 2006–2015: statistical brief# 243. Retrieved from December 2019 from https://hcup-us.ahrq.gov/reports/statbriefs/sb243-Severe-Maternal-Morbidity-Delivery-Trends-Disparities.jsp

Table F. Number of pregnancy-related deaths per 100,000 live births, by race/ethnicity: 2015-2016

State	Non-Hispanic White	Non-Hispanic Black	Hispanic	Non-Hispanic Asian or Pacific Islander	Non-Hispanic American Indian or Alaska Native
United States	13.2	40.8	11.6	14.7	21.9

Source: Petersen EE, Davis NL, Goodman D, et al. Racial/Ethnic Disparities in Pregnancy-Related Deaths — United States, 2007–2016. MMWR 2019;68:762–765. DOI: http://dx.doi.org/10.15585/mmwr.mm6835a3

Table G. Percentage of infants ever breastfed, by race/ethnicity: 2017 birth cohort

State	Non-Hispanic White	Non-Hispanic Black	Hispanic	Non-Hispanic Other Race
Alabama	72.9%	55.5%*	69.4%*	56.8%*
Alaska	97.1%c	NA	93.4%	85.1%
Arizona	85.3%	NA	79.9%	79.3%*
Arkansas	76.7%	NA	80.6%*	86.5%
California	90.2%	NA	90.0%	81.7%*
Colorado	94.8%	NA	85.6%	75.5%*
Connecticut	88.9%	89.4%*	79.9%	89.9%
Delaware	82.3%	70.0%*	75.3%*	84.8%*
District of Columbia	96.0%a	66.3% bc	91.3%	89.1%
Florida	81.3%	61.8%* bc	84.7%	88.3%
Georgia	80.9%	72.6%*	85.5%	87.5%
Hawaii	95.3%	NA	85.6%	92.8%
Idaho	91.2%	NA	89.2%	NA
Illinois	85.7%a	66.5%* bc	87.2%	87.6%
Indiana	80.8%	68.4%*	84.3%*	77.9%*
Iowa	83.7%	NA	86.9%*	67.5%*
Kansas	89.7%	NA	84.5%	70.6%*
Kentucky	72.9%	63.3% *	74.9%*	79.5%*
Louisiana	73.0%abc	46.5%* bc	90.6%	91.6%
Maine	NA	NA	NA	NA
Maryland	91.4%	82.1% *	82.1%*	89.5%*
Massachusetts	86.0%	NA	80.0%*	86.5%*
Michigan	87.8%	NA	71.8%*	76.7%*
Minnesota	NA	NA	NA	NA
Mississippi	69.4%a	44.6%bc	84.2%	67.9%*
Missouri	87.2%	69.6%*	94.0%*	89.1%
Montana	NA	NA	NA	NA
Nebraska	84.4%	NA	75.2%*	80.0%*
Nevada	82.5%	80.6%*	83.5%	81.3%*
New Hampshire	NA	NA	NA	NA
New Jersey	83.7%c	80.1%* c	75.6%c	97.7%
New Mexico	87.7%	NA	84.3%	85.5%
New York	83.9%	82.1%	87.2%	84.1%
North Carolina	86.0%	75.5%*	85.4%*	92.7%
North Dakota	81.6%	NA	85.9% *	77.8%*

State	Non-Hispanic White	Non-Hispanic Black	Hispanic	Non-Hispanic Other Race
Ohio	80.9%	72.2%*	75.1%*	90.7%
Oklahoma	82.0%	NA	72.2%*	68.4%*
Oregon	93.5%	NA	86.4%	88.1%*
Pennsylvania	86.2%	74.3%	83.1%	77.7%*
Rhode Island	82.4%	76.1%*	78.9%	86.5%*
South Carolina	79.5%	69.8%*	86.8%*	NA
South Dakota	87.2%[c]	NA	72.9%*	57.8%*
Tennessee	80.1%	65.0%*	85.5%	71.9%*
Texas	89.4%	78.9%	85.8%	84.6%
Utah	89.2%	NA	91.5%	82.6%*
Vermont	NA	NA	NA	NA
Virginia	89.0%	68.3%*	92.1%	73.1%*
Washington	90.0%	NA	90.9%	89.3%
West Virginia	NA	NA	NA	NA
Wisconsin	88.4%[c]	NA	89.9%	62.5%*
Wyoming	89.4%	90.8%	90.8%	89.4%
United States	85.2%[a]	68.9%[bc]	85.7%*	82.5%

Notes:
[a]Indicates statistically significant difference with non-Hispanic black ($p < 0.05$, after a Bonferroni correction for making multiple comparisons between race/ethnic groups)
[b]Indicates statistically significant difference with Hispanic ($p < 0.05$, after a Bonferroni correction for making multiple comparisons between race/ethnic groups)
[c]Indicates statistically significant difference with non-Hispanic other ($p < 0.05$, after a Bonferroni correction for making multiple comparisons between race/ethnic groups)
*Indicates unreliable data due to sample size limitations
Source: U.S. Department of Health and Human Services (DHHS). National Center for Immunization and Respiratory Diseases. (2018). The 2017 National Immunization Survey-Child, Atlanta, GA : Centers for Disease Control and Prevention.

