



INDIANA UNIVERSITY

PUBLIC POLICY INSTITUTE

Center for Research on Inclusion & Social Policy

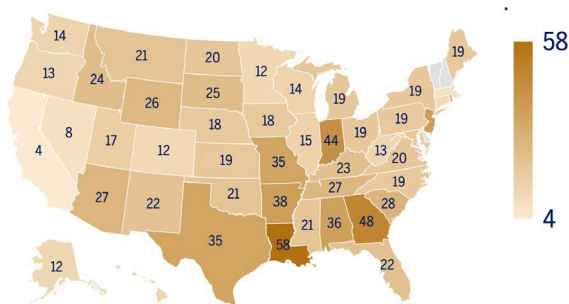
MATERNAL MORTALITY IN INDIANA (2022) Contributing factors and policy recommendations

BACKGROUND

The United States has the highest maternal mortality rate among developed countries and is the only developed nation in which that rate is rising.¹ Within the United States, Indiana has the third highest maternal mortality rate among all reporting states at 44 deaths per 100,000 live births (Figure 1) as of 2022.

Maternal mortality is the death of a mother during pregnancy or up to one year after childbirth, due to a cause related to pregnancy or a mother's pre-existing condition that was made worse by pregnancy.²

Figure 1. U.S. maternal mortality rates, as of 2022 per 100,000 live births^A



There are three factors to consider when examining maternal mortality: the maternal mortality rate, pregnancy-related deaths, and pregnancy-associated deaths.

The maternal mortality rate is the rate of maternal deaths per 100,000 live births. This rate is based on deaths during or within one year of the end of a pregnancy, or within 42 days of a pregnancy's termination.

Pregnancy-related deaths are those the Indiana Maternal Mortality Review Committee (MMRC) have concluded are the direct result of a pregnancy complication, a chain of events initiated by pregnancy, or the aggravation of an unrelated condition by the psychological effects of pregnancy.³

Pregnancy-associated deaths are all maternal deaths that happen during or within one year of a pregnancy. Indiana includes these deaths when examining maternal mortality because some may have underlying causes linked to pregnancy or contributing factors, such as health care access, social structures, family structure, and more. While there is some debate over the use of pregnancy-associated death numbers, state and federal officials include them to help explain social factors that may contribute to maternal deaths.

INDIANA'S MATERNAL MORTALITY

In 2020, the state pregnancy-related mortality ratio for women ages 10-60 years was nearly 23 deaths per 100,000 live births. This was a significant increase from 12 per 100,000 in 2018.

That same year, there were 92 pregnancy-associated deaths in Indiana. Of these, 18 were determined to be specifically pregnancy-related. The MMRC deemed 79% of these to be preventable. Substance use disorder was the most common contributing factor, resulting in nearly 2 out of 5 pregnancy-associated deaths in 2020.³

In this brief, researchers from the Center for Research on Inclusion and Social Policy examine underlying issues that contribute to Indiana's high maternal mortality rates. They specifically focus on a lack of access to maternal health services, inadequate maternal mental health care,

^A Source: World Population Review. Maternal Mortality Rate by State 2022. Retrieved Oct 4, 2022, from <https://worldpopulationreview.com/state-rankings/maternal-mortality-rate-by-state>

and inadequate racial representation in Indiana's health workforce. This brief also discusses actionable strategies that may help address these factors.

CONTRIBUTING FACTORS TO HIGH MATERNAL MORTALITY RATES

Access to services, quality of care, and the availability of skilled and compassionate health care professionals all determine the state of a health care system and can thereby shape maternal health outcomes.

