Maternal Mortality in Michigan

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Despite many legislative and health system advancements in care, women in Michigan continue to face significant challenges in maternal health. In 2022, Michigan's maternal mortality rate was 19.1 maternal deaths per 1,000 births, and nearly 75% of these deaths have been deemed preventable if changes are made at the provider, patient, facility, system, community, or policy level.[1,2,3] This primer describes the maternal health landscape in Michigan, highlights the key populations affected by this problem, and summarizes current Michigan-based initiatives to reduce maternal mortality.

Factors driving maternal mortality

Maternal mortality events are categorized in two main ways: pregnancy-related deaths and pregnancy-associated deaths. Pregnancy-related deaths are directly related to a pregnancy complication, initiated by a pregnancy or aggravated by pregnancy. Pregnancy-associated deaths occur while a woman is pregnant, but the death is not directly caused by pregnancy.[4] The leading causes of pregnancy-related death are infection or sepsis and thrombotic or pulmonary embolism. The leading causes of pregnancy-associated death are substance use disorder, pregnancy-associated medical conditions, and homicide. See Figures 1 and 2 below.

Michigan needs solutions that reduce both pregnancy-related and pregnancy-associated death across diverse populations. For example, pregnancy-related deaths are complications that might benefit from clinically focused reduction efforts, like continuous quality improvement (CQI) frameworks. Alternatively, efforts to prevent pregnancy-associated deaths would require an approach that fosters collaboration among public health professionals, social service agencies, and healthcare systems.

Figure 1:

The most common causes of pregnancy-related deaths in Michigan, 2016-2020[5]

Cause of death	% of pregnancy-related deaths
Infection or sepsis	14.20%
Thrombotic or pulmonary embolism	12.30%
Hypertensive disorders of pregnancy	8.50%
Cardiovascular conditions	8.50%
Hemorrhage	7.50%

Data Sources: Michigan Department of Health and Human Services, Michigan Maternal Mortality Surveillance Program, 2016-2020; Michigan Department of Health and Human Services, Division for Vital Records and Health Statistics, Resident Death Files and Live Birth Files, 2016-2020.

Figure 2:

The leading causes of pregnancy-associated deaths in Michigan, 2016-2020[6]

Cause of death	% of pregnancy-associated deaths
Substance use disorder	29%
Pregnancy-associated medical conditions	20.1%
Homicide	12.7%
Motor vehicle accidents	9.50%
Suicide	5%

Date Sources: Michigan Department of Health and Human Services, Michigan Maternal Mortality Surveillance Program, 2016-2020; Michigan Department of Health and Human Services, Division for Vital Records and Health Statistics, Resident Death Files, 2016-2020

Barriers to quality care

Lack of providers for routine and complex pregnancy care is a problem throughout large parts of the state. Even where health care resources are available, quality care delivery is not always achieved due to lack of culturally competent care.[7]

Lack of quality obstetric care results in:

- Poor overall health before pregnancy
- Less prenatal care
- Higher rates of maternal mortality[8]

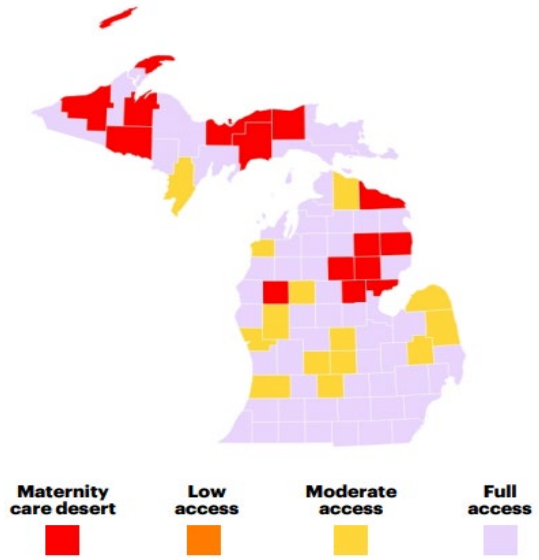
Provider shortages and poor quality care affect certain populations more frequently than others. Place-based and racial disparities are major challenges in ensuring broad access to quality maternal care. Women living in rural areas face greater barriers to obtaining quality obstetric care due to provider shortages and long driving distances to care.[9] Women of color are more likely than white women to receive poor quality care, and often experience racial discrimination in healthcare spaces.[10]

Geographic distribution of healthcare infrastructure

Healthcare facilities with obstetric services are distributed unevenly across Michigan, with rural areas facing more pronounced shortages (Figure 3).[11] Fifteen out of Michigan's 83 counties are labeled as maternity care deserts, meaning that the county does not have a hospital or birth center offering obstetric care from obstetric providers.[12] Due to this scarcity, pregnant women are more likely to have to travel long distances to access care, particularly for specialist services, or to forgo care altogether.[13] In addition to health impacts related to barriers in care, significant social and economic burdens are associated with long travel times including access to transportation, increased costs, and securing childcare and time off work.[14]

Figure 3:

Maternity care deserts in Michigan



Data 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.

