

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 Arizona, 6.7 percent of counties are defined as maternity care deserts compared to 32.6 percent in the U.S.
- 6.8 percent of women had no birthing hospital within 30 minutes compared to 9.7 percent in the U.S.
- Overall, women in Arizona have a very high vulnerability to adverse outcomes due to the availability of reproductive healthcare services.
- 20.0 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 45 percent increased likelihood of preterm birth compared to women with none.

ACCESS TO MATERNITY CARE IN ARIZONA

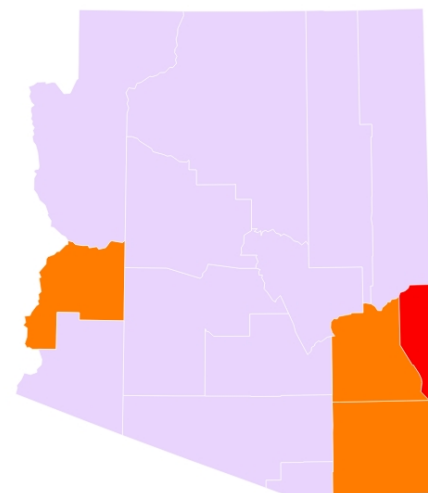
Access to care during pregnancy and around the time of birth is not consistently available across the country. Hospital closures and a shortage of providers are driving changes in maternity care access, especially within rural areas and among Black, Indigenous, and people of color (BIPOC).³ The level of maternity care access within each county is classified across Arizona by the availability of birthing facilities, maternity care providers, and the percent of uninsured women (see table). The map shows that in Arizona, 6.7 percent of counties are defined as maternity care deserts compared to 32.6 percent of counties in the U.S. overall.

FINDINGS

- In Arizona, there was a 3% decrease in the number of birthing hospitals between 2020 and 2019.
- In Arizona, there were 119 babies born in maternity care deserts, 0.2% of all births.
- 0.8% of babies were born to women who live in rural counties, while 0.1% of maternity care providers practice in rural counties in Arizona.

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[†], 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.

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.

WHERE YOU LIVE MATTERS: MATERNITY CARE DESERTS AND THE CRISIS OF ACCESS AND EQUITY

March of Dimes recommends state policy actions that address access to care; see: <https://marchofdimes.org/mcdr-az>
For details on data sources and calculations, see Technical Notes: <https://www.marchofdimes.org/peristats/maternitycaretechnotes>

ARIZONA

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

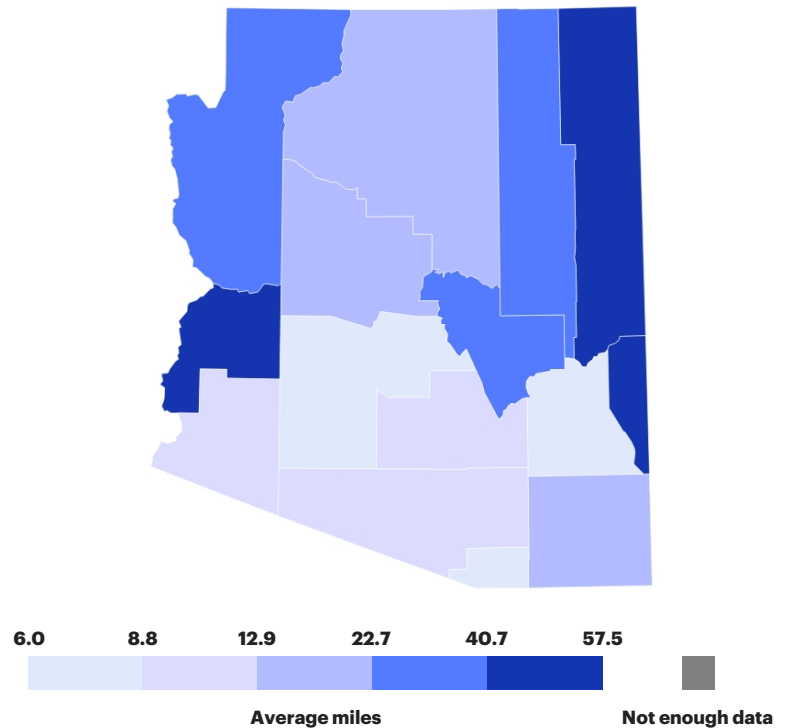
Mapping software was utilized to calculate distance, in miles and minutes, under normal traffic conditions and using real-world travel routes. The map indicates the average distance to the closest birthing hospital throughout Arizona. Commonly used thresholds of 30- and 60-minute driving times were applied to measure the percent of birthing people with timely access to care.⁴ 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

