

2023

Indiana's Maternity Care Workforce



SCHOOL OF MEDICINE
BOWEN CENTER FOR HEALTH
WORKFORCE RESEARCH & POLICY

INDIANA'S MATERNITY CARE WORKFORCE

BACKGROUND

The reduction of infant and maternal mortality is a top health priority for the state of Indiana. Access to quality care at every stage of pregnancy is a critical factor in both maternal and infant health.¹ Maternal healthcare providers focus on the health of women during pregnancy (pre-natal), through labor and delivery and into the post-natal period. This brief examines Indiana's maternity care workforce and assesses county-level maternity care capacity in order to facilitate the identification of low resource areas in the state. This brief serves as an accompanying resource to the full 2022 report, An Assessment of Indiana's Maternity Care Workforce.²

Who is included in the reporting sample?

Physicians:

- With an OB/GYN or Family Medicine/General Practice specialty
- Report providing Pre-natal, Post-natal or Labor & Delivery (L&D) services

Advanced Practice Registered Nurses (APRNs)

- Report providing Pre-natal, Post-natal or Labor & Delivery (L&D) services either in-person or through telehealth

Professionals were included in this brief if they held an active, valid to practice Indiana license as either a 1) physician, 2) RN self-identified as an APRN, 3) Certified Nurse Midwife, or 4) APRN prescriptive authority, renewed their license online, and reported at least one (1) practice location in Indiana.

Who is NOT included in the reporting sample?

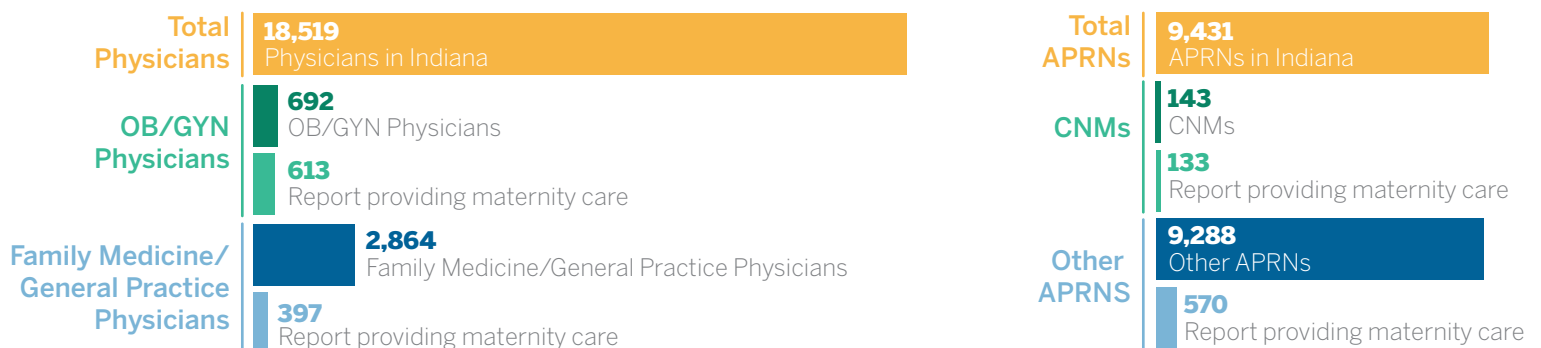
- **Physician Assistants** were not included because there were only 13 individuals that reported an obstetrics specialty in the latest data report
- **Certified Direct Entry Midwives:** Only 16 individuals hold this license in Indiana as of 2022.
- **Doulas:** No comprehensive information is available on these individuals in Indiana.
- **Out-of-state Providers:** A large part of this report is focused on labor and delivery providers; because of this, only professionals that report providing in-person care to Indiana residents were included.



THE 2021 INDIANA MATERNITY CARE WORKFORCE

Of the 18,519 active physicians licensed to practice in Indiana, 5.4% report providing maternity care. Of the 9,431 APRNs in Indiana, 7.4% report providing maternal healthcare services. In total 1,713 individuals make up Indiana's Maternity Care Workforce.

The figures below demonstrate the maternity care workforce (lighter shades) in relation to both the total physician and total APRN workforce.

Maternity Care Workforce



 = Dedicated Maternity Care Professionals
 = Additional workforce capacity that helps contribute to maternity care

1. Indiana Maternal Mortality Review Committee Annual Report. 2022. Available at: <https://www.in.gov/health/cfr/files/Maternal-Mortality-Annual-Report-2022.pdf>
2. An Assessment of Indiana's Maternity Care Workforce. 2022. Available at: <https://scholarworks.iupui.edu/handle/1805/31535>

WHO IS THE MATERNITY CARE WORKFORCE?

