# WHERE YOU LIVE MATTERS: MATERNITY CARE IN NORTH CAROLINA

### INTRODUCTION

With over 3.5 million births in the United States annually, and rising rates of maternal mortality and morbidity, there is ample opportunity to improve maternal outcomes across the country.¹ More than 2 million women of childbearing age live in maternity care deserts, areas without access to birthing facilities or maternity care providers. Access to maternity care is essential for preventing poor health outcomes and eliminating health disparities. This report expands on the 2022 Nowhere to Go: Maternity Care Deserts Across the U.S. report² by taking a deeper dive into state level data and examining additional barriers that impact access to care. This data can be used to inform policies and practice recommendations in each state.

This report presents data on several important factors: levels of maternity care access and maternity care deserts by county; distance to birthing hospitals; availability of family planning services; community level factors associated with prenatal care usage as well as the burden and consequences of chronic health conditions across the state. While not an exhaustive list, each of these topics contribute to the complexity of maternity care access in each state. Working to improve access to maternity care by bringing awareness to maternity care deserts and other factors that limit access is one way in which March of Dimes strives to reduce preventable maternal mortality and morbidity for all pregnant people.

#### **KEY FINDINGS**

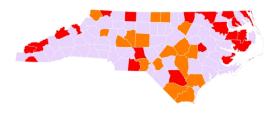
- In North Carolina, 21.0 percent of counties are defined as maternity care deserts compared to 32.6 percent in the U.S.
- 13.4 percent of women had no birthing hospital within 30 minutes compared to 9.7 percent in the U.S.
- Overall, women in North Carolina have a moderate vulnerability to adverse outcomes due to the availability of reproductive healthcare services.
- 17.1 percent of birthing people received no or inadequate prenatal care, greater than the U.S. rate of 14.8 percent.
- Women with chronic health conditions have a 56 percent increased likelihood of preterm birth compared to women with none.

### **ACCESS TO MATERNITY CARE IN NORTH CAROLINA**

Access to care during pregnancy and around the time of birth is not consistently available across the country. Hospital closures and a shortage of providers are driving changes in maternity care access, especially within rural areas and among Black, Indigenous, and people of color (BIPOC).<sup>3</sup> The level of maternity care access within each county is classified across North Carolina by the availability of birthing facilities, maternity care providers, and the percent of uninsured women (see table). The map shows that in North Carolina, 21.0 percent of counties are defined as maternity care deserts compared to 32.6 percent of counties in the U.S. overall.

### **FINDINGS**

- In North Carolina, there was a 1.9% decrease in the number of birthing hospitals between 2020 and 2019.
- In North Carolina, there were 3,573 babies born in maternity care deserts, 3.0% of all births.
- 3.3% of babies were born to women who live in rural counties, while 1.5% of maternity care providers practice in rural counties in North Carolina.



# DEFINITIONS OF MATERNITY CARE DESERT AND LEVEL OF MATERNITY CARE ACCESS

Definitions	Maternity care deserts	Low access	Moderate access	Full access*
Hospitals and birth centers offering obstetric care	zero	<2	<2	≥2
Obstetric providers (obstetrician, family physician <sup>†</sup> , CNM/CM per 10,000 births)	zero	<60	<60	≥60
Proportion of women 18-64 without health insurance	any	≥10%	<10%	any



**Sources:** U.S. Health Resources and Services Administration (HRSA), Area Health Resources Files, 2022; American Board of Family Medicine, 2017-2020; National Center for Health Statistics, 2021 final natality data.

Full

access

**Note:** CNM/CM = certified nurse midwives/certified midwives. \*A county is full access if it meets one or more of the criteria. 'Includes family physicians who provide obstetric care.

## **DISTANCE TO MATERNITY CARE**

The farther a woman travels to receive maternity care, the greater the risk of maternal morbidity and adverse infant outcomes, such as stillbirth and NICU admission. 4.5 Furthermore, longer travel distances to care can cause financial strain on families and increased prenatal stress and anxiety. 6 The distance a woman must travel to access care becomes a critical factor during pregnancy, at the time of birth, and in the case of emergencies. Nationwide closures of birthing hospitals have contributed to increased distance and travel time to care, especially in rural areas. 6

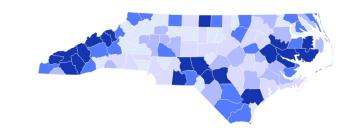
Mapping software was utilized to calculate distance, in miles and minutes, under normal traffic conditions and using real-world travel routes. The map indicates the average distance to the closest birthing hospital throughout North Carolina. Commonly used thresholds of 30- and 60-minute driving times were applied to measure the percent of birthing people with timely access to care.<sup>4</sup> This information can help identify areas where resources are needed to improve access to care. Overall, in the U.S. women travel 9.7 miles to their nearest birthing hospital.