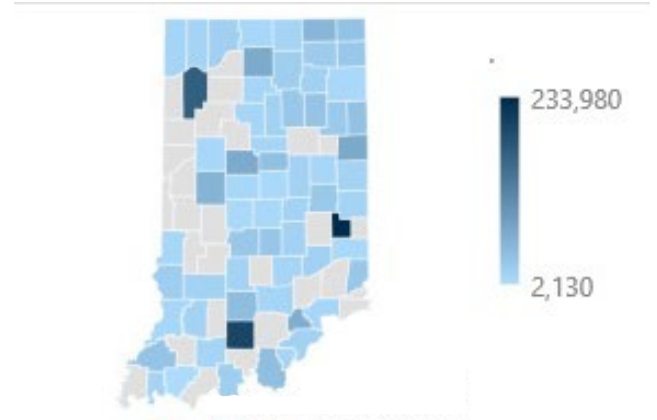
LACK OF ACCESS TO MATERNAL HEALTH SERVICES

Access to high-quality care before, during, and after delivery is critical to maternal health. Regular prenatal visits can identify health risks early and lead to better health outcomes for mothers.⁴ The MMRC estimated that 15% of pregnancy-associated deaths in 2020 happened among women who did not receive any prenatal care. Twenty-two percent of pregnancy-associated deaths happened among women who did not begin prenatal care until the second trimester. This suggests there are barriers to accessing prenatal care.

In 2020, March of Dimes estimated 6% of all births in Indiana occurred among women who lived in a county without a hospital. Another 3% happened in counties with a hospital that did not have inpatient delivery services.⁵ These counties are described as maternity care deserts. In Indiana, these are largely found in rural areas with majority white populations⁶ and a lack of access to reliable transportation.

A significant contributing factor to maternity care deserts is the shortage of obstetrician-gynecologists—known as OB/GYNs. Figure 2 represents the ratio of county population to available OB/GYNs. To account for reduced hours spent in patient care, OB/GYNs are recorded in decimals depending on the average number of hours they see patients in a week. For instance, in Fayette County, 0.1 OB/GYNs serve its 28,980 residents. This means that the single OB/GYN practicing in the county can dedicate only 1-4 hours per week to patient care. This is in comparison to the 977,203 residents in Marion County, who have access to 127.3 full-time equivalent OB/GYNs.

Figure 2. Ratio of county population to OB/GYN specialists (2021)



Limited access to maternity health care—either because of lack of services or barriers to access—increases pregnancy-associated risks that may become life-threatening.

INADEQUATE MATERNAL MENTAL HEALTH CARE AND SUBSTANCE ABUSE DISORDERS

Maternal mental health (MMH) conditions are the most common complications during and after pregnancy, affecting 1 in 7 people giving birth.⁷ Women who have a personal or family history of mental illness, have previous traumatic experiences, lack social support—especially from their partner—or have experienced a traumatic birth are at an increased risk of MMH conditions.⁸

It is common for individuals experiencing adverse mental health conditions to have co-occurring substance use disorder (SUD).⁹ An SUD is a type of mental condition that leads to a person's inability to control their use of substances such as alcohol, medications, and legal or illegal drugs. Indiana MMRC found that mental health conditions other than an SUD contributed to 28% of all pregnancy-associated deaths in 2020, while SUDs contributed to 46%. Between 2018 and 2020, 88% of pregnancy-associated overdose deaths occurred among white women, while the remaining 12% happened among Black and Latinx women. A 2022 report by U.S. Centers for Disease Control and Prevention shows that drug overdose deaths are sharply increasing among Black people.¹⁰

B Obstetrician-gynecologists (OB/GYN) are physicians who possess special knowledge, skills, and professional capability in the medical and surgical care of the female reproductive system and associated disorders.

MMRC also found that 65% of pregnancy-associated deaths in 2020 occurred among women who have a history with the Department of Child Services. This indicates a need for addressing intergenerational trauma through mental health care and connecting vulnerable women to social services. To address behavioral health needs during pregnancy and after giving birth, it is important to improve access to mental health care and screenings during pregnancy. The state should also address the mental health care provider shortage in Indiana as 58 of Indiana's 92 counties are designated as mental health professional shortage areas.¹¹

