# EXPANDING CERTIFIED NURSE MIDWIFE PRACTICE AUTHORITY ENABLES EARLY AND REGULAR PRENATAL CARE VISITS

Sriparna Ghosh, Agnitra Roy Choudhury, and Alicia Plemmons

**DESPITE OVERALL DECLINES IN MATERNAL AND** infant mortality across high-income countries, the United States still reports one of the highest rates of maternal deaths during and after childbirth. There are likely many causes, such as the lack of access to providers who may perform prenatal and postnatal visits, the greater patient-to-staff ratios within delivery centers, and the great physical distance between a mother's home and birthing facilities.[1]

One solution to the shortage of providers, which more than half of US states have tried, is to allow trained nonphysicians with advanced graduate education to independently diagnose, treat, and prescribe for patients, even if such authority was granted only temporarily during the COVID-19 pandemic.[2] This solution has been particularly helpful in primary care and family medicine because these are the least common specialties chosen by physicians, owing to rates of reimbursement that are lower than in more lucrative specialties, such as cardiology or neurology. The lack of physicians in primary care affects the availability of prenatal and postnatal care visits, especially in states that require collaborative practice agreements, where the shortage of physicians may indirectly prevent

the practice of nonphysicians. Nonphysicians such as advanced practice registered nurses (APRNs) or physician assistants are substantially more likely to specialize in primary care, so allowing patients more access to these providers alleviates these problems.

Studies have found that increased access to one type of nonphysician provider, certified nurse midwives (CNMs), can lead to positive outcomes during pregnancy, labor, and delivery.[3] However, no studies have analyzed the mechanism by which CNM access changes patient experiences. Because earlier and regular prenatal care visits are one of the strongest determinants of infant health during and after delivery,[4] this research in brief discusses how the greater access to CNMs enabled by public policy reforms affects the timing and frequency of prenatal care visits and, in turn, birthweight and the rate of birth defects.

## CERTIFIED NURSE MIDWIFE SCOPE OF PRACTICE

**CNMS SPECIALIZE IN DELIVERING COMPREHENSIVE** reproductive care, including family planning, pregnancy and childbirth support, and newborn care for the first 28 days of life. CNM patient ages range from adolescence through menopause. CNM-attended births have risen substantially over the past decade, with CNM presence at nearly 11 percent of all deliveries and 16 percent of vaginal births for low-risk pregnancies.[5]

The term "scope of practice" refers to the legal limits on healthcare providers' actions, including diagnosing and treating illnesses, referring patients, and ordering tests. Scope of practice also determines whether a provider may prescribe medications, the types of medications that may be prescribed, and the collaboration or supervision requirements under which providers can write prescriptions. CNMs are a subset of APRNs: registered nurses who have completed either a master's degree or doctor of nursing practice degree, as well as substantial clinical hours to learn more advanced techniques, care functions, and the management of a patient as the primary provider. Although CNMs typically adhere to a state's overall APRN rules and regulations, some states have different rules for CNMs.[6]

CNMs often may practice only in collaboration with or under the supervision of a physician, which makes it more difficult for CNMs to locate within rural or poor communities, given that existing physicians' practices are in short supply in those places. These rural and poor communities often have some of the worst rates of maternal and infant mortality, where it is not uncommon for women to arrive in the emergency room for delivery having had no prior prenatal care or testing.