Table H. Percentage of infants breastfed at 6 months, by race/ethnicity: 2017 birth cohort

State	Non-Hispanic White	Non-Hispanic Black	Hispanic	Non-Hispanic Other Race
Alabama	NA	NA	NA	NA
Alaska	79.5%[c]	NA	57.1%*	55.1%
Arizona	60.7%	NA	46.1%	59.8%*
Arkansas	42.6%	NA	60.3%*	54.1%*
California	65.6%*	NA	57.5%	64.5%*
Colorado	73.1%[b]	NA	49.9%*	NA
Connecticut	58.6%	61.0%*	44.3%*[c]	78.3%*
Delaware	55.1%	47.9%*	52.4%*	60.2%*
District of Columbia	84.1%[a]	39.4%[bc]	72.0%*	73.8%*
Florida	51.4%	NA	48.2%*	54.3%*
Georgia	55.6%	45.8%*	55.7%*	54.4%*
Hawaii	71.5%*	NA	54.8%*	67.2%
Idaho	NA	NA	NA	NA
Illinois	58.8%	NA	53.5%	60.3%*
Indiana	49.2%	NA	51.6%*	NA
Iowa	NA	NA	NA	NA
Kansas	58.1%	NA	54.7%*	NA
Kentucky	NA	NA	NA	NA
Louisiana	40.7%	NA	48.3%*	NA
Maine	NA	NA	NA	NA
Maryland	NA	NA	NA	NA
Massachusetts	NA	NA	NA	NA
Michigan	NA	NA	NA	NA
Minnesota	NA	NA	NA	NA
Mississippi	NA	NA	NA	NA
Missouri	NA	NA	NA	NA
Montana	NA	NA	NA	NA
Nebraska	59.9%	NA	46.4%*	NA
Nevada	53.9%	NA	40.5%	51.8%*
New Hampshire	NA	NA	NA	NA
New Jersey	61.6%[bc]	NA	39.2%[c]	78.7%
New Mexico	58.3%*	NA	53.1%	59.8%*
New York	62.9%[b]	52.7%*	49.3%[c]	66.4%
North Carolina	54.2%	NA	55.6%*	NA

State	Non-Hispanic White	Non-Hispanic Black	Hispanic	Non-Hispanic Other Race
North Dakota	NA	NA	NA	NA
Ohio	NA	NA	NA	NA
Oklahoma	54.1%	NA	50.4%*	NA
Oregon	75.1%	NA	65.5%*	74.6%*
Pennsylvania	NA	NA	NA	NA
Rhode Island	58.1%[b]	NA	40.4%	61.7%*
South Carolina	48.9%	NA	62.2%*	NA
South Dakota	NA	NA	NA	NA
Tennessee	NA	NA	NA	NA
Texas	60.1%	51.9%	51.7%	59.3%*
Utah	64.5%	NA	65.9%*	NA
Vermont	NA	NA	NA	NA
Virginia	61.5%	NA	82.9%*	59.5%*
Washington	70.2%	NA	68.8%*	58.5%*
West Virginia	NA	NA	NA	NA
Wisconsin	NA	NA	NA	NA
Wyoming	NA	NA	NA	NA
United States	58.4%[ab]	42.4%[bc]	52.5%	57.5%

Notes:
[a]Indicates statistically significant difference with non-Hispanic black ($p < 0.05$, after a Bonferroni correction for making multiple comparisons between race/ethnic groups)
[b]Indicates statistically significant difference with Hispanic ($p < 0.05$, after a Bonferroni correction for making multiple comparisons between race/ethnic groups)
[c]Indicates statistically significant difference with non-Hispanic other ($p < 0.05$, after a Bonferroni correction for making multiple comparisons between race/ethnic groups)
*Indicates unreliable data due to sample size limitations
Source: U.S. Department of Health and Human Services (DHHS). National Center for Immunization and Respiratory Diseases. (2018). The 2017 National Immunization Survey-Child, Atlanta, GA: Centers for Disease Control and Prevention.

Table I. State adopted Medicaid expansion under the ACA: As of 2019

State	
Alabama	No
Alaska	Yes
Arizona	Yes
Arkansas	Yes
California	Yes
Colorado	Yes
Connecticut	Yes
Delaware	Yes
District of Columbia	Yes
Florida	No
Georgia	No
Hawaii	Yes
Idaho	Yes
Illinois	Yes
Indiana	Yes
Iowa	Yes
Kansas	No
Kentucky	Yes
Louisiana	Yes
Maine	Yes
Maryland	Yes
Massachusetts	Yes
Michigan	Yes
Minnesota	Yes
Mississippi	No
Missouri	No
Montana	Yes
Nebraska	Yes
Nevada	Yes
New Hampshire	Yes
New Jersey	Yes
New Mexico	Yes
New York	Yes
North Carolina	No
North Dakota	Yes
Ohio	Yes
Oklahoma	No

State	
Oregon	Yes
Pennsylvania	Yes
Rhode Island	Yes
South Carolina	No
South Dakota	No
Tennessee	No
Texas	No
Utah	Yes
Vermont	Yes
Virginia	Yes
Washington	Yes
West Virginia	Yes
Wisconsin	No
Wyoming	No
United States	NA

Source: Kaiser Family Foundation (2019). Status of State Medicaid Expansion Decisions: Interactive Map. Retrieved September 2019 from https://www.kff.org/medicaid/issue-brief/status-of-state-medicaid-expansion-decisions-interactive-map/