PHYSICIANS

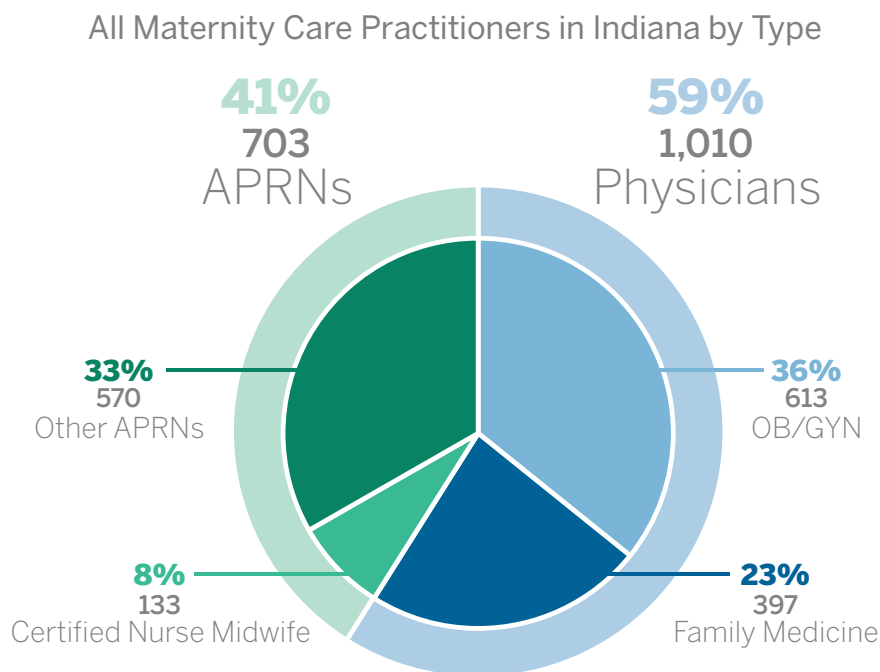
Traditionally, maternity care workforce studies focus on obstetricians/gynecologists (OB/GYNs), specialists with the training and skills in caring for mothers and babies during pregnancy. However, family medicine/general practice physicians also make an important contribution to the maternity care workforce and are of particular importance within communities that lack a dedicated OB/GYN, such as rural areas. In fact, a recent national study found that family/general physicians delivered babies in 67% of rural hospitals and were the only labor and delivery provider in approximately 40% of rural hospitals.³

ADVANCED PRACTICE REGISTERED NURSES (APRNs)

APRNs are registered nurses (RNs) with advanced, post-secondary training. Certified Nurse Midwives (CNMs) are one of four (4) APRN roles. CNMs are state-licensed advanced practice registered nurses trained specifically to provide healthcare throughout pregnancy, labor, delivery, and post-delivery and are considered “dedicated” maternity care professionals due to the nature of their role. Other APRN roles include Nurse Practitioners, Clinical Nurse Specialists and Certified Registered Nurse Anesthetists. These “other APRNs” who self-report a specialty in obstetrics, provide primary care services and play a role in maternal healthcare.

Of Indiana's 2,864 family medicine/general practice physicians, 208 (7.3%) report providing labor and delivery services.

The maternity care workforce in Indiana includes 1,713 providers.



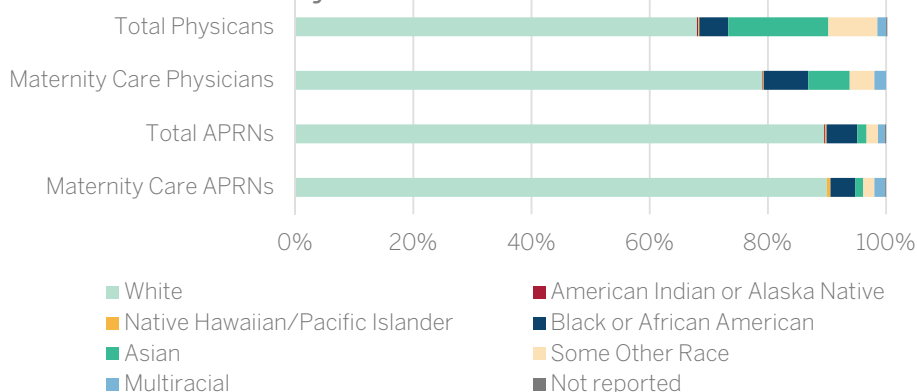
3. Deutchman M, Macaluso F, Bray E, Evans D, Boulger J, Quinn K, Pierce C, Onello E, Porter J, Warren W, Erickson JS, Bright P, Maness P, Luke S, James KA. The impact of family physicians in rural maternity care. Birth. 2022 Jun;49(2):220-232. doi: 10.1111/birt.12591. Epub 2021 Sep 23. PMID: 34558093.

WORKFORCE DEMOGRAPHICS

Nearly 70% of physicians and 90% of APRNs in Indiana identify as white. Indiana's maternity care providers report less racial diversity compared to the overall physician and APRN workforce.

4% of the Maternity Care workforce is Hispanic or Latino.