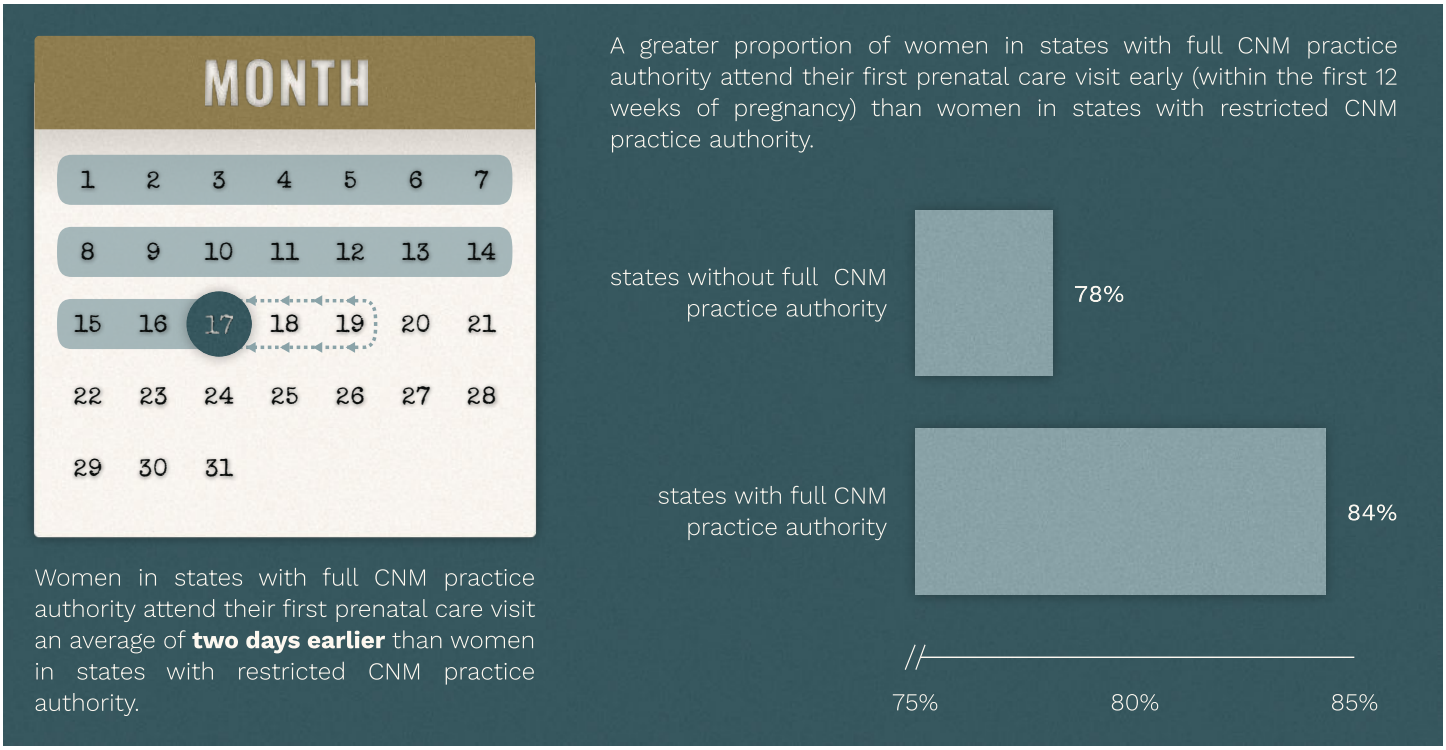
CNM regulations are state-specific and created through the legislative process. The following section discusses the relationship between these regulations and health outcomes.

## EXPANDING SCOPE OF PRACTICE INCREASES PRENATAL CARE

**DATA FROM THE PREGNANCY RISK ASSESSMENT** Monitoring System (PRAMS) shed light on whether some of the stark differences in maternal and infant outcomes across the United States are explained by differences in scope-of-practice regulations. PRAMS is a monitoring project started in 1987 by the Centers for Disease Control and Prevention (CDC) to investigate the causes of poor infant health outcomes. PRAMS represents a partnership between the CDC and state health departments in collecting jurisdiction-specific population data on maternal attitudes and experiences before, during, and shortly after pregnancy.

As shown in Figure 1, women in states with full practice authority for CNMs attend their first prenatal care visit about two days earlier than women in states that restrict CNM scope of practice. Also, a larger proportion of women have their first prenatal care visit within the first 12 weeks of pregnancy in states with full practice authority. These findings are the result of analyses (see Table A1) that control for variables such as age, education, and race, and they suggest that some women may be delaying their first prenatal care visit owing to difficulty scheduling provider appointments in states with scope-of-practice restrictions.

**Figure 1. Time of First Prenatal Care Visit**




Note: FPA (full practice authority) indicates that a state allows CNMs to practice and prescribe without direct physician supervision or a collaborative practice agreement.

Source: Authors' calculations from Sriparna Ghosh, Agnitra Roy Choudhury, and Alicia Plemmons, "Expansions in Scope-of-Practice Regulations and Maternal–Infant Health Outcomes: Evidence from PRAMS" (working paper, Pacific Legal Foundation, Sacramento, CA, forthcoming 2026).

Because the first prenatal care visit still occurs after roughly the same number of months regardless of scope-of-practice regulations, differences in health outcomes are likely driven by the few days' difference in the time until the first prenatal care visit. Although this difference is small, receiving prenatal care earlier during the first trimester, even by a few days, can support critical fetal development and significantly affect child health outcomes. For example, a late first prenatal care visit is associated with low birthweight and marginally higher odds of birth defects (see Table A2). The total number of prenatal visits increases only marginally, but the major improvement is that pregnant women can access care sooner.

Expanding CNM scope of practice strengthens maternal and infant health. States that allow certified nurse midwives to practice independently show improvements in infant health: while birth defects remain unchanged, low birth weights decline slightly. Although American Medical Association lobbyists have expressed concerns that independent CNM practice might lead to poorer infant health outcomes, analysis of PRAMS data does not find any evidence to support this concern. On the contrary, analysis demonstrates that broader CNM autonomy does not pose any risk to infant health and may even enhance outcomes marginally.