Table J. State Medicaid policy requires, recommends, or allows maternal depression screenings during well-child visits: As of 2018

State	
Alabama	Allows
Alaska	No Policy
Arizona	No Policy
Arkansas	No Policy
California	Recommends
Colorado	Allows
Connecticut	Allows
Delaware	Recommends
District of Columbia	Recommends
Florida	No Policy
Georgia	Requires
Hawaii	Allows
Idaho	Recommends
Illinois	Recommends
Indiana	Recommends
Iowa	Recommends
Kansas	No Policy
Kentucky	Recommends
Louisiana	No Policy
Maine	Recommends
Maryland	Recommends
Massachusetts	Recommends
Michigan	Requires
Minnesota	Recommends
Mississippi	Requires
Missouri	No Policy
Montana	Recommends
Nebraska	No Policy
Nevada	Allows
New Hampshire	No Policy
New Jersey	No Policy
New Mexico	Recommends
New York	Allows
North Carolina	Recommends
North Dakota	Recommends
Ohio	Recommends

State	
Oklahoma	No Policy
Oregon	No Policy
Pennsylvania	Requires
Rhode Island	Recommends
South Carolina	Recommends
South Dakota	Recommends
Tennessee	Recommends
Texas	Recommends
Utah	No Policy
Vermont	Recommends
Virginia	Recommends
Washington	Required
West Virginia	Recommends
Wisconsin	Allows
Wyoming	No Policy
United States	NA

Source: National Academy for State Health Policy (2018). Medicaid Fee for Service Policies for Maternal Depression Screening in a Well-Child Visit [Interactive Map]. Retrieved August 2019 from https://healthychild.nashp.org/resource-center/maternal-depression/. Updated link (current as of October 22, 2019): https://healthychild.nashp.org/screening/maternal-depression-screening/#toggle-id-1

Table K. Percentage of low-income infants/toddlers who lack health insurance: 2017

State	
Alabama	3.3%
Alaska	10.7%
Arizona	9.3%
Arkansas	4.8%
California	3.8%
Colorado	4.1%
Connecticut	4.6%
Delaware	5.0%
District of Columbia	0.8%
Florida	6.4%
Georgia	7.6%
Hawaii	1.4%
Idaho	3.9%
Illinois	3.2%
Indiana	8.1%
Iowa	5.2%
Kansas	6.5%
Kentucky	3.4%
Louisiana	3.9%
Maine	4.3%
Maryland	5.6%
Massachusetts	1.9%
Michigan	3.9%
Minnesota	5.2%
Mississippi	4.2%
Missouri	7.2%
Montana	7.1%
Nebraska	6.3%
Nevada	8.7%
New Hampshire	4.6%
New Jersey	4.7%
New Mexico	5.7%
New York	3.5%
North Carolina	4.1%
North Dakota	15.5%
Ohio	5.3%
Oklahoma	6.9%

State	
Oregon	4.0%
Pennsylvania	7.2%
Rhode Island	4.7%
South Carolina	4.6%
South Dakota	5.1%
Tennessee	4.2%
Texas	7.9%
Utah	9.5%
Vermont	0.6%
Virginia	5.9%
Washington	4.2%
West Virginia	1.5%
Wisconsin	5.9%
Wyoming	11.8%
United States	**5.4%**

Source: *American Community Survey 2017, five-yr estimates. Ruggles, S., Flood, S., Goeken, R., Grover, J., Meyer, E., Pacas, J., & Sobek, M. (2019). IPUMS USA: Version 9.0 [dataset]. Minneapolis, MN: IPUMS.* https://doi.org/10.18128/D010.V9.0

Table L. Percentage of eligible infants who participated in WIC[1]: 2016

State	
Alabama	93.2%
Alaska	56.8%
Arizona	85.9%
Arkansas	87.8%
California	92.6%
Colorado	69.2%
Connecticut	89.9%
Delaware	94.0%
District of Columbia	100.0%
Florida	84.7%
Georgia	68.7%
Hawaii	81.2%
Idaho	63.4%
Illinois	84.7%
Indiana	85.6%
Iowa	64.9%
Kansas	89.9%
Kentucky	89.4%
Louisiana	97.5%
Maine	92.6%
Maryland	100.0%
Massachusetts	81.6%
Michigan	87.8%
Minnesota	84.1%
Mississippi	92.8%
Missouri	87.2%
Montana	64.5%
Nebraska	85.8%
Nevada	94.3%
New Hampshire	73.8%
New Jersey	76.2%
New Mexico	72.5%
New York	80.6%
North Carolina	86.9%
North Dakota	70.7%
Ohio	100.0%

State	
Oklahoma	94.1%
Oregon	77.6%
Pennsylvania	93.2%
Rhode Island	100.0%
South Carolina	89.4%
South Dakota	65.2%
Tennessee	78.1%
Texas	89.9%
Utah	53.9%
Vermont	54.5%
Virginia	81.6%
Washington	73.8%
West Virginia	77.8%
Wisconsin	75.5%
Wyoming	86.9%
United States	**85.9%**

[1] The Supplemental Nutrition Program for Women, Infants, and Children.
Source: USDA Food and Nutrition Service (2019). WIC 2016 Eligibility and Coverage Rates. Retrieved from https://www.fns.usda.gov/wic/wic-2016-eligibility-and-coverage-rates