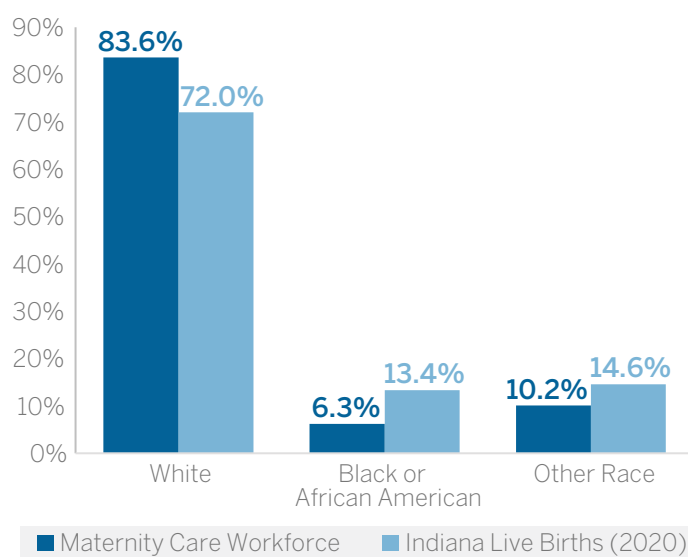
Race of Maternity Care Workforce vs. Total Physician and APRN Workforce



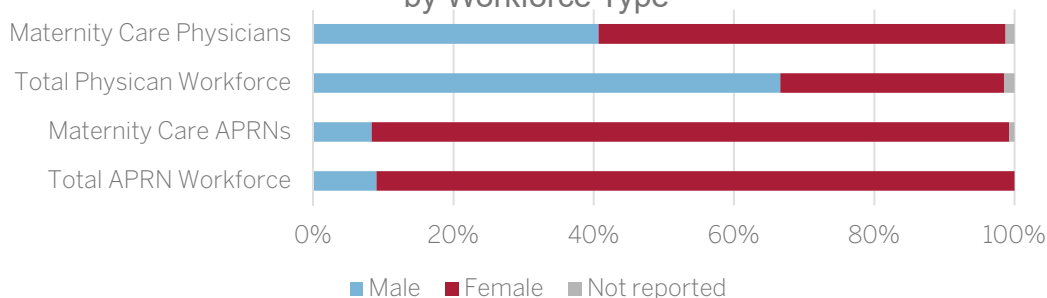
THE IMPORTANCE OF RACIAL CONCORDANCE

According to a 2019 CDC report, Black, American Indian, and Alaska Native women experience higher pregnancy-related mortality rates compared to their white counterparts⁴. The reasons for this disparity are complex and include factors such as health insurance status, socioeconomic status and access to care.⁵ However, a subtle yet important contributing factor may include racial discordance. Racial discordance in health care, when the patient and practitioner have different racial identities, may negatively impact both sides of the patient-practitioner relationship leading to distrust and implicit biases.⁶ Greater diversity in the health care workforce has been cited to positively affect health outcomes by improving patient experience, increasing patient satisfaction, and improving access to care for underserved patients.⁷ Racial and ethnic diversity in many healthcare professions has not kept pace with demographic changes in the general populations of the United States.⁷ However, increasing the diversity of the maternity care (birthing) workforce has been put forth as a promising strategy to improve maternity care and associated outcomes.⁶

Racial Comparison of Maternity Care Workforce and Indiana Live Births by Race of the Mother



Reported Sex of Indiana's Maternity Care Workforce and Total Workforce, by Workforce Type



Men make up the majority of Indiana physicians (66.6%) but the majority of maternity care physicians are women (58.0%).

APRNs are predominantly Women (90.9%). There are currently no male CNMs.

4. Maternal Mortality Rates in the United States, 2019. NCHS Health E-Stats. 2021. Available at: <https://doi.org/10.15620/cdc.103855>

5. Nowhere to Go – Maternity Care Deserts Across the U.S. - March of Dimes Report. 2022. Available at: https://www.marchofdimes.org/sites/default/files/2022-10/2022_Maternity_Care_Report.pdf

6. Policies for Reducing Maternal Morbidity and Mortality and Enhancing Equity in Maternal Health. The Commonwealth Fund. 2021. Available at: <https://www.commonwealthfund.org/publications/fund-reports/2021/nov/policies-reducing-maternal-morbidity-mortality-enhancing-equity>

7. Association Between Provider-Patient Racial Concordance and the Maternal Health Experience During Pregnancy. 2022. Available at: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8829722/>

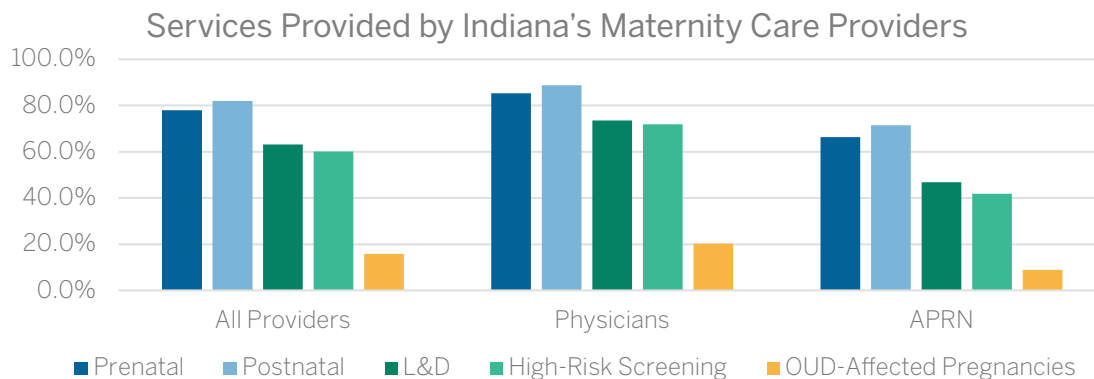
8. Developing Workforce Diversity in the Health Professions: A Social Justice Perspective. 2020. Available at: <https://www.sciencedirect.com/science/article/pii/S245230112030016X>

WHAT TYPES OF PREGNANCY-RELATED SERVICES DOES INDIANA'S MATERNITY CARE WORKFORCE PROVIDE?