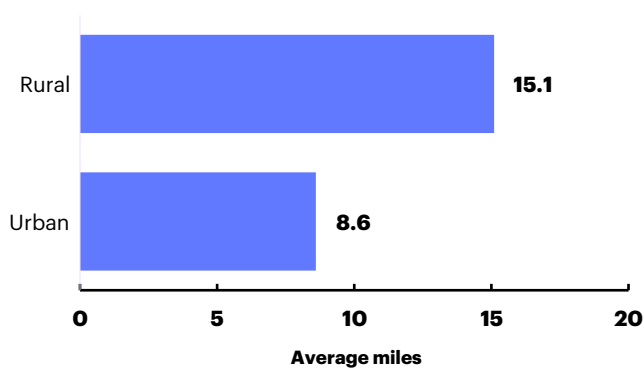
- In Arizona, women travel 8.7 miles and 13.9 minutes, on average, to their nearest birthing hospital.
- Women living in counties with the highest travel times (top 20 percent) could travel up to 57.5 miles and 70.9 minutes, on average, to reach their nearest birthing hospital.
- Under normal traffic conditions, 2.1% of women live over 60 minutes from their nearest birthing hospital compared to 1.0% in the U.S.
- 6.8% of women in Arizona had no birthing hospital within 30 minutes.
- In rural areas across Arizona, 25.9% of women live over 30 minutes from a birthing hospital compared to 6.7% of women living in urban areas.
- Women living in maternity care deserts traveled 5.7 times farther than women living in areas with full access to maternity care in Arizona.

On average, women in Arizona travel 8.7 miles to the nearest birthing hospital.

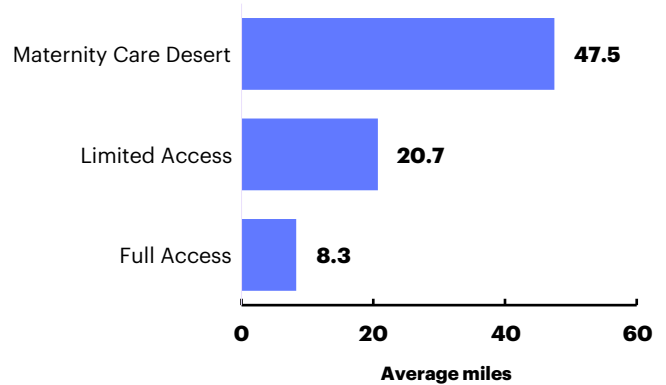
DISTANCE TO BIRTHING HOSPITAL BY COUNTY



DISTANCE TO CARE BY RURALITY



DISTANCE TO CARE BY MATERNITY CARE ACCESS



Sources: United States Census Bureau. "S1301 : Fertility." American Community Survey. 2017-2021. 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.

WHERE YOU LIVE MATTERS: MATERNITY CARE DESERTS AND THE CRISIS OF ACCESS AND EQUITY

March of Dimes recommends state policy actions that address access to care; see: <https://marchofdimes.org/mcdr-az>
For details on data sources and calculations, see Technical Notes: <https://www.marchofdimes.org/peristats/maternitycaretechnotes>

ARIZONA

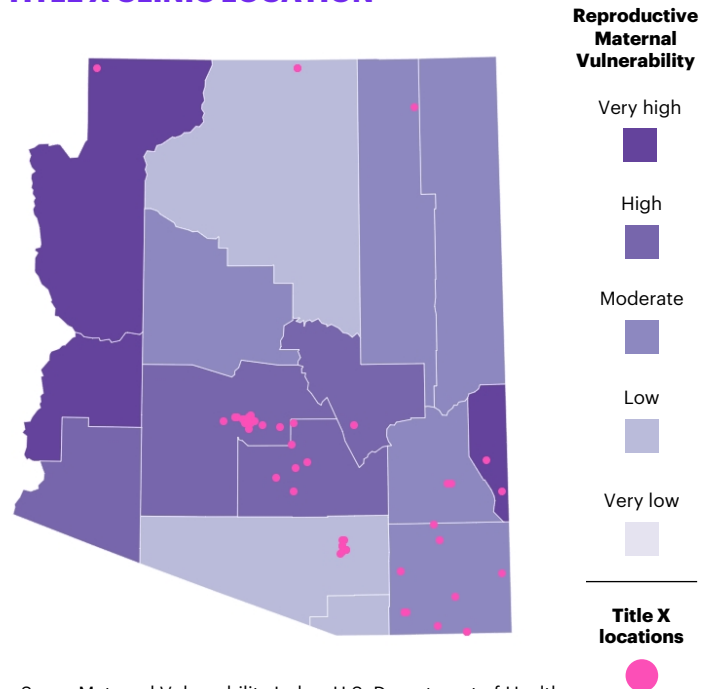
AVAILABILITY OF FAMILY PLANNING SERVICES