Table M. State has a paid family leave program: As of 2019

State	
Alabama	No
Alaska	No
Arizona	No
Arkansas	No
California	Yes
Colorado	No
Connecticut	Yes
Delaware	No
District of Columbia	Yes
Florida	No
Georgia	No
Hawaii	No
Idaho	No
Illinois	No
Indiana	No
Iowa	No
Kansas	No
Kentucky	No
Louisiana	No
Maine	No
Maryland	No
Massachusetts	Yes
Michigan	No
Minnesota	No
Mississippi	No
Missouri	No
Montana	No
Nebraska	No
Nevada	No
New Hampshire	No
New Jersey	Yes
New Mexico	No
New York	Yes
North Carolina	No
North Dakota	No
Ohio	No

State	
Oklahoma	No
Oregon	Yes
Pennsylvania	No
Rhode Island	Yes
South Carolina	No
South Dakota	No
Tennessee	No
Texas	No
Utah	No
Vermont	No
Virginia	No
Washington	Yes
West Virginia	No
Wisconsin	No
Wyoming	No
United States	**NA**

Source: *National Partnership for Women and Families. State Paid Family and Medical Leave Insurance Laws.* (2019). Retrieved from http://www.nationalpartnership.org/research-library/work-family/paid-leave/state-paid-family-leave-laws.pdf

Table N. Of infants/toddlers who could benefit from evidence-based home visiting, percentage receiving those services: 2017

State	
Alabama	0.5%
Alaska	2.4%
Arizona	3.0%
Arkansas	0.9%
California	1.0%
Colorado	1.9%
Connecticut	3.4%
Delaware	2.6%
District of Columbia	1.9%
Florida	1.7%
Georgia	0.6%
Hawaii	1.2%
Idaho	1.9%
Illinois	2.0%
Indiana	4.3%
Iowa	4.2%
Kansas	5.7%
Kentucky	5.4%
Louisiana	1.6%
Maine	5.7%
Maryland	0.9%
Massachusetts	1.2%
Michigan	2.2%
Minnesota	2.0%
Mississippi	0.6%
Missouri	9.9%
Montana	2.5%
Nebraska	1.6%
Nevada	0.2%
New Hampshire	1.0%
New Jersey	1.5%
New Mexico	1.9%
New York	1.4%
North Carolina	2.2%
North Dakota	1.5%
Ohio	2.7%

State	
Oklahoma	3.3%
Oregon	2.1%
Pennsylvania	2.7%
Rhode Island	6.1%
South Carolina	1.3%
South Dakota	2.1%
Tennessee	0.9%
Texas	0.5%
Utah	1.2%
Vermont	2.8%
Virginia	1.3%
Washington	1.9%
West Virginia	2.3%
Wisconsin	1.9%
Wyoming	2.1%
United States	1.9%

Source: *National Home Visiting Resource Center. (2018). 2018 Home Visiting Yearbook. Arlington, VA: James Bell Associates and the Urban Institute.* Retrieved September 2019 from https://www.nhvrc.org/wp-content/uploads/NHVRC_Yearbook_2018_FINAL.pdf

References

1. Martin, J. A., Hamilton, B. E., Osterman, M.J. K., and Driscoll, A.K. Births: Final data for 2018. *National Vital Statistics Reports, 68*(13), 1-46. Table 13. Retrieved from https://www.cdc.gov/nchs/data/nvsr/nvsr68/nvsr68_13-508.pdf

2. Rubin, R. (2018). Rate of severe childbirth complications has increased. Health Agencies Update. *JAMA, 320*(16), 1630

3. Martin, J. A., Hamilton, B. E., Osterman, M.J. K., and Driscoll, A.K. Births: Final data for 2018. *National Vital Statistics Reports, 68*(13), 1-46. Table 13. Retrieved from https://www.cdc.gov/nchs/data/nvsr/nvsr68/nvsr68_13-508.pdf

4. Beauregard, J. L., Hamner, H. C., Chen, J., Avila-Rodriguez, W., Elam-Evans, L. D., & Perrine, C. G. (2019). Racial disparities in breastfeeding initiation and duration among U.S. infants born in 2015. *Morbidity and Mortality Weekly Report, 68*(34), 745-748.

5. Ely, D. M. & Driscoll, A. K. (2019). Infant mortality in the United States, 2017: Datafrom the period linked birth/infant death file. *National Vital Statistics Reports, 68*(10), 1-20.

6. Institute of Medicine. (2002). Unequal treatment: What health care system administrators need to know about racial and ethnic disparities in healthcare. Washington, DC: National Academy of Sciences.

7. Collins, J. W., Jr., David, R. J., Handler, A., Wall, S., and Andes, S. (2004). Very low birthweight in African American infants: The role of maternal exposure to interpersonal racial discrimination. *American Journal of Public Health, 94*(12), 2132-2138.

8. Martin, J. A., Hamilton, B. E., Osterman, M.J. K., and Driscoll, A.K. Births: Final data for 2018. *National Vital Statistics Reports, 68*(13), 1-46. Table 13. Retrieved from *https://www.cdc.gov/nchs/data/nvsr/nvsr68/nvsr68_13-508.pdf*

9. Lu, M. C. (2018). Reducing maternal mortality in the United States. Viewpoint. *JAMA*, published online September 28, 2018.