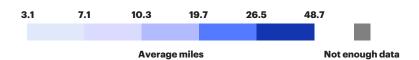
### **FINDINGS**

- In North Carolina, women travel 11.9 miles and 17.6 minutes, on average, to their nearest birthing hospital.
- Women living in counties with the highest travel times (top 20 percent) could travel up to 48.7 miles and 58.4 minutes, on average, to reach their nearest birthing hospital.
- Under normal traffic conditions, 0% of women live over 60 minutes from their nearest birthing hospital compared to 1.0% in the U.S.
- 13.4% of women in North Carolina had no birthing hospital within 30 minutes.
- In rural areas across North Carolina, 60.1% of women live over 30 minutes from a birthing hospital compared to 11.8% of women living in urban areas.
- Women living in maternity care deserts traveled 2.5 times farther than women living in areas with full access to maternity care in North Carolina.

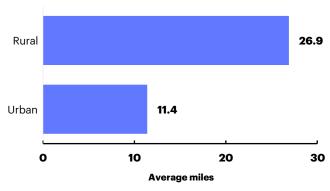
On average, women in North Carolina travel 11.9 miles to the nearest birthing hospital.

#### **DISTANCE TO BIRTHING HOSPITAL BY COUNTY**

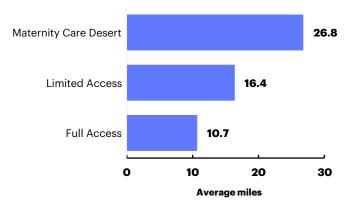




### **DISTANCE TO CARE BY RURALITY**



### **DISTANCE TO CARE BY MATERNITY CARE ACCESS**



**Sources:** Healthcare Cost and Utilization Project State Inpatient Database. North Carolina. Agency for Healthcare Research and Quality, 2019. Web. 1 Nov 2022. American Hospital Association, 2021; American Board of Family Medicine, 2017-2020; U.S. Health Resources and Services Administration (HRSA), Area Health Resources Files, 2022.



# AVAILABILITY OF FAMILY PLANNING SERVICES

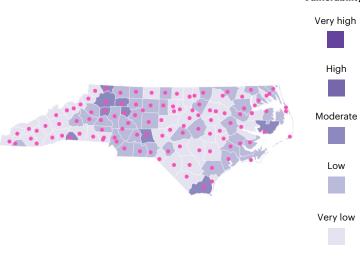
Access to family planning services allows for people to achieve their goals around having children, including the timing of and spacing between pregnancies.<sup>7</sup> An unexpected pregnancy or too little time between pregnancies can lead to serious health consequences, including preterm birth, depression, and anxiety.8,9 Providing access to affordable contraceptives is a strategy to help people attain their family planning goals.<sup>10</sup> Title X clinics are federally funded healthcare sites that provide low-cost reproductive healthcare services including contraceptives, wellness exams, and breast and cervical cancer screenings.11 The map displays Title X locations and areas where women are vulnerable to poor outcomes due to lack of access to reproductive health services. County level risk data are derived from Surgo's U.S. Maternal Vulnerability Index (MVI), where a darker color indicates greater vulnerability.<sup>12</sup> Overall, women in North Carolina have a moderate vulnerability to adverse outcomes due to the availability of reproductive healthcare services.

### **FINDINGS**

- There are 4.8 Title X clinics per 100,000 women in North Carolina compared to 5.3 per 100,000 in the U.S. overall.
- Women living in 91.0% of counties in North Carolina have a very low or low vulnerability to adverse outcomes.
- On average, people living in maternity care deserts in North Carolina, travel 1.2 times farther to reach their nearest Title X clinic compared to people living in full access counties.

# REPRODUCTIVE MATERNAL VULNERABILITY AND TITLE X CLINIC LOCATION





Title X locations

**Sources:** Surgo Maternal Vulnerability Index; U.S. Department of Health & Human Services, Office of Population Affairs. Title X Family Planning Directory (March 2023); United States Census Bureau. "S1301: Fertility." American Community Survey. 2017–2021. Web. 1 Nov 2022.

