The preterm birth rate in Mississippi is 14.8 percent however the preterm birth rate among smokers is 17.4 percent. In the U.S., the preterm birth rate among those who had pre pregnancy hypertension was 23.4 percent whereas pre pregnancy hypertension accounts for 2.9 percent of all live births in Mississippi is 14.8 percent however the preterm birth rate among smokers is 17.4 percent.
PRETERM BIRTH BY FACTORS CONTINUED

All factors were assessed using data from NCHS 2022 natality data and Puerto Rico Department of Health and were selected based on their association with preterm birth and availability within natality data.

SMOKING
Smoking status was ascertained when the birthing person reported having any cigarettes in the 3 months prior to pregnancy regardless of the number of cigarettes consumed. Smoking before pregnancy is a self-reported measure and data did not include those that smoked during their pregnancy.

HYPERTENSION
Pre-pregnancy hypertension was defined as the elevation of blood pressure above normal for the birthing persons age, sex, and physiological condition prior to onset of the current pregnancy. Data presented for preterm birth by hypertension does not include gestational hypertension and pregnancy induced hypertension (or preeclampsia).

DIABETES
Diabetes was defined as pre-pregnancy diabetes (type 1 or type 2) and does not include gestational diabetes (diabetes during pregnancy).

UNHEALTHY WEIGHT BEFORE PREGNANCY
Body mass index (BMI) is a measure of body fat based on height and weight that applies to adult men and women. The percent of women with an unhealthy weight before pregnancy was calculated as the number of women with a BMI that is categorized as either underweight (BMI <18.5) or obese (30 or higher) divided by the number of women who had a live birth multiplied by 100.

PREVIOUS PRETERM BIRTH
A previous preterm birth was defined as having a prior birth where the baby was born before 37 weeks’ gestation.

CARRYING MULTIPLES
Carrying multiples was defined as any pregnancy with more than one baby. Multiples can include twins, triples, quadruplets or more.

INFANT MORTALITY RATE
Infant mortality rates were calculated using the NCHS 2021 period linked infant birth and infant death data. Infant mortality rates were calculated as the number of infant deaths divided by the number of live births multiplied by 1,000. Infant mortality rate in the trend graph are from the NCHS 2011-2021 period linked infant birth and infant death files. Joinpoint Trend Analysis Software was utilized to assess significant trends in infant mortality. Weights were applied to account for deaths in which linking was not possible.

INFANT MORTALITY BY RACE/ETHNICITY OF THE MOTHER
Mother’s race and Hispanic ethnicity are reported separately on the birth certificate. Rates for Hispanic women include all bridged racial categories (White, Black, American Indian/Alaska Native and Asian/Pacific Islander). Rates for non-Hispanic women are classified according to race. The Asian/Pacific Islander category includes Native Hawaiian. To provide stable rates, racial and ethnic groups are shown on the report card if the group had 10 or more infant deaths. To calculate infant mortality rates by maternal race/ethnicity on the report card, three years of data were aggregated (2019-2021). Infant mortality rates for not stated/unknown race are not shown on the report card. Weights were applied to account for deaths in which linking was not possible.

LEADING CAUSES OF INFANT DEATH
NCHS period linked birth/infant death files (2019-2021) were used for cause of death analyses. See Appendix A for a detailed list of cause of death codes and their groupings. The top four cause of death categories by percent of total deaths per state were selected for chart inclusion. The percent of deaths attributed to causes outside of the categories selected were combined in an “other” category. Please see “Tenth Revision 130 Selected Causes of Infant Death Adapted” for full code list and labels. Weights were applied to account for deaths in which linking was not possible.
MATERNAL MORTALITY

Maternal mortality refers to the death of a birthing person from complications of pregnancy or childbirth that occur during the pregnancy or within 6 weeks after the pregnancy ends. Maternal deaths are ascertained using the NCHS 2018-2021 mortality data. The number of maternal deaths does not include all deaths occurring to pregnant or recently pregnant women, but only deaths with the underlying cause of death assigned to International Statistical Classification of Diseases, 10th Revision code numbers A34, O00–O95, and O98–O99. Rates are calculated by dividing the number of maternal deaths by the number of births in the same geographic region during the same data year(s) and multiplying by 100,000.