Access to family planning services allows for people to achieve their goals around having children, including the timing of and spacing between pregnancies.⁷ 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.¹⁰ 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.¹² Overall, women in Arizona have a very high vulnerability to adverse outcomes due to the availability of reproductive healthcare services.

FINDINGS

- There are 3.8 Title X clinics per 100,000 women in Arizona compared to 5.3 per 100,000 in the U.S. overall.
- Women living in 46.7% of counties in Arizona have a very high or high vulnerability to adverse outcomes.
- On average, people living in maternity care deserts in Arizona, travel 0.4 times less to reach their nearest Title X clinic compared to people living in full access counties.

REPRODUCTIVE MATERNAL VULNERABILITY AND TITLE X CLINIC LOCATION



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.

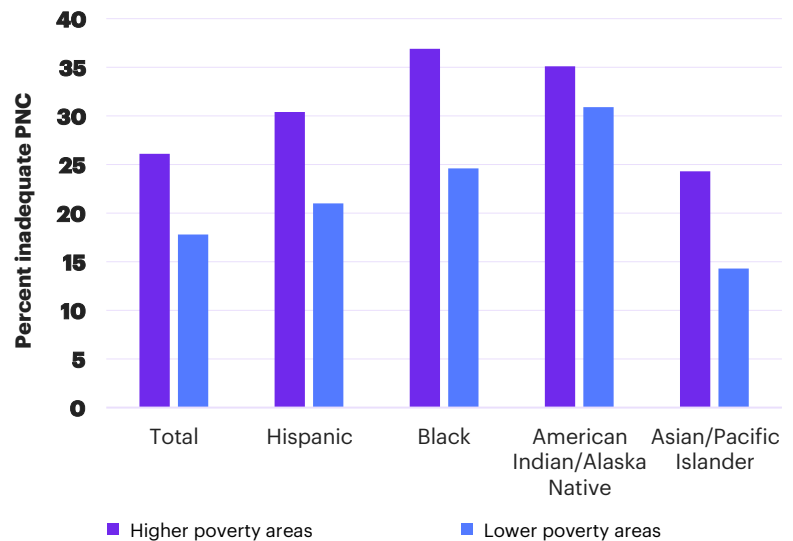
DISPARITIES IN PRENATAL CARE

Early and regular prenatal care (PNC) is an important strategy for reducing the risk of pregnancy complications and adverse birth outcomes.¹³ 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.^{14,15} Community level factors, such as poverty, create barriers to accessing care that can worsen the disparity in PNC usage among BIPOC.¹⁶ 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 Arizona, 20.0 percent of women received inadequate PNC compared to 14.8 percent in the U.S.

FINDINGS

- 6.2% of BIPOC did not receive PNC in areas of high poverty.
- Among BIPOC, those living in areas of high poverty have a 60% 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 1.7 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.

WHERE YOU LIVE MATTERS: MATERNITY CARE DESERTS AND THE CRISIS OF ACCESS AND EQUITY

March of Dimes recommends state policy actions that address access to care; see: <https://marchofdimes.org/mcdr-az>
For details on data sources and calculations, see Technical Notes: <https://www.marchofdimes.org/peristats/maternalcaretechnotes>

