

## PRETERM BIRTH: DEFINITION AND SOURCE

Preterm birth is a birth with less than 37 weeks gestation based on the obstetric estimate of gestational age. Data used in this report card came from the National Center for Health Statistics (NCHS) natality files, as compiled from data provided by the 57 vital statistics jurisdictions through the Vital Statistics Cooperative Program.<sup>1</sup> This national data source was used so that data are comparable for each state and jurisdiction-specific report card. Data provided on the report card may differ from data obtained directly from state or local health departments and vital statistics agencies due to timing of data submission and handling of missing data. The preterm birth rates shown at the top of report card was calculated from the NCHS 2020 final natality data. Preterm birth rates in the trend graph are from the NCHS 2010-2020 final natality data. County and city preterm birth rates are from the NCHS 2019 final natality data. Preterm birth rates for bridged racial and ethnic categories were calculated from NCHS 2017-2019 final natality data. Preterm birth rates were calculated as the number of premature births divided by the number of live births with known gestational age multiplied by 100.

## GRADING METHODOLOGY

Expanded grade ranges were introduced in 2019. Grade ranges remain based on standard deviations of final 2014 state and District of Columbia preterm birth rates away from the March of Dimes goal of 8.1 percent by 2020. Grades were determined using the following scoring formula: (preterm birth rate of each jurisdiction - 8.1 percent) / standard deviation of final 2014 state and District of Columbia preterm birth rates. Each score within a grade was divided into thirds to create +/- intervals. The resulting scores were rounded to one decimal place and assigned a grade. See the table for details.

## INFANT MORTALITY RATE

Infant mortality rates were calculated using the NCHS 2019 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 2009-2019 period linked infant birth and infant death files.

## PRETERM BIRTH BY RACE/ETHNICITY OF THE MOTHER

Mother's race and Hispanic ethnicity are reported separately on birth certificates. 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 preterm births in each year from 2017-2019. To calculate preterm birth rates on the report card, three years of data were aggregated (2017-2019). Preterm birth rates for not stated/unknown race are not shown on the report card.

| GRADE     | PRETERM BIRTH RATE RANGE<br>SCORING CRITERIA       |
|-----------|--|
| <b>A</b>  | Preterm birth rate less than or equal to 7.7%.     |
| <b>A-</b> | Preterm birth rate of 7.8 to 8.1%.                 |
| <b>B+</b> | Preterm birth rate of 8.2 to 8.5%.                 |
| <b>B</b>  | Preterm birth rate of 8.6 to 8.9%.                 |
| <b>B-</b> | Preterm birth rate of 9.0 to 9.2%.                 |
| <b>C+</b> | Preterm birth rate of 9.3 to 9.6%.                 |
| <b>C</b>  | Preterm birth rate of 9.7 to 10.0%.                |
| <b>C-</b> | Preterm birth rate of 10.1 to 10.3%.               |
| <b>D+</b> | Preterm birth rate of 10.4 to 10.7%.               |
| <b>D</b>  | Preterm birth rate of 10.8 to 11.1%.               |
| <b>D-</b> | Preterm birth rate of 11.2 to 11.4%.               |
| <b>F</b>  | Preterm birth rate greater than or equal to 11.5%. |

## PRETERM BIRTH BY CITY

Report cards for states and jurisdictions, except District of Columbia, display the city with the greatest number of live births. Cities are not displayed for Delaware, Maine, Vermont, West Virginia and Wyoming due to limited availability of data. Grades were assigned based on the grading criteria described above. Change from previous year was calculated by comparing the 2019 city preterm birth rate to the 2018 rate.

## PRETERM BIRTH DISPARITY MEASURES

The March of Dimes disparity ratio is based on Healthy People 2020 methodology and provides a measure of the differences, or disparities, in preterm birth rates across racial/ethnic groups within a geographic area.<sup>2</sup> The disparity ratio compares the racial/ethnic group with the lowest preterm birth rate (comparison group) to the average of the preterm birth rate for all other groups.

To calculate the disparity ratio, the 2017-2019 preterm birth rates for all groups (excluding the comparison group) were averaged and divided by the 2017-2019 comparison group preterm birth rate. The comparison group is the racial/ethnic group with the lowest six-year aggregate preterm birth rate (2010-2015) among groups that had 20 or more preterm births in each year from 2010-2015. A disparity ratio was calculated for U.S. states, the District of Columbia, and the total U.S. A disparity ratio was not calculated for Maine, Vermont, and West Virginia. A lower disparity ratio is better, with a disparity ratio of 1 indicating no disparity.

## A TIME FOR PARTNERSHIP AND ACTION: EXAMINING THE U.S. MATERNAL AND INFANT HEALTH CRISIS AND POLICIES NEEDED FOR CHANGE

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### PRETERM BIRTH DISPARITY MEASURES

Progress toward eliminating racial and ethnic disparities was evaluated by comparing the 2017-2019 disparity ratio to a baseline (2010-2012) disparity ratio. Change between time periods was assessed for statistical significance at the 0.05 level using the approach recommended by Healthy People 2020.<sup>2</sup> If the disparity ratio significantly improved because the average preterm birth rate for all other groups got better, we displayed “Improved” on the report card. If the disparity ratio significantly worsened because the lowest group got better or the average of all other groups got worse, we displayed “Worsened” on the report card. If the disparity ratio did not significantly change, we displayed “No Improvement” on the report card.