Maternal mortality rates fluctuate from year to year because of the relatively small number of these events and possibly due to issues with the reporting of maternal deaths on death certificates. One-year national rates can only be shown overall and for the three largest race and Hispanic-origin groups for which statistically reliable rates can be calculated (Non-Hispanic Black, Non-Hispanic White and Hispanic). Four-year aggregate rates are presented for all other race groups and by state, still some states do not have enough deaths to provide reliable estimates and are therefore suppressed.

MATERNAL VULNERABILITY INDEX

March of Dimes recognizes the importance of certain risk factors that are associated with maternal and infant health outcomes. March of Dimes, in partnership with Surgo Health, is offering the opportunity to examine determinants of maternal health at the county level using the Maternal Vulnerability Index (MVI). The MVI is the first county-level, national-scale, open-source tool to identify where and why mothers in the United States are vulnerable to poor pregnancy outcomes and pregnancy-related deaths. The MVI includes not only widely known clinical risk factors, but also key social, contextual, and environmental factors that are also essential influencers of outcomes. This report displays data from the 2023 updated MVI.

Differences in counties are measured using numerous factors broken into six themes: reproductive healthcare, physical health, mental health and substance abuse, general healthcare, socioeconomic determinants and physical environment. The MVI assigns a score of 0-100 to each geography, where a higher score indicates greater vulnerability to adverse maternal outcomes. Learn more about the MVI methodology by visiting Surgo Health website. (Surgo Ventures - The US Maternal Vulnerability Index (MVI)).

ADDITIONAL MATERNAL HEALTH INDICATORS

LOW-RISK CESAREAN BIRTH RATES

A low-risk Cesarean birth occurs when a woman undergoes the surgical procedure if the baby is a single infant, is positioned head-first, the mother is full-term (at least 37 weeks), and has not given birth prior. This is also referred to as a NTSV Cesarean birth. NTSV abbreviated to mean Nulliparous (or first-time mother), Term, Singleton, Vertex (head-first position).

Low-risk Cesarean birth rates were calculated using the NCHS 2022 final natality data for the US states and District of Columbia and the data from the Puerto Rico Health Department. Low-risk Cesarean birth rates were calculated as the number of Cesarean births that occurred to first-time mothers of a single infant, positioned headfirst with a gestational age of at least 37 weeks (NTSV) divided by the number of first-time mothers of a single infant, positioned headfirst with a gestational age of at least 37 weeks (NTSV) multiplied by 100.

INADEQUATE PRENATAL CARE

Adequacy of prenatal care is measured using the Adequacy of Prenatal Care Utilization Index, which classifies prenatal care received into 1 of 4 categories (inadequate, intermediate, adequate and adequate plus) by combining information about the timing of prenatal care, the number of visits and the infant’s gestational age. Inadequate prenatal care is defined as a woman who received less than 50% of her expected visits. Inadequate prenatal care is calculated using the NCHS 2022 final natality data and data from the Puerto Rico Health Department.

CALCULATIONS

All natality calculations were conducted by March of Dimes Perinatal Data Center.
STATE LEVEL POLICIES

MEDICAID EXTENSION
The adoption of this policy allows women to qualify for pregnancy-related Medicaid coverage for more than the standard 60 days after pregnancy for up to one year. Extending this coverage option can be done through a State Plan Amendment (SPA) or Section 1115 Waiver. Medicaid extension status is provided by Kaiser Family Foundation as adopted, progressing, or not adopted.10

MEDICAID EXPANSION
Medicaid expansion allows more people to be eligible for Medicaid coverage—it expands the cut-off for eligibility. Medicaid expansion status is provided by the Kaiser Family Foundation as adopted, progressing, or not adopted.11 Medicaid expansion has reduced the rates of uninsured. Increased access and utilization of health care are significantly associated with Medicaid expansion.12