Evidence has shown that utilizing telehealth for some maternity care services (both during prenatal and postpartum periods) increases patient satisfaction and results in comparable health outcomes to in-person care. In 2022, a March of Dimes report recommended expanding insurance coverage for maternal health services through telehealth and aligning telehealth reimbursement approaches across payers to reduce rural versus urban disparities in maternity care.

Access to culturally competent providers

The maternal care workforce faces a national shortage of physicians, including obstetricians and gynecologists (ObGyns), internal medicine physicians, and primary care providers, at the same time that the population of childbearing women is projected to grow in coming years.[15] The shortage in the maternal care workforce is projected to be at 70-80% adequacy by 2037.[16] In addition, a recent survey revealed that 86% of physicians practicing in Michigan have experienced declines in staff since 2020.[17]

When maternity care is available, the quality of that care varies based on many variables, including patient race. Between 2016 and 2020, Black women in Michigan were 2.2 times more likely to die from pregnancy-related causes than non-Hispanic white women.[18] Studies have shown that women of color receive poorer quality maternity care and experience complications at rates higher than their white counterparts.[19] More broadly, a recent survey found that about one in five (21%) Black women reported having been treated unfairly by a health care provider or staff because of their racial or ethnic background.[20] In Michigan, a 2022 qualitative study reported that of the 19 low-income Black women in

Detroit interviewed, all shared that the prenatal care delivery they received failed to meet their goals and preferences.[21] Racism and discrimination in healthcare settings perpetuates harmful maternal health outcomes for people of color.[22]

To address the need for culturally competent care for people of color, research has shown that a more diverse workforce that allows for increased racial concordance in physician-patient relationships may improve health outcomes.[23,24] Further, birth outcomes have shown to be more positive when a midwife and/or doula is in attendance.[25] Policies that focus on expanding and diversifying the maternal health workforce, as well as strengthening payment for midwives' and doulas' services may be important for improving maternal health in Michigan.

Michigan-based strategies for addressing barriers

In addition to the telehealth and workforce diversification strategies outlined above, there are many active evidence-based initiatives across Michigan that work to dismantle existing barriers to care for pregnant and postpartum women.

Group prenatal care

Group prenatal care (GPC) models, such as CenteringPregnancy, have been shown to decrease preterm birth rates, decrease low birth weight, and lower rates of cesarean sections.[26,27,28,29,30] In Michigan, CenteringPregnancy is offered within various health systems, including Michigan Medicine, Central Michigan University Health, and Bronson.

GPC combines individual risk screening and physical assessment with group sessions focusing on patient education and social support–making the overall prenatal care experience more well-rounded.[31] In contrast to traditional, individual prenatal care, group prenatal care offers patients more time with their providers, encourages patients to play an active role in their healthcare, offers support services, and is designed to address the multifaceted needs of pregnant women and their families.[32,33,34]

Patients in group care:

- demonstrate greater prenatal knowledge,
- feel more prepared for labor,
- report higher levels of satisfaction with their care.[35]

GPC in Michigan: WIN Network Detroit

Women Inspired Neighborhood (WIN) Network Detroit is an evidence-based, local example of a group prenatal program. Through WIN, pregnant women discuss topics such as breastfeeding, making a birth plan, common pregnancy discomforts, how to make healthy foods, and more. Guest speakers join sessions to inform participants of local resources and services. While a group setting is core to the WIN model, participants also receive private time with their midwife for exams and opportunities to ask questions in private. Since 2016, the WIN Network prenatal group has had a 97% breastfeeding initiation rate among moms and 95% of babies born at full term.[36]