10. Kaplan, E. K. (2019). "Reducing Maternal Mortality." New York Times. March 5, 2019.

11. Slomski, A. (2019). Why do hundreds of U.S. women die annually in childbirth? Medical News and Perspectives. *JAMA*, published online March 13, 2019.

12. University of Michigan Institute for Healthcare Policy and Innovation. October, 10, 2018. Study of nearly 41,000 women who almost died giving birth shows who's most at risk. Retrieved from https://ihpi.umich.edu/news/study-nearly-41000-women-who-almost-died-giving-birth-shows-whos-most-risk

13. National Institute for Children's Health Quality. (2020). The impact of institutional racism on maternal and child health. Retrieved from https://www.nichq.org/insight/impact-institutional-racism-maternal-and-child-health

14. Sternthal, M. J., Slopen, N., & Wlliams, D. R. (2011). Racial disparities in health: How much does stress really matter? *Du Bois Review, 8*(1), 95-113.

15. Galea, S., Tracy, M., Hoggatt, K. J., DiMaggio, C., & Karpati, A. (2011). Estimated deaths attributable to social factors in the United States. *American Journal of Public Health, 101*(8), 1456-1465.

16. Geronimus, A.T. (1992). The weathering hypothesis and the health of African-American women and infants: Evidence and speculations. *Ethnicity & Disease, 2*(3), 207-221.

17. Geronimus, A. T., Hicken, M., Keene, D., & Bound, J. (2006). "Weathering" and age patterns of allostatic load scores among Blacks and whites in the United States. *American Journal of Public Health, 96*(5), 826-833.

18. Collins, J. W., David, R. J., Handler, A., Wall, S., & Andes, S. (2004), Very low birthweight in African American infants: the role of maternal exposure to interpersonal racial discrimination. *American Journal of Public Health, 94*(12), 2132-2138.

19. Din-Dzietham, R. & Hertz-Picciotto, (1998). Infant mortality differences betweenwhites and African Americans: The effect of maternal education. *American Journal of Public Health, 88*(4), 651-656.

20. The Annie E. Casey Foundation. (2014). Race for results: Building a path to opportunity for all children. KIDS COUNT Policy Report. Baltimore: Author.

21. Sims, M., Sims, T. L., & Bruce, M. A. (2007). Urban poverty and infant mortality ratedisparities. *Journal of the National Medical Association, 99*(4), 349-356.

22. Kumanyika, S. K., Morssink, C. B., & Nestle, M. (2001). Minority women and advocacy for women's health. *American journal of public health, 91*(9), 1383–1388. doi:10.2105/ajph.91.9.1383

23. Amnesty International. (2010). Deadly delivery. The maternal health care crisis in the U.S.A. London: Author.

24. National Public Radio. October 24, 2017. Poll: Most Americans think their own group faces discrimination. Reported by Joe Neel.

25. Novoa, C. & Taylor, J. (2018). Exploring African Americans' high maternal and infant death rates. Center for American Progress. Retrieved from https://cdn.americanprogress.org/content/uploads/2018/01/29114454/012918_MaternalInfantMortalityRacialDisparities-brief.pdf

26. Novoa, C. & Taylor, J. (2018). Exploring African Americans' high maternal and infant death rates. Center for American Progress. Retrieved from https://cdn.americanprogress.org/content/uploads/2018/01/29114454/012918_MaternalInfantMortalityRacialDisparities-brief.pdf

27. Li, J., Pesko, M. F., Unruh, M. A., & Jung, H-Y. (2019). Effect of the Medicaid primary care rate increase on prenatal care utilization among Medicaid-insured women. *Maternal and Child Health Journal, 23*(11), 1564–1572.

28. National Institute for Children's Health Quality. (undated). The impact of institutional racism on maternal and child health. Retrieved from https://www.nichq.org/insight/impact-institutional-racism-maternal-and-child-health

29. Li, R., Perrine, C. G., Anstey, E. H. , Chen, J., MacGowan, C. A., & Elam-Evans, L. D. (2019). Breastfeeding trends in race/ethnicity among U.S. children born from 2009 to 2015. *JAMA Pediatrics*, published online October 14, 2019.

30. Dugat, V. M. et al. (2019). Association between stressful life events and exclusive breastfeeding among mothers in the United States. *Breastfeeding Medicine,14*(7), 475-481.

31. Gonzalez-Nahm, S., Grossman, E. R., & Benjamin-Neelon, S. E. (2019). The role of equity in U.S. states' breastfeeding policies. Viewpoint. *JAMA Pediatrics*, published online August 12, 2019.

32. Chiang, K. V., Sharma, A. J., Nelson, J. M., Olson, C. K., & Perrine. C. G. (2019). Receipt of breast milk by gestational age—United States, 2017. *Morbidity and Mortality Weekly Report, 68*(22), 489-493.

33. Munn, A. C., Newman, S. D., Mueller, M., Phillips, S. M., & Taylor, S. N. (2016) The impact in the United States of the Baby-Friendly Hospital Initiative on early infant health and breastfeeding outcomes. *Breastfeeding Medicine, 11*(5), 222-230.

34. Beauregard, J. L., Hamner, H. C., Chen, J., Avila-Rodriguez, W., Elam-Evans, L. D., & Perrine, C. G. (2019). Racial disparities in breastfeeding initiation and duration among U.S. infants born in 2015. *Morbidity and Mortality Weekly Report, 68*(34), 745-748.