PAID FAMILY LEAVE
Paid family and medical leave refers to policies that enable workers to receive compensation when they take extended time off for qualifying reasons, such as bonding with a new child, recovering from one’s own serious illness or caring for a seriously ill loved one.13 The measure is reported as: state has an active policy that provides an option for pay while out on extended leave, state is progressing/has pending legislation that is not yet in effect or it does not have an active policy in place. Data is provided by Onpay.14

DOULA POLICY ON MEDICAID COVERAGE
Doulas are non-clinical professionals that emotionally and physically support birthing persons during the perinatal period, including birth and postpartum.15 Doula policy status show states that have enacted bills relating to Medicaid coverage of doula care, or not. The measure is reported as: state Medicaid agency is actively reimbursing doula care, state has progress on passing Medicaid reimbursement legislation or state Medicaid agency does not reimburse doula care. An additional measure includes identifying states that reimburse up to $1,500 for doula services. Data is provided by the National Health Law Program under the Doula Medicaid Project.16

MATERNAL MORTALITY REVIEW COMMITTEE (MMRC)
These committees investigate deaths related to pregnancy to determine underlying causes of death and respond to improve conditions and practices. The committees can be made up of representatives from public health, nursing, maternal-fetal medicine, obstetrics and gynecology, midwifery, patient advocacy groups and community-based organizations.17 The measure is provided by the Centers for Disease Control (CDC) and is categorized as: state has an MMRC that is receiving federal funding or state does not have an MMRC that is receiving federal funding.18

FETAL AND INFANT MORTALITY REVIEW (FIMR)
Fetal and Infant Mortality Review is the community-based, action-oriented process of reviewing fetal and infant death cases to improve maternal and infant health outcomes.19 The measure is reported as: state has a Fetal and Infant Mortality Review team or teams or state does not have any teams. Data was provided by the National Center for Fatality Review and Prevention.20

PERINATAL QUALITY COLLABORATIVE (PQC)
The PQC involves partnerships with families, key state agencies and organizations to identify and initiate programs or procedures that increase the quality of care in clinical settings. PQC’s work focuses on collaborative learning among health care providers and the PQC. Data is provided by the Centers for Disease Control and Health Resources and Services Administration, and the measure is reported as: state has a PQC with federal funding or state does not have a PQC with federal funding.21
REFERENCES


22. Health Resources and Services Administration. FY 2023 Alliance for Innovation (AIM) on Maternal Health Awards; Published September 2023. FY 2023 Alliance for Innovation (AIM) on Maternal Health Awards | MCHB (hrsa.gov).
### APPENDIX A: CAUSE OF DEATH CATEGORIES AND CORRESPONDING CODES

<table>
<thead>
<tr>
<th>Cause of death category</th>
<th>Cause of death codes included</th>
</tr>
</thead>
<tbody>
<tr>
<td>Birth defects</td>
<td>119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133</td>
</tr>
<tr>
<td>Preterm birth/low birth weight</td>
<td>089, 090</td>
</tr>
<tr>
<td>SUIDS</td>
<td>135</td>
</tr>
<tr>
<td>Maternal complications</td>
<td>075, 076, 077, 078</td>
</tr>
<tr>
<td>Respiratory distress syndrome</td>
<td>096</td>
</tr>
<tr>
<td>Complications of the placenta, cord, or membranes</td>
<td>080, 081, 082, 083</td>
</tr>
<tr>
<td>Accidents (unintentional injury)</td>
<td>141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151</td>
</tr>
<tr>
<td>Bacterial sepsis of newborn</td>
<td>106</td>
</tr>
<tr>
<td>Diseases of the circulatory system</td>
<td>047, 048, 049, 050, 051, 052</td>
</tr>
<tr>
<td>Intrauterine hypoxia and birth asphyxia</td>
<td>094, 095</td>
</tr>
</tbody>
</table>