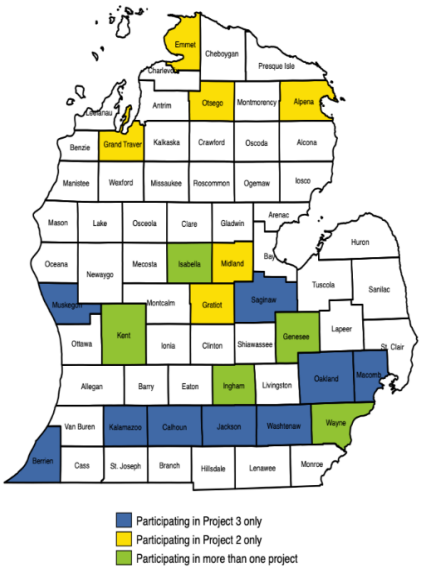
Maternal Health Research Centers

Michigan State University-based MIRACLE Center. MSU's MIRACLE (Maternal Health Multilevel Interventions for Racial Equity Center) is a NIH-funded Maternal Health Research Center of Excellence committed to advancing women's health and health equity.[37] One of 12 initiatives nation-wide, the MIRACLE Center began in 2023 and will be funded for seven years. The center aims to evaluate and implement evidence-based interventions to address maternal health disparities and covers a population of more than 7 million women. The center leads three major projects in Michigan and works primarily with Black, Latine, and rural populations:[38]

- Project #1 includes a home visiting program with services from community health workers, visiting nurses, and social workers. It aims to address comorbidities, improve patient-provider interactions, and help coordinate care.
- Project #2 has women employ an app (MI MOM app) during pregnancy and postpartum to live chat with community health workers and connect to services. It aims to increase healthcare access, help users identify health warning signs, and combat social barriers in user-friendly ways.
- Project #3 aims to improve the quality of care and maternal health outcomes in both medical settings and within the community by standardizing care. Standard care "bundles" of evidence-based practices are intended to reduce preventable complications.

Figure 4:

MIRACLE Center Project Locations



Data Source: MIRACLE Center, Michigan State University.

Wayne State University-based SOS MATERNITY Network

SOS MATERNITY is a healthcare collaborative led by Wayne State University's Office of Women's Health that includes 14 leading maternal-fetal medicine universities and health care systems across the state. The

network hosts regular community events aimed at educating expectant mothers about childbirth from medical experts throughout the state. The first event was hosted in October 2024, and featured experts from the University of Michigan who discussed efforts to reduce preterm birth and pre-eclampsia.[39]

University of Michigan-based Obstetrics Initiative

The Obstetrics Initiative is a Collaborative Quality Initiative (CQI) sponsored by BlueCross BlueShield of Michigan and housed at the University of Michigan. The initiative works across disciplines to improve the quality and value of childbirth care.[40] One of their recent initiatives addressed the high rates of cesarean section births among low-risk patients in Michigan, which can cause increased risk of infection and blood clots.[41,42]

Community paramedicine

Community paramedics (CPs) offer community-based care that can help to fill gaps in provider shortages in underserved areas. EMS providers are often the first point of contact for patients when they feel something is not right. Training CPs to specifically understand and identify risks in the prenatal and postpartum periods can reduce missed warning signs and save lives—particularly around early identification of hypertension and other commonly missed signs of prenatal or postpartum complications.

Given their role as providers who can deliver care within a woman's home, CPs often have the local connections and experience to offer culturally competent maternal health care and identify unmet social needs.[43]

Presently, Henry Ford Health System employs CPs to deliver this type of care for women who have had little prenatal care, have been diagnosed with preeclampsia, or who face transportation problems.[44] In other parts of the state, EMS providers train and deploy CPs to address individuals' needs in the community that typically do not require transport to an emergency department.

Policy Highlights

In 2024, the Michigan Senate passed the Michigan Momnibus Package aimed at promoting racial equity in maternal healthcare. While the bills were not signed by the governor, the package was reintroduced by the Senate in early 2025.[45] Overall, the bills aim to support community-driven programs and care options, enhance prenatal and maternal healthcare, and ensure accountability for maternal healthcare providers.[46]

Other policy highlights in Michigan pertinent to maternal health include:[47]

- Medicaid expansion to cover women up to 12 months postpartum.[48]
- Bundled payments for maternity episodes of care (maternity-case rate), which creates financial incentives for providers to better coordinate care and increase efficiency with the goal to improve health outcomes and lower costs.[49,50]
- Medicaid coverage of doulas and certified nurse midwives.[51]
- Medicaid coverage of blood pressure monitors for new moms, which aims to reduce complications and death stemming from cardiovascular conditions.[52]

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