ARIZONA

CHRONIC HEALTH CONDITIONS AND PRETERM BIRTH

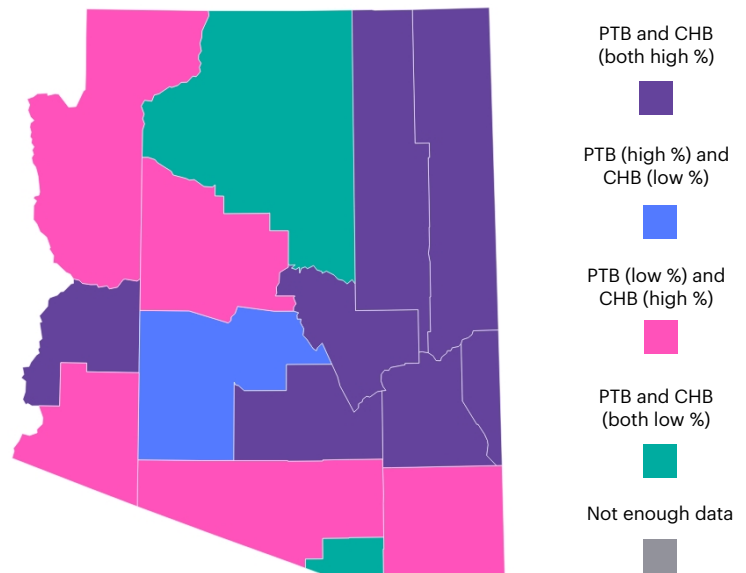
Having a chronic health condition before pregnancy increases the risk of pregnancy and postpartum complications. Preterm birth (PTB), a delivery before 37 weeks gestation, is one example of a complication that can lead to serious health impacts. The burden of chronic health conditions among birthing people is increasing across the U.S.^{17,18} 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 Arizona 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 Arizona 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.¹⁹ In Arizona, the PTB rate was 10.0 percent, compared to 10.5 percent in the U.S. overall in 2021.

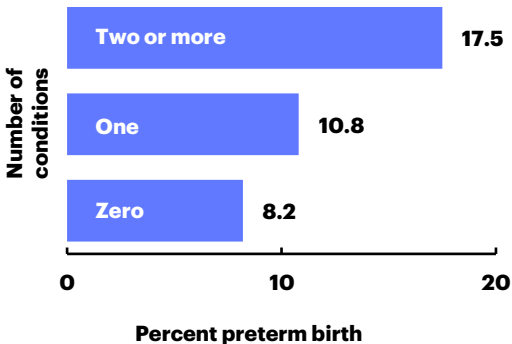
FINDINGS

- In Arizona, 37.9% 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 45% increased likelihood of having a preterm birth compared to those without any chronic health conditions.
- 46.7% of counties in Arizona have a high burden of chronic health conditions and a high rate of preterm birth.

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



PRETERM BIRTH BY NUMBER OF CHRONIC HEALTH CONDITIONS



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

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.²⁰ 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.

WHERE YOU LIVE MATTERS: MATERNITY CARE DESERTS AND THE CRISIS OF ACCESS AND EQUITY

March of Dimes recommends state policy actions that address access to care; see: <https://marchofdimes.org/mcdr-az>
For details on data sources and calculations, see Technical Notes: <https://www.marchofdimes.org/peristats/maternitycaretechnotes>

ARIZONA

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.²¹ Women who are underserved, vulnerable to poor health outcomes, and have limited access to high-risk care can greatly benefit from telehealth.²¹

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 Arizona 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 Arizona 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 Arizona has passed laws to permanently provide Medicaid telehealth coverage for maternity care services.^{22,23}



Meets recommendations



TELEHEALTH COVERAGE

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

✓ Live video ✓ Remote patient monitoring ✓ Audio-only²²



Progressing toward recommendations



Needs improvement

POLICY AND PROGRAM INNOVATION

- The Arizona State Loan Repayment Program expands and diversifies Arizona's healthcare workforce for all levels of maternal care in Arizona's Maternity Care Deserts.²⁴
- Public health professionals, advocates, and community stakeholders created the Arizona Health Improvement Plan, an action plan to address Arizona's health issues and disparities. The plan identifies the need to improve maternal health by increasing access to care and increasing the maternal care workforce, especially in underserved areas in rural and urban settings.²⁵
- The Arizona Department of Health Services contracted the Inter Tribal Council of Arizona, Inc. to create the Maternal Health Innovation Program to reduce maternal mortality and morbidity in American Indian communities in Arizona.²⁶

WHERE YOU LIVE MATTERS: MATERNITY CARE DESERTS AND THE CRISIS OF ACCESS AND EQUITY

March of Dimes recommends state policy actions that address access to care; see: <https://marchofdimes.org/mcdr-az>

For details on data sources and calculations, see Technical Notes: <https://www.marchofdimes.org/peristats/maternalcaretechnotes>