35. Altman, M. R., Oseguera. T., McLemore, M. R., Kantrowitz-Gordon, I., Franck, L. S., & Lyndon, A. (2019). Information and power: Women of color's experience interacting with health care providers in pregnancy and birth. *Social Science & Medicine*, doi: 10.1016/j.socscimed.2019.112491.

36. Kwan, M. L., Miglioretti, D. L., Marlow, E. C., Aiello Bowles, E. J., Weinmann, S. et al. (2019). Trends in medical imaging during pregnancy in the United States and Ontario, Canada, 1996 to 2016. *JAMA Network Open*, 2(7): e197249 DOI: 10.1001/jamanetworkopen.2019.7249.

37. Roth, L. M. & Henley, M. M. (2012). Unequal motherhood: Racial-ethnic and socioeconomic disparities in cesarean sections in the United States. *Social Problems, 59*(2), 207-227.

38. Amnesty International. (2010). Deadly delivery. The maternal health care crisis in the U.S.A. London: Author.

39. Novoa, C. & Taylor, J. (2018). Exploring African Americans' high maternal and infant death rates. Center for American Progress. Retrieved from https://cdn.americanprogress.org/content/uploads/2018/01/29114454/012918_MaternalInfantMortalityRacialDisparities-brief.pdf

40. Institute of Medicine (US) Committee on Understanding and Eliminating Racial and Ethnic Disparities in Health Care; Smedley BD, Stith AY, Nelson AR, editors. Washington (DC): National Academies Press (US); 2003.

41. Hsiao, B., Bhalla, S., Mattocks, K., & Fraenkel, L. (2018). Understanding the factors that influence risk tolerance among minority women: A qualitative study. *Arthritis Care & Research, 70*(11), 1637–1645. doi:10.1002/acr.23542

42. Markus, A. R., Andres, E., West, K. D., Garro, N., & Pellegrini, C. (2013). Medicaid covered births, 2008 through 2010, in the context of the implementation of health reform. *Women's Health Issues, 23*(5), e273-e280.

43. American College of Obstetricians and Gynecologists, "Benefits to Women of Medicaid Expansion Through the Affordable Care Act" (Washington: American College of Obstetricians and Gynecologists, January 2013), available at https://www.acog.org/Clinical-Guidance-and-Publications/Committee-Opinions/Committeeon-Health-Care-for-Underserved-Women/Benefits-to-Women-of-Medicaid-Expansion-Affordable-Care-Act.

44. Rudowitz, R., Artiga, S., & Young, K. (2016). What coverage and financing is at risk under a repeal of the ACA Medicaid expansion? Retrieved from http://files.kff.org/attachment/Issue-Brief-What-Coverage-and-Financing-is-at-Risk-Under-a-Repeal-of-the-ACA-Medicaid-Expansion

45. National Academy for State Health Policy. (2018). "Where States Stand on Medicaid Expansion"[map] Retrieved from https://nashp.org/states-stand-medicaid-expansion-decisions/

46. Long, S. K., Coughlin, T., & King, J. (2005). How well does Medicaid work in improving access to care? *Health Services Research, 40*(1), 39–58.

47. Rudowitz, R., Artiga, S., & Young, K. (2016). What coverage and financing is at risk under a repeal of the ACA Medicaid expansion? Retrieved from http://files.kff.org/attachment/Issue-Brief-What-Coverage-and-Financing-is-at-Risk-Under-a-Repeal-of-the-ACA-Medicaid-Expansion

48. Ross, D. C., Guyer, J., Lam, A., & Toups, M. (2019). Fostering social and emotional health through pediatric primary care: A blueprint for leveraging Medicaid and CHIP to finance change. Washington, DC: Center for the Study of Social Policy.

49. Zero to Three. (2018). North Carolina Pregnancy Medical Homes. Policy Resource. Retrieved from https://www.zerotothree.org/resources/866-north-carolina-pregnancy-medical-homes

50. U.S. Government Accountability Office. (2015). Behavioral health: Options for low-income adults to receive treatment in selected states. Retrieved from http://www.gao.gov/assets/680/670894.pdf

51. Ali, M., Mutter, R., & Teich, J. (2015). State participation in the Medicaid expansion provision of the Affordable Care Act: implications for uninsured individuals with a behavioral health condition. Retrieved from https://www.samhsa.gov/data/sites/default/files/report_2073/ShortReport-2073.pdf

52. Cohen, J., Oser, C., & Quigley, K. (2012). Making it happen: Overcoming barriers to providing infant-early childhood mental health. Retrieved from https://www.zerotothree.org/resources/511-making-it-happen-overcoming-barriers-to-providing-infant-early-childhood-mental-health#downloads

53. Keating, K., Cole, P., & Schaffner, M. (2020). *State of Babies Yearbook: 2020*. Washington, DC: ZERO TO THREE. Retrieved from https://stateofbabies.org

54. Rudowitz, R., Artiga, S., & Arguello, R. (2014). Children's health coverage: Medicaid, CHIP and the ACA. Retrieved from http://www.kff.org/health-reform/issue-brief/childrens-health-coverage-medicaid-chip-and-the-aca/