DISCRIMINATORY ATTITUDES AND LACK OF DIVERSITY AMONG INDIANA'S HEALTH CARE WORKFORCE

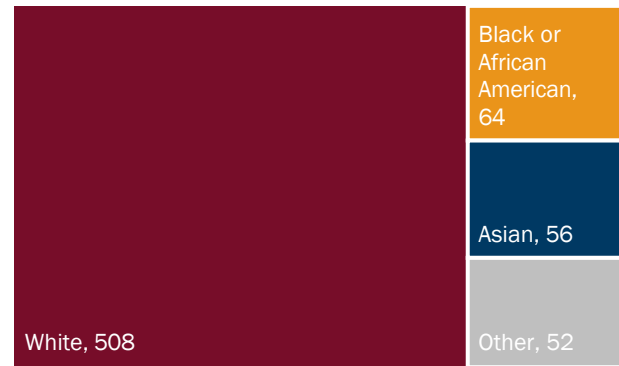
Maternal health is adversely impacted by discrimination resulting from structural inequities and provider bias. Indiana's MMRC defines discrimination as "treating someone less or more favorably based on the group, class, or category they belong to resulting from biases, prejudices, and stereotyping." The MMRC found that discrimination contributed to 8% of pregnancy-associated deaths. This definition included discrimination pertaining to race, obesity, substance use, and mental health history. Identifying and addressing bias in health care systems is vital to improving health outcomes.

In its 2003 publication on unequal treatment in health care, the National Academy of Medicine reported that racial and ethnic minorities tend to receive lower-quality health care than their white peers, even if they had comparable insurance, income, age, and severity of conditions.¹²

For instance, commonly held misconceptions regarding Black women's pain tolerance compared to white women¹³ and the resulting invalidation of their pain exacerbate poor maternal health outcomes for Black women.¹⁴ This was true even for those who had advantages of high income and education. Maternal mortality rates between Black women with doctoral-level training and white women with a high school education are nearly on par, indicating the effect of structural racism on health outcomes.¹⁵

Data shows that Indiana's OB/GYN workforce has low number of women and racial and ethnic minorities.¹⁶ Health workforce reflecting the diversity of Indiana's childbearing population would be helpful in navigating maternal health disparities.

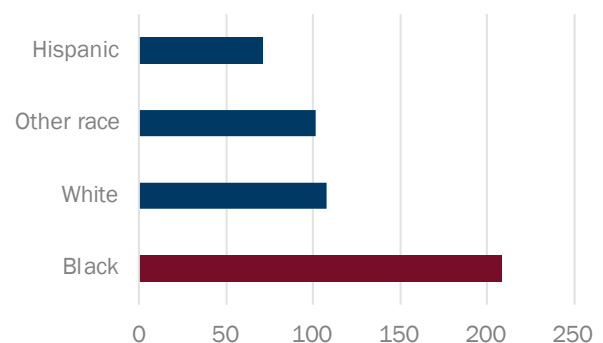
Figure 3. Number of OB/GYNs in Indiana by race (2021)



DISPARITIES IN MATERNAL MORTALITY RATES

In 2020, the maternal mortality ratio for Black Hoosier women was 208 per 100,000 live births, compared to 108 for white women and 71 for Latinx women (Figure 4). Historically underserved communities are exposed to overlapping inequalities in medical care. They also lack access to other opportunities—such as employment and education—that are linked to higher risks of maternal mortality. People's racialized experiences also impact whether and how they access care, how they experience care, and how they respond to it. Women from low-income households and those from rural areas experience higher pregnancy complications as well.

Figure 4. Rate of pregnancy-associated deaths by race and ethnicity, per 100,000 live births (2020)



CONSIDERATIONS

BRIDGING THE GAP IN COMMUNITIES FACING HEALTH CARE ISSUES

The CDC considers 25 Indiana counties maternal health care deserts, with another 12 having low access to maternal care.¹⁷ To help close this gap, United Health Group has awarded a \$2 million grant to local nonprofit HealthNet Inc. The goal is to expand access to high-quality primary, behavioral, and preventative health care services to Monroe and Morgan counties.¹⁸ These efforts will bring care to historically minoritized and rural communities whose members may not have the flexible schedules nor equitable access to seek health care services outside their counties.

HealthNet Inc. has provided residents in these two counties with mental health screenings, at-home monitoring devices for at-risk patients, and referrals for substance use disorder treatment. Creating a similar state-funded program to reach even more—if not all—of the 25 counties facing health care issues may result in better maternal health outcomes for women. A similar program with a pronounced focus on the expansion of maternal care to rural counties could help reduce maternal mortality rates as mothers receive more resources before, during, and after their pregnancies.