REFERENCES

- ¹ Osterman MJ, Hamilton BE, Martin JA, Driscoll AK, Valenzuela CP. Births: Final Data for 2020. *National Vital Statistics Reports*. 2022;70(17). Accessed April 5, 2023. <https://www.cdc.gov/nchs/products/index.htm>.
- ² Brigance C, Ripley L, Jones E, et al. *Nowhere to Go: Maternity Care Deserts Across the U.S. (Report No. 3)*. March of Dimes. 2022. Accessed April 5, 2023. <https://www.marchofdimes.org/research/maternity-care-deserts-report.aspx>
- ³ U.S. Government Accountability Office (GAO). *Availability of Hospital-Based Obstetric Care in Rural Areas*. October 2022. Accessed April 5, 2023. <https://www.gao.gov/assets/gao-23-105515.pdf>
- ⁴ Roa L, Uribe-Leitz T, Fallah PN, et al. Travel Time to Access Obstetric and Neonatal Care in the United States. *Obstetrics and Gynecology*. 2020;136(3):610-612. doi:10.1097/AOG.0000000000004053
- ⁵ Minion SC, Krans EE, Brooks MM, Mendez DD, Haggerty CL. Association of Driving Distance to Maternity Hospitals and Maternal and Perinatal Outcomes. *Obstetrics and Gynecology*. 2022;140(5):812-819. doi:10.1097/AOG.0000000000004960
- ⁶ Kozhimannil KB, Hung P, Henning-Smith C, Casey MM, Prasad S. Association Between Loss of Hospital-Based Obstetric Services and Birth Outcomes in Rural Counties in the United States. *JAMA*. 2018;319(12):1239. doi:10.1001/JAMA.2018.1830
- ⁷ World Health Organization (WHO). Family planning/contraception methods. Published November 9, 2020. Accessed April 9, 2023. <https://www.who.int/news-room/fact-sheets/detail/family-planning-contraception>
- ⁸ Kaiser Family Foundation. The U.S. Government and International Family Planning & Reproductive Health Efforts. Published November 11, 2021. Accessed April 3, 2023. <https://www.kff.org/global-health-policy/fact-sheet/the-u-s-government-and-international-family-planning-reproductive-health-efforts/>
- ⁹ Napili A. *Title X Family Planning Program*. Published June 2022. Accessed April 3, 2023. [https://crsreports.congress.gov/product/pdf/IF/IF10051#:text=What%20is%20the%20Federal%20Funding,Rescue%20Plan%20Act%20\(ARPA%2C%20P.L.](https://crsreports.congress.gov/product/pdf/IF/IF10051#:text=What%20is%20the%20Federal%20Funding,Rescue%20Plan%20Act%20(ARPA%2C%20P.L.)
- ¹⁰ Centers for Disease Control and Prevention (CDC). Premature Birth. Published November 1, 2022. Accessed April 3, 2023. <https://www.cdc.gov/reproductivehealth/features/premature-birth/index.html>
- ¹¹ U.S. Department of Health & Human Services (HHS), Office of Population Affairs. Title X Service Grants. Accessed April 3, 2023. <https://opa.hhs.gov/grant-programs/title-x-service-grants>
- ¹² Valerio VC, Downey J, Sgaier SK, Callaghan WM, Hammer B, Smittenaar P. Black-White Disparities in Maternal Vulnerability and Adverse Pregnancy Outcomes: an Ecological Population Study in the United States, 2014-2018. Accessed April 3, 2023. *The Lancet Regional Health*. <https://www.thelancet.com/journals/lanam/article/PIIS2667-193X%2823%2900030-3/fulltext>
- ¹³ Alexander GR, Kotelchuck M. Assessing the Role and Effectiveness of Prenatal Care: History, Challenges, and Directions for Future Research. *Public Health Reports*. 2001;116(4):306. doi:10.1016/S0033-3549(04)50052-3
- ¹⁴ Hill L, Artiga S, Ranji U. Racial Disparities in Maternal and Infant Health: Current Status and Efforts to Address Them. Kaiser Family Foundation. Published November 1, 2022. Accessed April 3, 2023. <https://www.kff.org/racial-equity-and-health-policy/issue-brief/racial-disparities-in-maternal-and-infant-health-current-status-and-efforts-to-address-them/>
- ¹⁵ Howell EA. Reducing Disparities in Severe Maternal Morbidity and Mortality. *Clin Obstet Gynecol*. 2018;61(2):387. doi:10.1097/GRF.0000000000000349
- ¹⁶ Bryant AS, Worjolah A, Caughey AB, Washington AE. Racial/Ethnic Disparities in Obstetric Outcomes and Care: Prevalence and Determinants. *Am J Obstet Gynecol*. 2010;202(4):335-343. doi:10.1016/J.AJOG.2009.10.864
- ¹⁷ Blue Cross Blue Shield, The Health of America Report. *Trends in Pregnancy and Childbirth Complications in the U.S. 2020*. Accessed April 3, 2023. https://www.bcbs.com/sites/default/files/file-attachments/health-of-america-report/HoA_Maternal_Health.pdf
- ¹⁸ Ananth CV, Duzyj CM, Yadava S, Schwebel M, Tita ATN, Joseph KS. Changes in the Prevalence of Chronic Hypertension in Pregnancy, United States, 1970 to 2010. *Hypertension*. 2019;74(5): 1089-1095. doi:10.1161/HYPERTENSIONAHA.119.12968
- ¹⁹ Healthy People 2030. Reduce preterm births — MICH-07. Office of Disease Prevention and Health Promotion, U.S. Dept. of Health and Human Services. Accessed April 3, 2023. <https://health.gov/healthypeople/objectives-and-data/browse-objectives/pregnancy-and-childbirth/reduce-preterm-births-mich-07>
- ²⁰ Brown HL, DeNicola N. Telehealth in Maternity Care. *Obstet Gynecol Clin North Am*. 2020;47 (3):497-502. doi:10.1016/j.ogc.2020.05.003
- ²¹ Health Resources & Services Administration (HRSA). Telehealth and High Risk Pregnancy. Published April 12, 2022. Accessed April 26, 2023. <https://telehealth.hhs.gov/providers/best-practice-guides/telehealth-for-maternal-health-services/telehealth-and-high-risk-pregnancy>
- ²² Center for Connected Health Policy (CCHP). State Telehealth Laws and Reimbursement Policies- Fall 2020 Summary Chart of Key Telehealth Policy Areas. Published October 2022. Accessed April 26, 2023. https://www.cchpca.org/2022/10/Fall2022_SummaryChart1.pdf
- ²³ Arizona State Legislature. 20-1057.13 - Telehealth; Coverage of Health Care Services; Definition. 2022. Accessed May 3, 2023. <https://www.azleg.gov/ars/20/01057-13.htm>.
- ²⁴ Arizona Department of Health Services (AZDHS). AZDHS: Workforce programs - Loan Repayment Programs. Published 2022. Accessed May 3, 2023. <https://www.azdhs.gov/prevention/health-systems-development/workforce-programs/loan-repayment/index.php>.
- ²⁵ Arizona Department of Health Services. Arizona Department of Health Services Arizona Health Improvement Plan 2021-2025. Published 2021. Accessed May 3, 2023. <https://www.azdhs.gov/documents/operations/strategic-initiatives/azhip-2021-2025.pdf>.
- ²⁶ Inter Tribal Council of Arizona. Maternal Health Innovation. Published 2023. Accessed May 3, 2023. <https://itcaonline.com/programs/health-services/maternal-health-innovation/>.

