

Shaping Tomorrow by Advancing Maternal and Child Health

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This special edition of the *Wisconsin Medical Journal* highlights the essential field of maternal and child health. The well-being of mothers and children is a critical indicator of societal progress, clearly reflecting the effectiveness of our health care systems. However, despite its importance, maternal and child health continues to face a host of challenges, including disparities in access to care and the growing recognition of the impact of social determinants on health outcomes. This issue strives to shed light on these complex challenges through in-depth studies, expert insights, and case reports that aim to improve care for mothers and children.

The reports in this issue come together to highlight several key themes: social determinants of health, obstetric health care delivery, health behaviors and practices, and pediatric health.

Social Determinants of Health

The issue opens with a focus on the social determinants of health surrounding pregnancy. This section explores topics such as the impact of childhood adversity on perinatal mental health, innovative ways to identify intimate partner violence in obstetric clinics, and

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the influence of geographic factors on birth weight.¹⁻³ These studies emphasize the critical role social factors play in shaping pregnancy-related health outcomes. For example, several studies use large-scale population data, including birth records, insurance claims,

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and social service records to understand how social context influences prenatal, perinatal, and postpartum health. One promising finding is the success of state-funded home visiting programs in reaching marginalized populations and improving health outcomes.⁴ However, concerns remain, such as younger Medicaid beneficiaries being more likely to lose postpartum health care coverage, highlighting the need for continuous coverage for mothers after childbirth.⁵

This section also highlights the impact of Wisconsin's post-*Roe v Wade*⁶ health care landscape. Following the Supreme Court's 2022 *Dobbs v Jackson Women's Health Organization* decision,⁷ a pre-Civil War law in Wisconsin banned abortion for 15 months until

overruled in 2023. During this period, legal uncertainty affected care for early pregnancy complications.⁸ One study found an increase in sterilization procedures among younger individuals following the decision overturning of *Roe v Wade*, indicating that abortion restric-

tions influence individuals' reproductive and childbearing preferences.⁹ Experts warn that restricting access to abortion harms reproductive autonomy and overall health, underscoring the urgent need to protect reproductive rights in this changing legal environment.^{10,11}

Obstetric Health Care Delivery

The issue then shifts focus to the delivery of obstetric health care, where advancements in both surgical techniques and pain management are transforming maternal care. A stand-out innovation in this field is the Enhanced Recovery After Cesarean Surgery (ERAS) protocol, which has led to a remarkable 94% reduction in opioid use following cesarean deliveries. This protocol incorporates intrathe-

cal morphine and other best practices, resulting in lower pain scores and a decrease in the number of patients needing opioid medication after surgery.¹²

Despite these advancements, challenges persist in obstetric care, particularly when it comes to accurately measuring blood loss during cesarean births. Research has shown that traditional methods, such as estimated blood loss and quantitative blood loss, lack the sensitivity to accurately assess blood loss. A study by Kram et al highlights the need for improved measurement tools to better guide clinical decisions and improve patient outcomes in obstetrics.¹³

The articles in this section also explore environmental and iatrogenic risks to pregnancy outcomes. One study reports both a concerning lack of follow-up and reassuring results among those who completed testing within a population at high risk for lead exposure from their water lines,¹⁴ and a thoughtful commentary also asks us to reconsider the benefits of folic acid food fortification.¹⁵

Beyond clinical advancements, this special issue also explores the emotional and ethical complexities of obstetric care and underscores the deep connection between medical practice, ethics, and the often under-recognized frequency and impact of loss. An insightful commentary discusses the mental health challenges that can result from even successful pregnancy outcomes.¹⁶ The challenges clinicians, including trainees, often face are highlighted by a medical student's experience in a fetal anomalies clinic where patients, families, and clinicians deal with life-changing diagnoses, and a resident's thoughtful reflection on struggling to cope with a fetal death.^{17,18} This issue also features a case report detailing the challenging decision-making process, including legal aspects, involved in terminating a pregnancy complicated by placenta increta through hysterectomy at the end of the first trimester.¹⁹