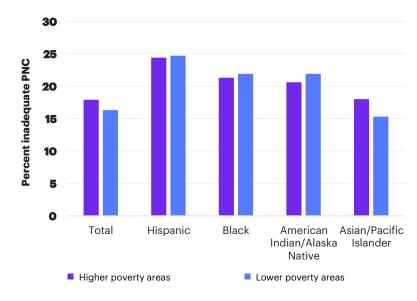
# **DISPARITIES IN PRENATAL CARE**

Early and regular prenatal care (PNC) is an important strategy for reducing the risk of pregnancy complications and adverse birth outcomes. <sup>13</sup> Historically, BIPOC have lower rates of adequate PNC and may be less likely to receive services such as important health screenings and appropriate monitoring of baby's growth. <sup>14,15</sup> Community level factors, such as poverty, create barriers to accessing care that can worsen the disparity in PNC usage among BIPOC. <sup>16</sup> The impact of poverty on PNC usage was assessed by examining the percent of women receiving inadequate PNC in areas of high and low poverty. In North Carolina, 17.1 percent of women received inadequate PNC compared to 14.8 percent in the U.S.

#### **FINDINGS**

- 3.6% of BIPOC did not receive PNC in areas of high poverty.
- Among BIPOC, those living in areas of high poverty have a 10% increased likelihood of inadequate PNC when compared to those living in areas of low poverty.
- Asian/Pacific Islander women living in areas of high poverty are 1.2 times more likely to receive inadequate PNC compared to those in areas of low poverty.

# INADEQUATE PRENATAL CARE BY RACE/ETHNICITY AND POVERTY



**Sources:** National Center for Health Statistics, 2019-2021 final natality data; United States Census Bureau. "B13010." American Community Survey. 2021. Web. Nov 2022.

**Note:** Inadequate PNC is defined as no prenatal care or care that began during or after the fifth month of pregnancy or that included less than half of the appropriate number of visits for the infant's gestational age. Missing groups are suppressed.



### CHRONIC HEALTH CONDITIONS AND PRETERM BIRTH

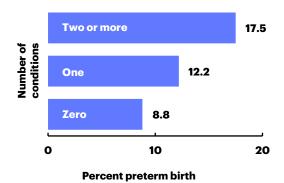
Having a chronic health condition before pregnancy increases the risk of pregnancy and postpartum complications. Preterm birth (PTB), a delivery before 37 weeks gestation, is one example of a complication that can lead to serious health impacts. The burden of chronic health conditions among birthing people is increasing across the U.S.<sup>17,18</sup> Access to healthcare before, during, and after pregnancy is important for appropriate management of chronic health conditions. At the time of birth, women with chronic conditions and their babies may need access to higher-level care, such as specialized providers, hospitals with the ability to perform a Cesarean birth, or hospitals with NICUs. Examining the chronic health burden (CHB) across North Carolina and its relationship to adverse outcomes provides information needed to make important changes that can result in targeted resource allocation, prevention, and appropriate disease management.

The percent of birthing people with one or more chronic conditions was calculated for each county in North Carolina and overall. The following conditions were included due to their availability in birth record data and established association with PTB: pre-pregnancy hypertension and diabetes, smoking, and being underweight or obese before pregnancy. The map describes the county level CHB in relation to the PTB rate. Areas shaded in purple have both a high CHB, greater than the overall state percent, and a high rate of PTB, defined as greater than the national target of 9.4 percent. In North Carolina, the PTB rate was 10.8 percent, compared to 10.5 percent in the U.S. overall in 2021.

#### **FINDINGS**

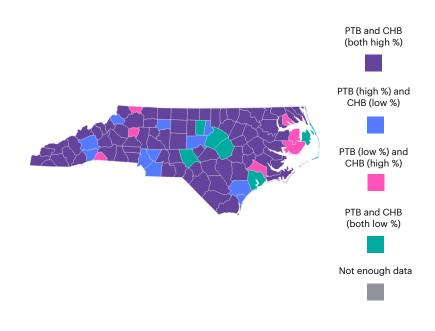
- In North Carolina, 41.0% of women had one or more chronic health conditions compared to 37.8% in the U.S. overall.
- Women with one or more chronic health conditions have a 56% increased likelihood of having a preterm birth compared to those without any chronic health conditions.
- 76.0% of counties in North Carolina have a high burden of chronic health conditions and a high rate of preterm birth.