A healthy pregnancy and delivery involves more than access to labor and delivery services. Reducing the risk of complications begins before pregnancy, includes care provided throughout the pregnancy (prenatal care), and extends beyond delivery (postnatal care). Access to health professionals and the care that they provide is critical at all stages of life, but especially during the pregnancy period. The March of Dimes recommends between 10-15 prenatal visits and at least 1 postpartum check up.⁹ There were over 78,500 live births in Indiana in 2020¹⁰, a robust maternity care workforce who can provide the recommended care for a healthy pregnancy is imperative. Prenatal practitioners are key to educating the mother on healthy lifestyle, monitoring the progress of the fetus and in the screening for high-risk pregnancies. Postpartum care is equally important. In 2020, 83% of Indiana's pregnancy-associated deaths occurred postpartum, with 60% occurring within the six weeks immediately following birth.¹⁰

Of Indiana's 1,713 maternal health practitioners

- **75.4% (1,292) practitioners report providing pre-natal care**
- **79.4% (1,360) report providing post-natal care**
- **61.1% (1,046) report providing labor & delivery services**
- **58.2% (997) report providing screenings for high-risk pregnancies**
- **15.2% (261) report providing services for OUD-affected pregnancies**



INDIANA POLICY & PROGRAMMING INTERSECTION

In 2021 Indiana launched the Pregnancy Promise Program, a free, voluntary program that aims to identify pregnant Medicaid beneficiaries with OUD as early as possible in their pregnancy. The program offers comprehensive case management and care coordination services and connects participants with prenatal and postpartum care, mental health services, and OUD treatment/recovery services and addresses health-related social needs, such as housing, nutrition, transportation, and other safety needs.¹³

OUD-Affected pregnancies - According to the Centers for Disease Control (CDC), the number of pregnant women with opioid use disorder (OUD) at labor and delivery more than quadrupled from 1999 to 2014 and continues to rise.¹¹ In Indiana, it was determined that substance use disorder contributed to 46% of all pregnancy-associated deaths in 2020.¹⁰ OUD during pregnancy has been associated with a range of negative health outcomes for both mothers and their babies, including maternal death, preterm birth, stillbirth, and neonatal abstinence syndrome (NAS).¹² Early intervention and access to specially trained, quality care is key. Less than one fifth (15.2%) of Indiana's maternity care professionals report providing services for OUD-affected pregnancies.

9. Nowhere to Go – Maternity Care Deserts Across the U.S. – March of Dimes Report. 2022. Available at: https://www.marchofdimes.org/sites/default/files/2022-10/2022_Maternity_Care_Report.pdf

10. Indiana Maternal Mortality Review Committee – Annual Report. 2022. Available at: <https://www.in.gov/health/cfr/files/Maternal-Mortality-Annual-Report-2022.pdf>

11. Opioid Use Disorder Documented at Delivery Hospitalization - United States, 1999–2014. Available at: https://www.cdc.gov/mmwr/volumes/67/wr/mm6731a1.htm?s_cid=mm6731a1_w