# CONCLUSION

**THE UNITED STATES IS ONE OF THE FEW HIGH-INCOME** countries still experiencing abnormally high rates of maternal mortality and endangerment of newborns during the labor and delivery process. Access to more providers may mitigate some of this downstream harm. While many studies have associated this reduction in poor outcomes with increased access to CNMs, the mechanism for how this affects mothers and infants

is not well understood. Analysis of PRAMS data shows that this increased access allows for earlier prenatal care visits, reduces low-birthweight births, and raises no extra risk of birth defects. Allowing CNMs to practice independently reduces the time before the first prenatal care visit by approximately two days. This analysis shows that policy reform can help mothers and infants remain healthy while reducing the burden of care later in life.

# APPENDIX: RESULTS OF REGRESSION ANALYSIS

**Table A1. Effects of Regulatory Expansions for Certified Nurse Midwives**

| | (1) | (2) | (3) | (4) | (5) |
|---|---|---|---|---|---|
| | Early 1st PNC | 1st PNC Week | Frequency of PNC Visits | Low Birthweight | Birth Defect |
| FPA | 0.0262*** (0.0052) | −0.2571*** (0.0570) | 0.0080 (0.0077) | −0.0029 (0.0018) | −0.0048 (0.0081) |
| Hispanic | −0.0091 (−0.037) | 0.4863 (0.4644) | −0.0112*** (0.0489) | −0.0097 (0.0077) | 0.0092 (0.0163) |
| Married | −0.0271 (0.0243) | 0.1077 (0.2799) | −0.0635 (0.0438) | −0.0163 (0.0097) | 0.0035 (0.0081) |
| Age 30 or above | −0.1001*** (0.0196) | 1.0450*** (0.2495) | −0.0373 (0.0229) | −0.0361 (0.0237) | 0.0143** (0.0056) |
| Less than High School | −0.3966*** (0.0395) | 3.5262*** (0.3860) | 0.0493* (0.0248) | 0.0397 (0.0398) | 0.0041 (0.0108) |
| Completed High School | −0.1463*** (0.0252) | 1.4292*** (0.2069) | 0.0397 (0.0398) | 0.0026 (0.0136) | 0.0294*** (0.0085) |
| Any College Experience | −0.0360 (0.0220) | 0.2103 (0.1914) | 0.0555*** (0.0174) | 0.0151 (0.0140) | −0.1500* (0.0075) |
| Observations | 5738 | 5738 | 5738 | 5738 | 5738 |
| R2 | 0.20 | 0.19 | 0.02 | 0.02 | 0.13 |
| Adjusted R2 | 0.20 | 0.19 | 0.02 | 0.02 | 0.13 |

Notes: *** p<0.01, ** p<0.05, * p<0.10. This table shows the results from a weighted unbalanced two-way fixed effect model. CT, FL, and NV do not participate in PRAMS and are entirely excluded from the sample. FPA = 1 if a state expanded to independent practice of CNMs. Control group is made up of states that have never expanded practice authority for CNMs. Standard errors are shown in parenthesis.

Source: Authors' calculations.

