

Addressing Disparities in Maternal Mortality: An Analysis of Pain Management Protocols and Their Impact on Global Maternal Health Equity

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Abstract

Maternal mortality rates underscore systemic healthcare disparities, disproportionately affecting black women, exacerbated by disbelief in pain thresholds. Access to pain management emerges as a leading cause, necessitating urgent action. This policy brief urges the United Nations and stakeholders to champion standardized protocols, critical for mitigating biases and fostering global maternal healthcare equity. Collaboration with entities like the World Health Organization ensures cultural sensitivity, while engagement with healthcare professionals leverages advancements for enhanced accessibility. This collective initiative aims to address deeply ingrained disparities, ultimately creating universally accepted protocols for equitable care.

Maternal deaths underscore the imperative for transformative interventions to ensure universal maternal well-being. The maternal mortality ratio (MMR) is a quantitative metric used to report the number of maternal deaths per 100,000 live births (UNICEF, 2023). From 2000 to 2020 the global MMR reduced from 339 deaths to 223 deaths per 100,000 live births, translating to an annual 2.1% reduction in maternal deaths. Despite this decline in maternal deaths, this reduction percentage is only about 1/3 of the 6.4% annual reduction needed to achieve the Sustainable Development Goal (SDG) of 70 maternal deaths per 100,000 live births by 2030 (UNICEF, 2023). In order to achieve the MMR set by SDG target 3.1, the disparities within maternal deaths must first be addressed. Despite advancements in maternal healthcare, a persistent issue revolves around the unequal access to effective pain management during childbirth, contributing to stark disparities in maternal mortality rates worldwide. These disparities raise critical questions about the adequacy of current healthcare strategies in ensuring that all expectant individuals, regardless of geographical location or race, can access safe and effective pain relief options. Addressing this issue is paramount to achieving health equity and making positive strides towards reducing maternal mortality rates on a global scale.

Maternal Mortality in Developed Nations

Among all developed nations, the United States ranks the highest among developed countries in maternal mortality at 32.9 deaths per 100,000 live births in 2021 (Hoyert, 2023). Black women yield a disproportionately high MMR due to issues such as disbelief in pain thresholds. In the United States, Black women have the highest MMR at 69.9 deaths per 100,000 live births, close to three times the rate for white women and over two times the national rate (Hoyert, 2023).

Similar trends can be observed in other developed nations. In the UK, Black women are 3.7 times more likely to die during or in the first year after pregnancy than white women (Brader, 2023). Research conducted in France revealed sub-Saharan African demonstrated a higher MMR when compared to White women (Small et al., 2017).

Figure 1. Maternal Mortality Rates by Race: United States, 2018-2021

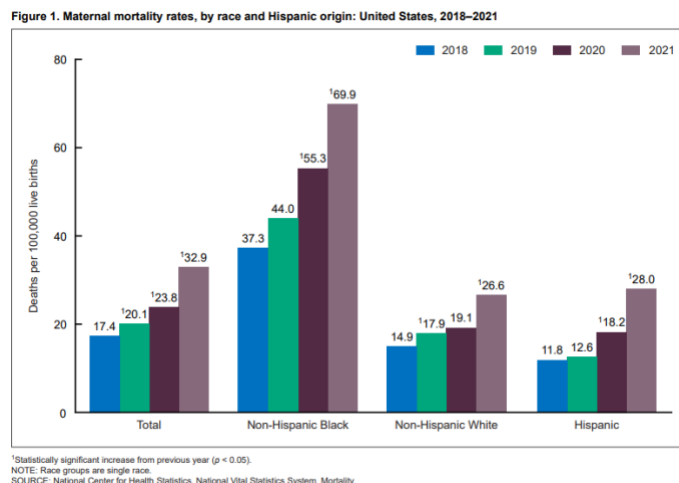


Figure 1. This graph illustrates the maternal mortality rates per 100,000 live births for Non-Hispanic Black, Non-Hispanic White, and Hispanic women in the United States from 2018 to 2021. The graph provides insights into the trends and disparities in maternal mortality rates across different racial and ethnic groups over the specified time period.

Studies have shown that medical students and residents hold inaccurate beliefs about biological differences between Black people and white people (Hoffman et al., 2016). This racial bias contributes to inaccurate predictions in pain perception, and subsequently negatively impacts the treatment these physicians administer to Black patients. If a physician doubts that a Black patient is experiencing genuine pain, they are less inclined to pursue additional medical examinations that could uncover an underlying life-threatening

condition. A study conducted on disparities in pain management showed that Black patients are less likely to be given pain medication relative to white patients, and if pain medication is administered, it is in lower quantities (Todd et al., 2000). These implicit biases in the healthcare system create a sense of distrust within the Black community and can lead to Black women not seeking out the proper maternal care when they are in pain (Jaiswal, 2019). Although developed nations are more technologically equipped to provide proper pain management and physical care to pregnant Black women, they do not always have equitable access to it. Black women have historically experienced higher rates of pregnancy related complications like preeclampsia, hypertension, and haemorrhaging (Gray et al., 2023). Consequently, equitable pain management protocols are essential for the reduction of maternal mortality among Black women in developed nations.