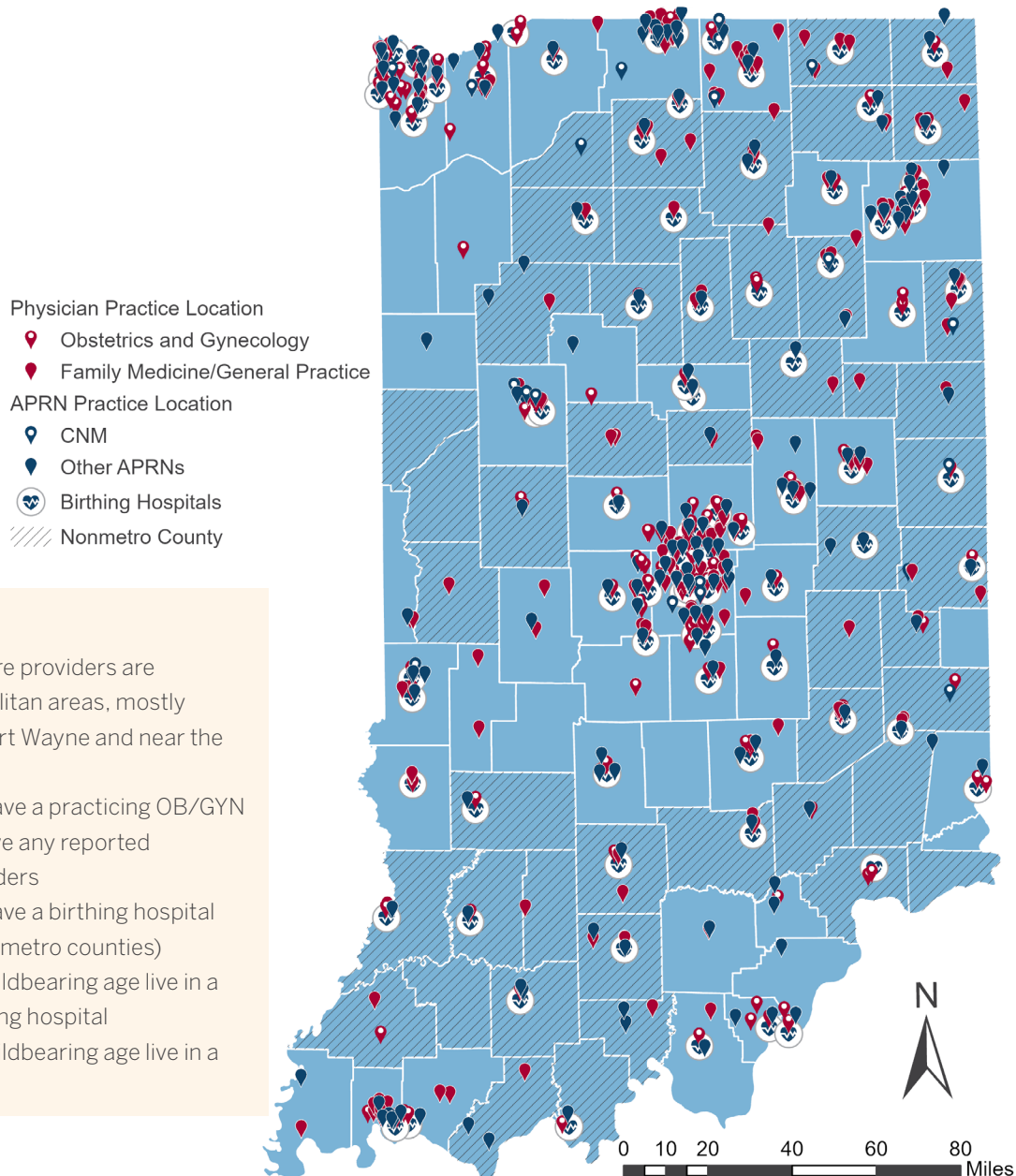
12. Centers for Medicare & Medicaid Services - Maternal Opioid Misuse (MOM) Model. 2022. Available at: <https://innovation.cms.gov/innovation-models/maternal-opioid-misuse-model>

13. Indiana Pregnancy Promise Program -2022 Annual Report. 2022. Available at: <https://www.in.gov/fssa/promise/files/IPPP-Annual-Report-2022.pdf>

GEOGRAPHIC DISTRIBUTION: INDIANA'S MATERNITY CARE PROVIDERS

Knowing the “who” and the “what” about Indiana’s maternity care workforce is important to measuring state-level capacity but knowing “where” these providers serve is critical to assessing local workforce capacity in Indiana’s communities. Maternity care providers are in high demand nationally, with an estimated shortage of 6,000-8,800 OB/GYNs today and a projected shortage of 22,000 by 2050.¹⁴ The national shortage is more severe in non-metro areas, where many counties do not have a practicing OB-GYN. The same is true in Indiana where 28 of the 92 counties do not have a practicing OB/GYN, 16 of which are considered non-metro counties. Nine (9) counties do not have any maternity care providers with a reported practice location within the county boundaries.

Indiana Providers that Report Providing **Prenatal, Postnatal, or Labor & Delivery Services** in Indiana



FAST FACTS

- Indiana maternity care providers are clustered in metropolitan areas, mostly near Indianapolis, Fort Wayne and near the Chicagoland area.
- 28 counties do not have a practicing OB/GYN
- 9 counties do not have any reported maternity care providers
- 35 counties do not have a birthing hospital (24 of which are non-metro counties)
- 93,234 Women of childbearing age live in a county with no birthing hospital
- 255,117 women of childbearing age live in a non-metro county

Source: 2021 Indiana Physician License and Supplemental Survey Data; Indiana RN License and Supplemental Data 2021. The full survey administered to all Indiana physicians that renewed online can be found at: <https://hdl.handle.net/1805/26208>. The Indiana RN survey can be found at: <https://scholarworks.iupui.edu/handle/1805/18431>. Birthing Hospitals can be accessed at https://gis.in.gov/apps/isdh/meta/resources_layers.htm. USDA Economic Research Service Rural-Urban Continuum Codes. Note: The Other APRN category includes those who reported a role as a Clinical Nurse Specialist, Certified Nurse Midwife, Certified Registered Nurse Anesthetist who report providing prenatal, postnatal or labor & delivery services.

14. Improving Access to Maternal Health Care in Rural Communities – CMS Issue Brief. 2019. Available at: <https://www.cms.gov/About-CMS/Agency-Information/OMH/equity-initiatives/rural-health/09032019-Maternal-Health-Care-in-Rural-Communities.pdf>

LABOR & DELIVERY SERVICES

Of Indiana's total maternity care workforce, 853 physicians and CNMs report providing labor and delivery services. The map below shows practice locations of physicians (OB/GYNs and Family Medicine/General Practice) and CNMs that report providing labor and delivery services.