55. Cornachione, E., Rudowitz, Robin, & Artiga, Samantha. (2016). Children's health coverage: the role of Medicaid and CHIP and issues for the future. Retrieved from http://files.kff.org/attachment/Issue-Brief-Childrens-Health-Coverage-The-Role-of-Medicaid-and-CHIP-and-Issues-for-the-Future

56. American Community Survey 2017, Fve-yearr estimates. Ruggles, S., Flood, S., Goeken, R., Grover, J., Meyer, E., Pacas, J., & Sobek, M. (2019). IPUMS USA: Version 9.0 [dataset]. Minneapolis, MN: IPUMS. https://doi.org/10.18128/D010.V9.0

57. Cornachione, E., Rudowitz, Robin, & Artiga, Samantha. (2016). Children's health coverage: the role of Medicaid and CHIP and issues for the future. Retrieved from http://files.kff.org/attachment/Issue-Brief-Childrens-Health-Coverage-The-Role-of-Medicaid-and-CHIP-and-Issues-for-the-Future

58. Hagan J. F., Shaw J. S., & Duncan P. M. (2008). Bright Futures guidelines for health supervision of infants, children and adolescents (3rd ed.). Elk Grove Village, IL: American Academy of Pediatrics.

59. U.S. Department of Agriculture, Economic Research Service. (2019). Food security status of U.S. households in 2018. Retrieved from https://www.ers.usda.gov/topics/food-nutrition-assistance/food-security-in-the-us/key-statistics-graphics.aspx

60. Khanani, I., Elam, J., Hearn, R., Jones, C., & Maseru, N. (2010). The impact of prenatal WIC participation on infant mortality and racial disparities. *American Journal of Public Health, 100 Suppl 1*(Suppl 1), S204–S209. doi:10.2105/AJPH.2009.168922

61. USDA Food and Nutrition Service (2019). WIC 2016 eligibility and coverage rates. Retrieved from https://www.fns.usda.gov/wic/wic-2016-eligibility-and-coverage-rates

62. National Partnership for Women & Families. (2019, May). The Pregnant Workers Fairness Act. Retrieved from https://www.nationalpartnership.org/our-work/resources/economic-justice/pregnancy-discrimination/fact-sheet-pwfa.pdf

63. Bartel, A. P., Kim, S., Nam, J., Rossin-Slater, M., Ruhm, C., & Waldfogel, J. (2019). Racial and ethnic disparities in access to and use of paid family and medical leave: Evidence from four nationally representative datasets. *Monthly Labor Review*, January 2019.

64. Gupta, P., Goldman, T., Hernandez, E. & Rose, M. (2018). Paid family and medical leave are critical for low-wage workers and their families. CLASP.

65. Kamerman, S. B. (2006). "Parental Leave Policies: The Impact on Child Well-Being." In Peter Moss and Margaret O'Brien, eds., International Review of Leave Policies and Related Research 2006, 16–21. London, UK: Department of Trade and Industry, 2006. Retrieved January 19, 2017 from http://www.leavenetwork.org/fileadmin/Leavenetwork/Annual_reviews/2006_annual_report.pdf

66. Ibid.

67. Zigler, E., Muenchow, S, & Ruhm, C. J. (2012). Time off with baby: Who gets it, and who doesn't, *Zero to Three, 32*(6), 50-55.

68. Ibid, p. 41.

69. Skinner, C. & Ochshorn, S. (2012). Paid family leave. Strengthening families and our future. NY: National Center for Children in Poverty. Retrieved from http://www.nccp.org/publications/pdf/text_1059.pdf

70. Plotka, R. & Busch-Rossnagel, N. A. (2018). The role of length of maternity leave in supporting mother-child interactions and attachment security among American mothers and their infants. *International Journal of Child Care and Education Policy, 12*(2), 1-18.

71. U.S. Bureau of Labor Statistics. (2019). Racial and ethnic disparities in access to and use of paid family and medical leave: Evidence from four nationally representative datasets. Monthly Labor Review, January 29.

72. Klerman J., Daley, K., & Pozniak, A. Family and medical leave in 2012: Technical report. U.S. Department of Labor, 2012. Retrieved from www.dol.gov/whd/fmla/survey

73. Hetrick, C. NJ assembly approves expanding paid family leave. (2017). Observer. Retrieved from http://observer.com/2017/06/nj-assembly-approves-expanding-paid-family-leave/

74. Keating, K., Cole, P., & Schaffner, M. (2020). *State of Babies Yearbook: 2020*. Washington, DC: ZERO TO THREE. Retrieved from https://stateofbabies.org

75. John F. Edens (1997) Home Visitation Programs with Ethnic Minority Families: Cultural issues in Parent Consultation, Journal of Educational and Psychological Consultation, 8:4, 373-383, DOI: 10.1207/s1532768xjepc0804_4. Retrieved from http://dx.doi.org/10.1207/s1532768xjepc0804_4

76. Michalopoulos, C., Faucetta, K., Hill, C. J., Portilla, X. A., Burrell, L., Lee, H., Duggan, A., and Knox, V. (2019). *Impacts on family outcomes of evidence-based early childhood home visiting: Results from the Mother and Infant Home Visiting Program Evaluation*. OPRE Report 2019-07. Washington, DC: Office of Planning, Research, and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services.