## Table A2. Correlation Matrix

| Variables | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) | (11) | (12) | (13) | (14) | (15) | (16) | (17) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| (1) PNC_WKS | 1.000 | | | | | | | | | | | | | | | | |
| (2) PNC_MTH | 0.230 | 1.000 | | | | | | | | | | | | | | | |
| (3) low_bwt | −0.026 | −0.059 | 1.000 | | | | | | | | | | | | | | |
| (4) defect_baby | 0.007 | −0.096 | 0.007 | 1.000 | | | | | | | | | | | | | |
| (5) hisp | 0.033 | 0.285 | −0.062 | −0.001 | 1.000 | | | | | | | | | | | | |
| (6) mar | −0.040 | −0.079 | −0.220 | 0.025 | 0.021 | 1.000 | | | | | | | | | | | |
| (7) mom30 | 0.389 | −0.043 | 0.097 | 0.061 | −0.225 | −0.253 | 1.000 | | | | | | | | | | |
| (8) private | −0.296 | 0.131 | −0.103 | −0.372 | 0.055 | 0.144 | −0.458 | 1.000 | | | | | | | | | |
| (9) medicaid | −0.226 | 0.247 | 0.051 | −0.352 | 0.081 | −0.314 | −0.194 | 0.690 | 1.000 | | | | | | | | |
| (10) mom_hs_drop | 0.347 | 0.081 | 0.104 | −0.022 | 0.201 | −0.343 | 0.430 | −0.379 | −0.084 | 1.000 | | | | | | | |
| (11) mom_hs | 0.217 | −0.065 | 0.192 | 0.210 | −0.184 | −0.305 | 0.535 | −0.588 | −0.292 | 0.193 | 1.000 | | | | | | |
| (12) mom_somecoll | −0.028 | 0.065 | −0.056 | −0.151 | −0.134 | 0.050 | 0.105 | 0.318 | 0.335 | −0.259 | −0.334 | 1.000 | | | | | |
| (13) mom_college | −0.350 | −0.040 | −0.162 | −0.068 | 0.102 | 0.387 | −0.727 | 0.474 | 0.067 | −0.529 | −0.658 | −0.265 | 1.000 | | | | |
| (14) momrace1 | 0.109 | 0.030 | −0.157 | −0.151 | −0.136 | 0.331 | 0.149 | 0.015 | −0.166 | −0.068 | −0.033 | 0.095 | 0.004 | 1.000 | | | |
| (15) momrace2 | 0.078 | −0.070 | 0.285 | −0.105 | −0.120 | −0.459 | 0.117 | −0.134 | 0.131 | 0.275 | 0.182 | −0.165 | −0.176 | −0.550 | 1.000 | | |
| (16) momrace3 | −0.139 | −0.117 | −0.007 | 0.419 | 0.093 | 0.026 | −0.145 | −0.118 | −0.142 | −0.149 | 0.091 | −0.053 | 0.045 | −0.626 | −0.132 | 1.000 | |
| (17) momrace4 | −0.147 | 0.223 | −0.081 | −0.152 | 0.344 | −0.066 | −0.287 | 0.355 | 0.386 | −0.042 | −0.349 | 0.128 | 0.194 | −0.397 | −0.120 | 0.043 | 1.000 |

Notes: PNC_WKS records the number of weeks it took for a woman to seek her first prenatal care appointment. We control for mother's education (high school dropout, high school graduate only, college, and college dropout). We also include characteristics of the mother such as whether she is married or not (mar), over the age of 30 during pregnancy (mom30), her insurance type (Medicaid or private), and her racial factors.

Source: Authors' calculations.

# NOTES

1. Alice Chen, Emily Oster, and Heidi Williams, “Why Is Infant Mortality Higher in the United States Than in Europe?,” *American Economic Journal: Economic Policy* 8, no. 2 (2016): 89–124; Christine Durrance, Melanie Guldi, and Lisa Schulkind, “The Effect of Rural Hospital Closures on Maternal and Infant Health,” *Health Services Research* 59, no. 2 (2024): e14248.

2. Jeremy Applebaum, “Expanding Certified Professional Midwife Services During the COVID-19 Pandemic,” *Birth* 49, no. 3 (2022): 360–63.

3. Lauren Hoehn-Velasco et al., “Health Outcomes and Provider Choice Under Full Practice Authority for Certified Nurse-Midwives,” *Journal of Health Economics* 92 (2023): 102817; Sara Markowitz et al., “Competitive Effects of Scope of Practice Restrictions: Public Health or Public Harm?,” *Journal of Health Economics* 55 (2017): 201–18.

4. Lyudmyla Sonchak, “Medicaid Reimbursement, Prenatal Care and Infant Health,” *Journal of Health Economics* 44 (2015): 10–24; William N. Evans and Diana S. Lien, “The Benefits of Prenatal Care: Evidence from PAT Bus Strikes,” *Journal of Econometrics* 125, no. 1–2 (2005): 207–39.

5. American College of Nurse-Midwives, *Access to Midwife Care National Chartbook*, 2023.

6. Caitlin Styrsky, Donna Matias, and Jamie Cavanaugh, *Restrictions to Care: How Collaborative Practice Agreements for Advanced Practice Registered Nurses and Certified Nurse-Midwives Limit Patient Access* (Sacramento, CA: Pacific Legal Foundation, 2025).

# PACIFIC LEGAL FOUNDATION

**SRIPARNA GHOSH** is an associate of economics at the University of Cincinnati, Blue Ash, and also a research affiliate at the Knee Regulatory Research Center. She received her PhD in economics from West Virginia University in 2017. As a trained applied microeconomist, she focuses on health and labor economics in her research.

**AGNITRA ROY CHOUDHURY** is an associate professor in the economics department at Auburn University at Montgomery. Roy Choudhury received his PhD and MA in economics from Binghamton University. His training is in applied microeconomics and applied econometrics. His research interests include studying the impact of regulations on healthcare, labor markets, and entrepreneurship.

**ALICIA PLEMMONS** is the director of the Knee Regulatory Research Center, director of the Center for Free Enterprise, and an assistant professor of general business at West Virginia University. Her research employs applied spatial and econometric methods to determine how policy changes affect health and labor markets by studying how to create environments that facilitate wellness, economic growth, and business development.