INDIANA POLICY & PROGRAMMING INTERSECTION: BIRTHING (PERINATAL) HOSPITALS

Indiana passed the Perinatal Hospital Services legislation in 2019¹⁵, which requires hospitals providing obstetric and neonatal care to obtain a Level of Care certification (I, II, III, or IV) by the Indiana Department of Health. This certification provides practitioners with the information they need when choosing the appropriate birthing facility to serve their patients, which is of utmost importance for mothers with high-risk pregnancies.¹⁶

Indiana Providers that Report Providing Labor & Delivery Services in Indiana

Indiana Labor and Delivery Providers by the Numbers

542

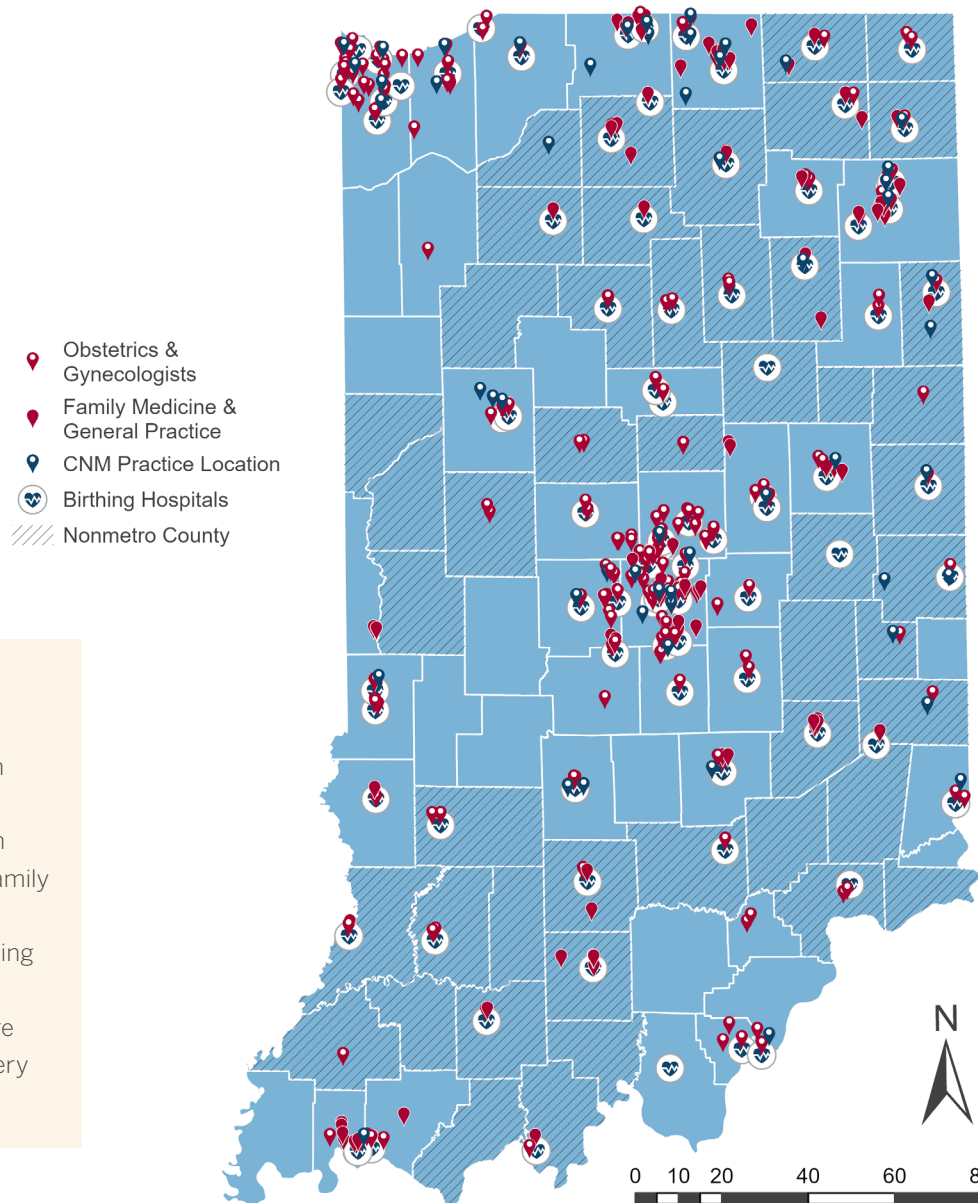
OB/GYN
Physicians

201

Family Medicine/
General Practice
Physicians

109

Certified Nurse
Midwives



FAST FACTS

- 62 counties have an OB/GYN physician or CNM engaged in labor and delivery
- Of the 30 counties without an OB/GYN or CNM, 3 have a Family Medicine/General Practice physician that reports providing labor & delivery services
- 27 of Indiana's 92 counties are left without a labor and delivery provider

Source: 2021 Indiana Physician License and Supplemental Survey Data; Indiana RN License and Supplemental Data 2021. The full survey administered to all Indiana physicians that renewed online can be found at: <https://hdl.handle.net/1805/26208>. The Indiana RN survey can be found at: <https://scholarworks.iupui.edu/handle/1805/18431>. Birthing Hospitals can be accessed at https://gis.in.gov/apps/isdh/meta/resources_layers.htm. USDA Economic Research Service Rural-Urban Continuum Codes. Note: The Other APRN category includes those who reported a role as a Clinical Nurse Specialist, Certified Nurse Midwife, Certified Registered Nurse Anesthetist who report providing prenatal, postnatal or labor & delivery services.