# PRETERM BIRTH BY NUMBER OF CHRONIC HEALTH CONDITIONS



**Source:** National Center for Health Statistics, 2017–2021 final natality data.

# CHRONIC HEALTH BURDEN (CHB) AND PRETERM BIRTH (PTB) BY COUNTY



**Note:** The burden of chronic health conditions is the percent of birthing people in each county with one or more chronic conditions. Data for counties with less than 10 preterm births or women with chronic health conditions are excluded from map.

#### **SUMMARY**

All women deserve healthcare which is safe, effective, timely, efficient and equitable. Consistent and equitable access to maternity care helps women maintain optimal health as well as reduce the risk of experiencing complications during pregnancy and the postpartum period. Several factors influence maternity care access for women across the U.S. By assessing distance to care and the availability of maternity care providers, hospitals and family planning services, this report provides insight into several physical components that affect a person's ability to receive care. In addition, examining community level factors associated with access to care and identifying vulnerable populations provides greater context around barriers to receiving appropriate care. Together this information can lead decision makers, public health professionals, clinicians and researchers to advocate for policies and resources that increase maternity care access across each state.

By addressing these factors, states may move closer to eliminating pregnancy-related deaths and complications. Telehealth, through various platforms, equips maternal health providers with the tools to better facilitate care before, during and after pregnancy and has been shown to not only increase access but also improves patient engagement and treatment.<sup>20</sup> March of Dimes fully supports Congress, governmental regulating agencies and states to act and make telehealth provisions balanced and permanent. Evidence-based telehealth services and other innovative solutions are explored in greater depth on page 5.



## **POLICY SOLUTIONS AND ACTIONS**

March of Dimes has long supported policies that improve access to maternity care, including Medicaid expansion and extension, improved integration of the midwifery model of care, reimbursement for doula care, and increasing the availability of telehealth services across a range of healthcare specialties. Telehealth is healthcare delivered using technology to replace or enhance in-person care and can save lives by providing high-quality care for pregnant and postpartum people.<sup>21</sup> Women who are underserved, vulnerable to poor health outcomes, and have limited access to high-risk care can greatly benefit from telehealth.<sup>21</sup>

To address the limited access to maternity care in the U.S., states must adopt and support telehealth and other innovative practices to expand access and provide more options for healthcare delivery. The current state of telehealth policies and innovative solutions in North Carolina aimed at improving maternal health outcomes is explored in this report. By highlighting innovative solutions implemented across states, policymakers and healthcare professionals can identify policies and programs that can improve health for pregnant people in North Carolina and ensure they receive the support and care needed before, during, and after pregnancy.



### **TELEHEALTH LAW**

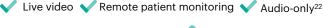
Due to the COVID-19 Public Health Emergency (PHE), states expanded access to telehealth services. While many of the policies increased access to telehealth for maternity care services temporarily, many states permanently expanded telehealth services. This policy measure identifies whether North Carolina has passed laws to permanently provide Medicaid telehealth coverage for maternity care services.<sup>22,23</sup>



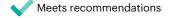


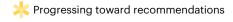
### **TELEHEALTH COVERAGE**

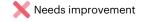
Medicaid telehealth policies vary by state. States may cover all forms of telehealth services or restrict certain forms of telehealth services. <sup>22</sup> This policy measure identifies whether North Carolina provides Medicaid reimbursement of the following telehealth services:











### POLICY AND PROGRAM INNOVATION

- North Carolina's Pregnancy Medical Home (PMH) model works to improve the quality of perinatal care given to Medicaid beneficiaries. Pregnant Medicaid customers and high-risk pregnant women in pregnancy medical homes receive care and case management services. Pregnancy medical home programs receive financial incentives for achieveing high-quality care milestones: \$50 for completing a high-risk screening tool at each initial visit, \$150 incentive for each postpartum visit per Medicaid beneficiary, and an increased reimbursement rate for vaginal deliveries.<sup>24</sup>
- The Mountain Area Health Education Center's Perinatal/Neonatal Outreach Coordinator (PNOC) program engages birthing facilities and other regional stakeholders to ensure that families receive high-quality, evidence-based, and risk-appropriate maternal and neonatal care. This program guides regional birth facilities in standardized assessments to determine levels of maternal and neonatal care. The program also provides rural obstetric simulations and professional development opportunities.<sup>25</sup>
- The Mountain Area Health Education Center's Maternal Telehealth grant trains maternal health practitioners to provide perinatal health services using a telemedicine software platform to improve access to maternal healthcare to prenatal and postpartum individuals living in rural areas of the state.<sup>25</sup>



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