The report card also provides the percent difference between the racial/ethnic group with the 2017-2019 highest preterm birth rate compared to the combined 2017-2019 preterm birth rate among women in all other racial/ethnic groups. This percent difference was calculated using only the racial/ethnic groups displayed on the state or jurisdiction-specific report card. This difference was calculated for each U.S. state with adequate numbers and the District of Columbia.

### SOCIAL VULNERABILITY INDEX

March of Dimes recognizes the importance of certain risk factors that are associated with maternal and infant health outcomes. The social vulnerability index is calculated by the Center for Disease Control.<sup>3</sup> This index is comprised of fifteen variables from the American Community Survey (ACS), 2014-2018 and is represented at the county level. These variables are grouped into the following themes: socioeconomic, household composition/disability, minority status/language and housing type/ transportation. Socioeconomic includes poverty, unemployment, income and level of high school completion. Household composition and disability includes aged 65 or older, aged 17 or younger, disability and single-parent household. Minority status includes minority and speaks English “Less than well”. Housing type and transportation includes multi-unit structures, mobile homes, crowding, no vehicle and group quarters.

### MATERNAL AND CHILD 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.<sup>4</sup> 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 2019 final natality data.<sup>1</sup> 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 1,000.

#### 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.<sup>5</sup> Inadequate prenatal care is defined as a woman who received less than 50% of her expected visits. Inadequate prenatal care will be calculated using the NCHS 2019 final natality data.<sup>1</sup>

### STATE LEVEL MATERNAL HEALTH POLICIES

#### 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 from the Kaiser Family Foundation as adopted or not adopted.<sup>6</sup> Medicaid expansion has reduced the rates of uninsured. Increased access and utilization of health care are significantly associated with Medicaid expansion.<sup>7</sup>

#### 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 one year.<sup>8</sup> Extending this coverage typically requires both state legislation and an appropriation in addition to a Section 1115 waiver in order to receive federal match.<sup>9</sup> Medicaid extension status is provided by Kaiser Family Foundation as adopted (having an approved 1115 waiver), waiver pending or planning or planning is occurring, or the state does not have the indicated organization/policy.<sup>8</sup>

**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.<sup>10</sup> The measure is provided by the Guttmacher Institute and is categorized as: state has the indicated organization/policy, state has an MMRC but does not review deaths up to a year after pregnancy ends or state does not have the indicated organization/policy.<sup>11</sup>

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## PERINATAL QUALITY COLLABORATIVE (PQC)

The PQC involves partnerships with families, key state agencies and organizations in order to identify and initiate programs or procedures that increase the quality of care in clinical settings. PQC's work focus on collaborative learning among healthcare providers and the PQC.<sup>12</sup> Data is provided by the Society of Maternal Fetal Medicine (SMFM) and the measure is reported as: state has the indicated organization/policy or the state does not have the indicated organization/policy.<sup>13</sup>

## DOULA POLICY ON MEDICAID COVERAGE

Doulas are non-clinical professionals that emotionally and physically support women during the perinatal period, including birth and postpartum.<sup>14</sup> Doula policy status show states that have enacted bills relating to Medicaid coverage of doula care, or not. The measure is reported as: state has the indicated organization/policy or the state does not have the indicated organization/policy. Data is provided by the National Health Law Program under the Doula Medicaid Project.<sup>15</sup>

## MIDWIFERY STATE LAWS

Midwives are health care professionals that may be part of the birth care team or stand alone in providing prenatal, delivery and postpartum care. Certified Nurse-Midwives (CNM) hold national certification and state licensure to practice in all 50 states. Measures depict states where both direct entry and nurse midwifery may practice and be licensed or where no licensure/practice is available/allowed. The measure is reported as: state has the indicated organization/policy or the state does not have the indicated organization/policy. Data is retrieved from the Midwife Alliance of North America.<sup>16</sup>

## CALCULATIONS

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

## REFERENCES

- <sup>1</sup> National Center for Health Statistics, final natality data 2017-2020.
- <sup>2</sup> Talih M, Huang DT. Measuring progress toward target attainment and the elimination of health disparities in Healthy People 2020. Healthy People Statistical Notes, No 27. Hyattsville, MD: National Center for Health Statistics. 2016.
- <sup>3</sup> CDC/ATSDR Social Vulnerability Index. Available at: <https://www.atsdr.cdc.gov/placeandhealth/svi/index.html>.
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- <sup>6</sup> Kaiser Family Foundation. Status of State Medicaid Expansion Decisions: Interactive Map. Available at: <https://www.kff.org/medicaid/issue-brief/status-of-state-medicaid-expansion-decisions-interactive-map/>.
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- <sup>11</sup> Guttmacher Institute. Maternal Mortality Review Committees. Available at: <https://www.guttmacher.org/state-policy/explore/maternal-mortality-review-committees>.
- <sup>12</sup> Centers for Disease Control and Prevention, Perinatal Quality Collaboratives. Available at: <https://www.cdc.gov/reproductivehealth/maternalinfanthealth/pqc.htm>.
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- <sup>14</sup> DONA International. What is a doula? Available at: <https://www.dona.org/what-is-a-doula/>.
- <sup>15</sup> National Health Law Program. Doula Medicaid Project. Available at: <https://healthlaw.org/doulamedicaidproject/>.
- <sup>16</sup> Midwife Alliance of North America. Midwives & the Law, State by State. Available at: <https://mana.org/about-midwives/state-by-state>.

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