15. 410 IAC Article 39 – Perinatal Hospital Services. Available at: https://www.in.gov/health/mch/files/iac_title.pdf

16. Indiana Perinatal Levels of Care Program. Available at: <https://www.in.gov/health/mch/indiana-perinatal-levels-of-care-program/indiana-perinatal-levels-of-care-program/>

MATERNITY CARE TARGET AREAS: FEDERALLY-DEFINED MATERNITY CARE SHORTAGES

Maternity Care Health Professional Target Areas (MCTAs) are areas within an existing Primary Care Health Professional Shortage Areas (HPSA) that are experiencing a shortage of maternity health care professionals. The federal Department of Health and Human Services recently released criteria for identification of MCTAs which include population to provider ratios, poverty levels, proximity to maternity care providers, fertility rates, a social vulnerability index, and maternal health indicators. While many of these criteria are outside the scope of this brief, the following map calculates areas of inclusion based on the first criteria, the ratio of provider FTE-to-population of women of childbearing age. MCTA-defined providers include OB/GYN physicians and CNMs only, and the population data includes women aged 15-44 years old. A population-to-provider ratio (PPR) of 1,500:1 is used as a minimum requirement for a population to be considered reasonably served.¹⁷

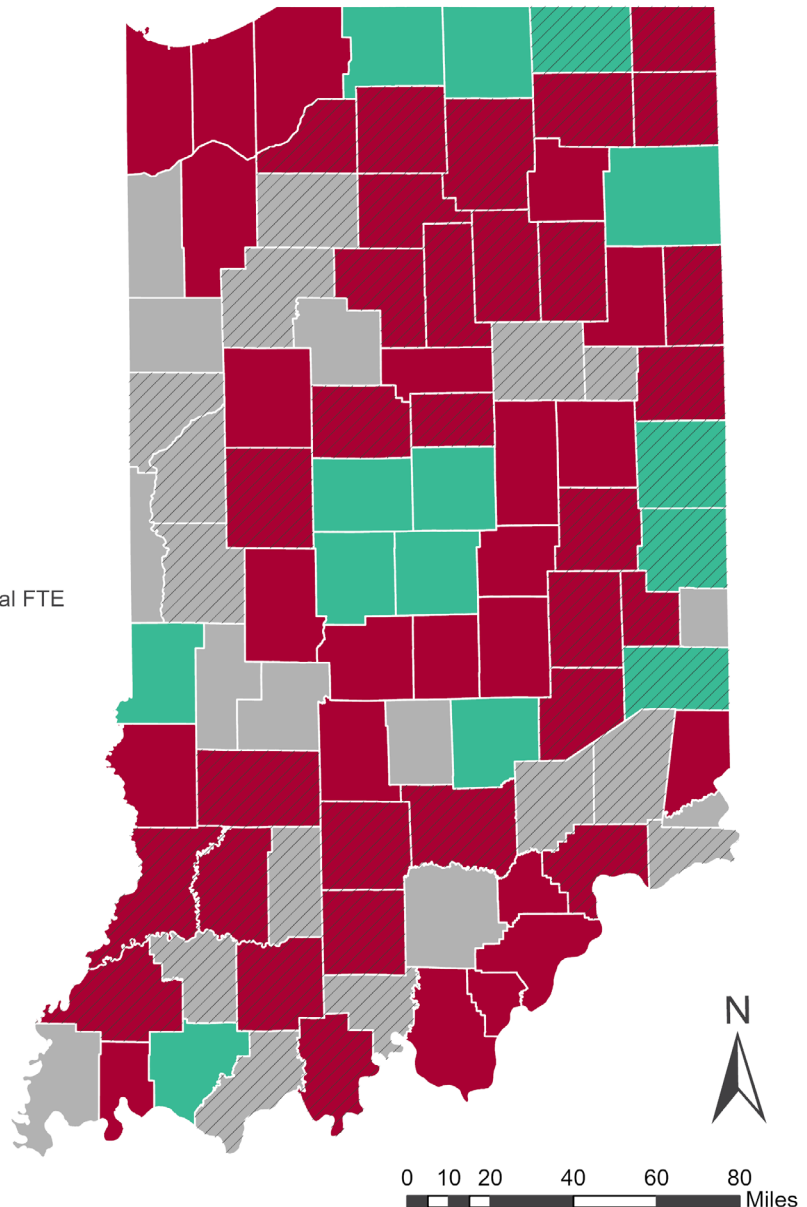
Maternity Care Health Professionals - Provider Capacity Identifying Maternity Care Target Areas (MCTA): County-Level Ratios of Population of Women of Childbearing Age (15-44 yrs.) to Full-Time-Equivalent Maternity Care Professionals (OB/GYN Physicians & CNMs)

FAST FACTS

- When applying the MCTA population-to-provider ratio criteria, only 14 Indiana counties are determined to have sufficient maternity care health professional capacity.
- 25 counties have no reported maternity care providers.
- An additional 53 counties have some maternity care professionals, but likely insufficient to serve the needs of the county.