Health Behaviors and Practices

The next section explores the health behaviors and practices that influence maternal and child health. Factors such as access to reliable information, social support, and health crises like

COVID-19 shape the choices of pregnant and postpartum individuals. A study in Milwaukee revealed a significant knowledge gap among pregnant women about the risks of tetrahydrocannabinol (THC) and cannabidiol (CBD) use, with over half unaware of the potential harm to fetal development.²⁰ This highlights the need for clear, evidence-based communication from health care providers. The COVID-19 pandemic further complicated maternal health, particularly breastfeeding, due to challenges like limited lactation support and increased isolation.²¹ The pandemic also intensified loneliness among perinatal individuals, leading to higher rates of depression, anxiety, and poorer pregnancy outcomes.²² Addressing these mental health issues remains crucial for improving maternal and child health.

Concerns about dietary health risks, such as excessive fish consumption beyond safety recommendations, were found among diverse populations including women of Asian descent in Milwaukee.^{23,24} This underscores the need for culturally tailored education to reduce health risks from food contaminants. The issue also examines perceptions of patients experiencing infertility toward the COVID-19 vaccine, with a study showing that those with higher education levels and more fertility treatment experience were more likely to get vaccinated.²⁵ These findings highlight the importance of accessible information and building trust in medical advice, emphasizing the need for interventions that address the unique needs of different populations to improve health outcomes.

Pediatric Health

Finally, the issue transitions to pediatric health, addressing a range of critical topics affecting children's health in Wisconsin and across the country. The section opens with a commentary by Snooks et al that highlights a pressing public health crisis: pediatric gun violence, which has become the leading cause of death among American youth, even surpassing motor vehicle accidents as of 2020.²⁶ The authors highlight a significant increase in gun-related injuries and deaths at the Children's Wisconsin Pediatric Trauma Center since the pandemic, affecting not just physical health

but also mental well-being across communities, and they call for a robust public health approach, including safe gun storage, community and hospital interventions, and legislative measures to shield mothers and children from gun violence.

A link between elevated blood lead levels to poorer academic performance is the focus of a study by Anguzu et al, which highlights the need for stronger prevention.²⁷ Research on mental health services includes a school-based program that improved both behavioral and academic outcomes, though challenges remain in optimizing outpatient care after ED visits.^{28,29} The issue also explores adolescent mental health, particularly the link between social media use and higher rates of depression and anxiety, especially in females.³⁰ The PATCH program demonstrates the effectiveness of youth-led health initiatives,³¹ while additional insights include the benefits of deferring antibiotics for febrile infants to reduce unnecessary interventions and the role of school-based rapid antigen testing in managing infectious disease outbreaks during the COVID-19 pandemic.^{32,33}

Case studies on pediatric conditions, such as parechovirus infections and neonatal femur fractures, emphasize the need for early diagnosis and intervention.^{34,35} The University of Wisconsin's Undiagnosed Disease Program highlights the potential of whole-genome sequencing in diagnosing rare neurodevelopmental disorders.³⁶ Family engagement in pediatric research is a key theme, with tools like the "Travel Passport" fostering collaboration between families and researchers.³⁷

As you read through this special issue, we encourage you to reflect on the complexity and depth of the topics at hand. The manuscripts—and artwork—featured represent a wide array of perspectives and experiences, highlighting the diverse ways in which health care providers, patients, and communities have navigated the ever-present challenges in the field of maternal and child health. From overcoming access barriers to addressing emerging health crises, each piece contributes to a deeper understanding of the current state of care and the ongoing need for innovation, advocacy, and compassion.

We would like to express our sincere gratitude to the *WMJ* Publishing Board for its unwavering support throughout the editorial process and our esteemed advisory board members for their invaluable guidance and contributions. Their expertise and commitment have been crucial in bringing this issue to fruition. Together, these collective efforts have helped create a special edition that informs and inspires positive change. It is our hope that this work will spark further action, driving innovation and improvements in maternal and child health for years to come.

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