CONTINUED EXPANSION OF EQUITABLE ACCESS THROUGH HEALTH CARE COVERAGE

Post-delivery insurance coverage is critical given that most pregnancy-related deaths occur between one week to one year of delivery. MMRC found that three-quarters of women who died from a pregnancy-associated death in Indiana in 2020 were enrolled in Medicaid.³ Indiana announced its intention to extend medical coverage under the American Rescue Plan Act. The plan received approval on September 8, 2022.

This allows Indiana to extend post-delivery Medicaid coverage to 12 months. It is a critical step toward improving maternal health outcomes by alleviating mothers' medical and financial burdens. It also can help improve mental and overall health by providing longer access to health care and mental health services throughout pregnancy and beyond. Having access to mental health services can aid in preventing and treating the severe effects of postpartum

depression, as well as supporting mothers living with substance use disorders.

Furthering the yearlong expansion to three years may have a greater life expectancy outcome. This is particularly true for postpartum mothers with SUDs who experience relapses and those who struggle with prolonged effects of postpartum depression.

Another step toward supporting expectant and postpartum mothers is expanding Medicaid benefits to include doula services. A doula is a woman—typically without formal obstetric training—who is employed to provide guidance and support to a pregnant woman during labor. Having a doula throughout pregnancy and especially after birth has been shown to provide emotional support and help to the mother during and after delivering her baby.

CREATING A MORE DIVERSE AND INCLUSIVE HEALTH CARE ENVIRONMENT

Implement diversity, equity, and inclusion training

Health care systems can take preventative measures to ensure their patients are not encountering discrimination by providing Diversity, Equity, and Inclusion training. Educational institutions can incorporate DEI courses into medical curriculum and as Continuing Medical Education (CME) credits.

Embedding implicit bias training and promoting cultural humility among maternal health providers can result in improved patient-provider communication, overall patient experience and quality of care, and a culture shift toward achieving equity. This also will help create a safer environment for all Hoosier patients and improve health outcomes by strengthening communities' trust in the health care system.

California and Ohio use a program called the Health Collaborative which is made up of hospitals and health care systems. Their goal is to collect data on DEI and implicit bias improvements within health care. They use insights generated from this initiative to improve the level of care in their state. A similar program in Indiana could help monitor DEI outcomes within health care systems.

Diversifying medical workforce

The disparities in maternal health require addressing system-level factors that impact maternal health outcomes. Hospitals and medical schools can create more pipeline programs to recruit, engage, and retain more students with diverse backgrounds. Tailoring educational pipeline programs to support underrepresented communities in Indiana can improve representation in the health care fields by leveraging programs that support the community being served. For example, educational institutes can offer students in Indiana's rural communities remote learning options for becoming mental health counsellors so they can stay in their communities. This will not only grow the pool of mental health providers but will ensure that rural communities receive much-needed support.

This could be similar to a recent law in Oregon which allows the Oregon Health Authority to provide financial incentives and assistance to recruit and retain behavioral health providers from underrepresented ethnic, tribal and rural backgrounds and incentivize providers to practice in underserved areas.¹⁹

CO-LOCATING MATERNAL AND MENTAL CARE

A pregnant person with substance uses disorder may be reluctant to seek treatment because of stigma, demands on time due to caregiving roles or fear of loss of custody. Capitalizing on the unique window provided by pregnancy in terms of increased frequency of health visits, integrating mental health and substance use treatment services in prenatal settings would be convenient for patient and normalize behavioral care. Indiana Perinatal Quality Improvement Collaborative work with prenatal care providers to implement substance use disorder and domestic violence screening is a welcome step toward improved coordination between providers and overcoming missed opportunities for early intervention.

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The Center for Research on Inclusion & Social Policy (CRISP) was created to address complex social issues and the effects of social policy through applied, data-driven, and translational research. CRISP analyzes and disseminates community-relevant research about social disparities and policy issues. The Center is housed within the IU Public Policy Institute (PPI), which also supports the Center for Health & Justice Research (CHJR), and the Manufacturing Policy Initiative (MPI).

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