Population of Women of Childbearing Age to One Maternity Care Professional FTE

- ≤1,500
- >1,500
- No Reported FTE
- Nonmetro County



Source: 2021 Indiana Physician License and Supplemental Survey Data; Indiana RN License and Supplemental Data 2021; full survey administered to all Indiana physicians that renewed online can be found at: <https://hdl.handle.net/1805/26208>. The Indiana RN survey can be found at: <https://scholarworks.iupui.edu/handle/1805/18431>. More information about Maternity Care Target Areas (MCTA) can be found at: <https://www.govinfo.gov/content/pkg/FR-2022-05-19/pdf/2022-10783.pdf>

17. Criteria for Determining Maternity Care Health Professional Target Areas. 2021. Available at: <https://www.federalregister.gov/documents/2021/09/27/2021-20855/criteria-for-determining-maternity-care-health-professional-target-areas>

WANT TO LEARN MORE ABOUT RECENT INITIATIVES RELATED TO INDIANA'S MATERNITY CARE WORKFORCE?

MY HEALTHY BABY

Reducing infant and maternal mortality has long been a value of Indiana Governor Eric Holcomb. In 2019, a bill was passed to establish the perinatal (OB) navigator program, which connects pregnant women in high-risk zip codes with wraparound services and home visits.¹⁸ The program provides social supports to expectant moms, such as accessing supplies for baby, childcare, or securing transportation for appointments with maternity care providers. The program is now known as My Healthy Baby and will be expanding to all 92 counties in 2023.¹⁹

STATEWIDE MATERNITY MORTALITY REVIEW COMMITTEE

In 2021, Governor Holcomb also signed a bill into law to establish the Statewide Maternity Mortality Review Committee.²⁰ This Committee is responsible for identifying pregnancy-associated deaths and recommending interventions that may reduce future deaths. The latest annual report included recommendations related to the maternity care workforce, such as increasing substance use and mental health implicit bias training for providers.²¹

INDIANA PERINATAL QUALITY IMPROVEMENT COLLABORATIVE (IPQIC)

This Collaborative was initially established in 2010 to support pregnant patients delivering at a healthcare facility that can provide the appropriate level of care. Since that time, the IPQIC has developed standard definitions for Levels of Care which were adopted in 2019.²² The various Levels of Care have workforce implications for maternity care providers; for example, an Obstetric Level IV facility must staff a maternal-fetal medicine specialist that is readily available at all times whereas an Obstetric Level I facility must have an obstetric provider (which can include a family medicine physician) that is readily available at all times.

To learn more about Maternal and Child Health-related initiatives in Indiana, check out the Indiana Department of Health Maternal and Child Health Division website at: <https://www.in.gov/health/mch/>

OPPORTUNITIES FOR FUTURE CLARIFICATION

In previous survey administration periods, the maternity care services included in this report were not well-defined. Future iterations of the supplemental survey data elements and licensure data that are collected during Indiana-licensed health professionals' license renewal period may include the following definitions (provided by the Indiana Department of Health) to better track the health workforce's contributions to maternity care:

- Pre-natal care is healthcare provided to a woman/birthing person during pregnancy. It consists of a series of clinical visits and ancillary services designed to promote the health and well-being of the mother, fetus, and family. Its major components include early and continuing risk assessment, health promotion, and medical and psychosocial interventions and follow-up²³
- Post-natal care (PNC) is defined as a care given to the mother and her newborn baby immediately after the birth of the placenta and for the first 42 days of life to ensure the physical, mental, and social well-being of the birthing person, partner, and newborn.²⁴

18. 2019 House Enrolled Act 1007. Available at: <https://iga.in.gov/legislative/2019/bills/house/1007#document-3588c9c2>

19. My Healthy Baby. Available at: <https://www.in.gov/myhealthybaby/for-the-public/>

20. Indiana Maternal Mortality Review Committee. Available at: <https://www.in.gov/health/cfr/maternal-mortality-review-committee/>

21. Indiana Maternal Mortality Review Committee 2022 Annual Report. Available at: <https://www.in.gov/health/cfr/files/MMR-Report-September-2022.pdf>

22. 410 IAC 39. Available at: https://www.in.gov/health/mch/files/iac_title.pdf

23. M.C. Lu, J.S. Lu, Prenatal Care, Editor(s): Marshall M. Haith, Janette B. Benson, Encyclopedia of Infant and Early Childhood Development, Academic Press, 2008, Pages 591-604, ISBN 9780123708779, <https://doi.org/10.1016/B978-012370877-9.00127-4>

24. Wudineh, K.G., Nigusie, A.A., Gesese, S.S. et al. Postnatal care service utilization and associated factors among women who gave birth in Debretabour town, North West Ethiopia: a community-based cross-sectional study. BMC Pregnancy Childbirth 18, 508 (2018). <https://doi.org/10.1186/s12884-018-2138-x>

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Department of Family Medicine
Indiana University School of Medicine
1110 W. Michigan Street, Suite 200
Indianapolis, IN 46202

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for Health Workforce Research and Policy. Indiana University
School of Medicine

AUTHORED BY

Becky Boustani, Policy Analyst
Courtney Medlock, Assistant Director of Policy and Strategy
Hannah L. Maxey, Director

CONTRIBUTIONS BY

Analise Dickinson, Health Services Research Analyst
Sierra Vaughn, Assistant Director of Data and Research

DESIGNED BY

Devan Gannon

Please address any correspondence regarding this document to the Bowen Center
via email at bowenctr@iu.edu or by phone at 317.278.4818.