ACKNOWLEDGEMENTS

This report is generously supported by a grant from the Elevance Health Foundation. Statements in this report are those of the authors and do not necessarily reflect the views of the Elevance Health Foundation or its affiliates unless explicitly noted.

Special thanks to Jazmin Fontenot, MPH; Ripley Lucas, MPH; Ashley Stoneburner, MPH; Christina Brigance, MPH; Erin Jones, JD; Kelly Hubbard, MPH; Motoko Oinuma; Danielle Procopio, MPH; Kelly Ernst, MPH; Tiasha Letostak, PhD, MPH; Kathryn Mishkin, DrPH, MPH, MA; Elizabeth Cherot, MD, MBA and many others from across March of Dimes who contributed to this report to improve access to maternity care in the United States. March of Dimes would also like to thank PRI for their help with report design and expertise.

Suggested citation: Fontenot, J, Lucas, R, Stoneburner, A, Brigance, C, Hubbard, K, Jones, E, Mishkin, K. *Where You Live Matters: Maternity Care Deserts and the Crisis of Access and Equity in Arizona*. March of Dimes. 2023.

WHERE YOU LIVE MATTERS: MATERNITY CARE DESERTS AND THE CRISIS OF ACCESS AND EQUITY

March of Dimes recommends state policy actions that address access to care; see: <https://marchofdimes.org/mcdr-az>
For details on data sources and calculations, see Technical Notes: <https://www.marchofdimes.org/peristats/maternitycaretechnotes>