77. Zero to Three. (2019). Minnesota develops prenatal to three policy agenda to promote equity. Policy Resource. Retrieved from https://www.zerotothree.org/resources/1739-minnesota-develops-prenatal-to-three-policy-agenda-to-promote-equity https://www.zerotothree.org/resources/905-ohio-s-maternal-depression-screening-program-creates-synergy-between-home-visiting-and-mental-health-services

78. Dodge, K. A., Goodman, W. B., Murphy, R. A., O'Donnell, K., Sato, J., & Guptil, S. (2014). Implementation and randomized controlled trial evaluation of universal postnatal nurse home visiting. *American Journal of Public Health, 104*(S1), S136-S143

79. Zero to Three. (2019). Alaska begins implementation of "Help Me Grow." Policy Resource. Retrieved from https://www.zerotothree.org/resources/1970-alaska-begins-implementation-of-help-me-grow

80. Quality Improvement Center for Research-Based Infant–Toddler Court Teams. (2018). Advancing Equitable Outcomes for Infants and Toddlers Involved in Child Welfare. Retrieved from http://www.qicct.org/sites/default/files/QIC-CT-RaceEquityBrief%205.2018.pdf

81. Zero to Three. (2019). Minnesota Develops Prenatal to Three Policy Agenda to Promote Equity. Policy Resource. Retrieved from https://www.zerotothree.org/resources/1739-minnesota-develops-prenatal-to-three-policy-agenda-to-promote-equity

82. Children's Hospital of Philadelphia. (2017). Examining physician implicit racial bias against children. Policy Lab. Research at a Glance.

83. Trent, M., Dooley, D. G., & Douge, J. AAP Section on Adolescent Health, AAP Council on Community Pediatrics, AAP Committee on Adolescence. (2019). The impact of racism on child and adolescent health. *Pediatrics, 144*(2), e20191765.

84. American College of Obstetrics and Gynecology. (2018). Symposium on Racial Disparities and Implicit Bias in Obstetrical Care. Retrieved from https://www.acog.org/-/media/Districts/District-II/Public/SMI/v2/SymposiumRacialDisparitiesDec2018.pdf?dmc=1&ts=20200124T1853411047

85. New York State Department of Health, Office of Health Insurance Programs. (2019). Final report of the First 1,000 Days Preventive Pediatric Care Clinical Advisory Group. Retrieved from https://health.ny.gov/health_care/medicaid/redesign/1000_days/docs/2019-10-01_final_report.pdf

86. Zero to Three. (2019). California bill mandates implicit bias training for perinatal healthcare professionals. Policy Resource. Retrieved from https://www.zerotothree.org/resources/2977-california-bill-mandates-implicit-bias-training-for-perinatal-healthcare-professionals

87. Chatterjee, R. (November 1, 2018). Premature birth rates rise again, but a few states are turning things around. National Public Radio.

88. March of Dimes. (2019). Supportive Pregnancy Care: A group prenatal care and education program aimed at empowering moms-to-be. Retrieved from https://www.marchofdimes.org/supportive-pregnancy-care/about-march-of-dimes-supportive-pregancy-care.aspx

89. Kozhimannil, K. B., Hardeman, R. R., Alarid-Escudero, F., Vogelsang, C. A., Blauer-Peterson, C., & Howell, E. A. (2016). Modeling the cost-effectiveness of doula care associated with reductions in preterm birth and cesarean delivery. *Birth, 43*(1), 20-27.

90. Minnesota Department of Human Services. (2019). Integrated Care for High Risk Pregnancies: A Pilot Project to Improve Medical Assistance Birth Outcomes. Minnesota Legislative Reference Library as part of an ongoing digital archiving project. Retrieved from http://www.leg.state.mn.us/lrl/lrl.asp

91. Kulka, T. R., Jensen, E., McLaurin, S., Woods, E., Kotch, J., Labbok, M., ... Baker, S. (2011). Community based participatory research of breastfeeding disparities in African American women. Infant, child & adolescent nutrition, 3(4), 233–239. doi:10.1177/1941406411413918. Retrieved from https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3543999/

92. Lu, M. C. (2018). Reducing maternal mortality in the United States. Viewpoint. *JAMA*, published online September 10, 2018.

93. Breen, N., Das, R., Farhat, T., Jones, N., & Palmer, R. (Eds.) (2019). New perspectives to advance minority health and health disparities research. *American Journal of Public Health, 109*(S1), Special Supplement.

94. Rubin, V., Ngo, D., Ross, A., Butler, D., & Balaram, N. (2018). Counting a diverse nation: Disaggregating data on race and ethnicity to advance a culture of health. PolicyLink. Retrieved from: https://www.policylink.org/resources-tools/counting-a-diverse-nation

95. Guzman, L. & Ramos-Olazagasti, M. A, (2018). How well do national surveys measure Hispanic families and households? National Research Center on Hispanic Children & Families. Retrieved from https://www.hispanicresearchcenter.org/wp-content/uploads/2019/08/Hispanics-Center-MHFL-brief_6.26-v21.pdf

96. Wildsmith, E., Ansari, A., & Guzman, L. (2015). Improving data infrastructure to recognize Hispanic diversity in the United States. National Research Center on Hispanic Children & Families. Retrieved from https://www.hispanicresearchcenter.org/wp-content/uploads/2019/08/Measure-Brief_Final-V21.pdf