Maternal Mortality in Developing Countries

In the context of developing nations, disparities in access to pain management reflect a broader landscape of challenges. In 2020, Africa accounted for 69% of the global maternal deaths (2023). South Sudan has the highest global MMR at 1,150 deaths per 100,000 live births (Galal, 2024).

Figure 2. African Countries with Highest Maternal Mortality Rate 2020

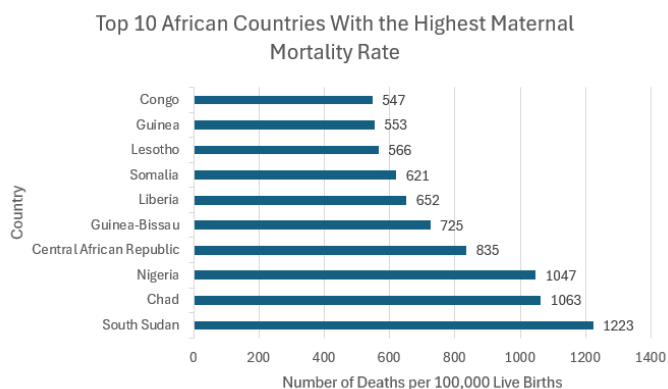


Figure 2. This horizontal bar chart displays the top 10 African countries with the highest maternal mortality rates per 100,000 live births. Each bar represents a country, and the length of the bar corresponds to the maternal mortality rate. The graph highlights the disparities in maternal health outcomes across African nations, emphasizing the urgency of targeted interventions to reduce maternal mortality rates in these high-risk areas.

Shortages of skilled healthcare professionals, lack of advancement in healthcare technology, and economic barriers contribute to high maternal mortality rates in developing countries. In South Sudan, where an estimated 19% of births are attended by skilled health personnel (Perera et al., 2023), and in Chad, the next leading developing country in maternal mortality,

where only 39% of births receive the attention of a skilled healthcare professional, these figures fall significantly below the global average of 84% (UNICEF, State of the World's Children, Child info, and Demographic and Health Surveys, 2019). The lack of skilled healthcare professionals present at birth in Sudan exacerbates challenges in pain management, potentially leading to higher frequencies of maternal death during childbirth.

Figure 3. Skilled Health Personnel Presence at Birth in Developed v. Developing Countries

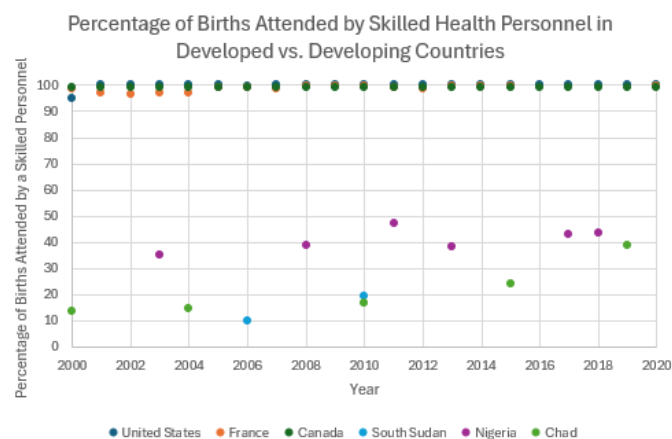


Figure 3. This scatterplot illustrates the percentage of births attended by skilled health personnel in developed and developing countries. The scatterplot reveals the distribution of skilled birth attendance rates across different levels of economic development, providing insights into global disparities in maternal healthcare access and quality.

Beyond shortages of skilled healthcare professions and limitations in healthcare technology, inadequate infrastructure and limited education compound the complexities contributing to high maternal mortality rates. A lack of awareness and education about maternal health practices in other developed nations may result in delayed decision-making and underutilization of available services. When examining pain management protocols and their global impact on maternal mortality in developing countries, it is evident these challenges intersect with disparities in accessing trained personnel in pain relief and treatment.

Conclusion

The disparities in maternal mortality rates across both developed and developing nations underscore the critical importance of equitable pain management protocols. While developed nations, equipped with advanced technology, face racial biases and healthcare disparities leading to disproportionately high maternal mortality rates among Black women, developing nations grapple with shortages of skilled healthcare professionals and limited access to pain management.

The global discrepancies in maternal mortality highlight the urgent need for comprehensive, culturally sensitive, and universally accessible pain management strategies. Bridging these gaps will not only save lives but also propel the United Nations closer to achieving SDG Target 3.1.

Policy Recommendations

(1.) The United Nations (UN), as a key player in shaping global health policies, should take a leading role in championing the development and implementation of standardized pain management protocols and guidelines. Engaging with the International Confederation of Midwives (ICM) and the World Medical Association (WMA) is essential to consider the perspectives of healthcare professionals, fostering the ethical integration of standardized protocols into medical practices globally. Combining these collaborative efforts with entities like the Office of the Assistant Secretary for Health, which has already allocated millions towards research addressing disparities in maternal mortality, would ensure a diverse panel of organizations. By engaging in dialogue with pertinent institutions, the United Nations can actively contribute to the formulation of novel protocols and technologies dedicated to assessing pain thresholds during and post childbirth. The integration of these advancements holds the potential to mitigate subjectivity in physicians' evaluations of pain, subsequently playing a pivotal role in diminishing mortality rates in developed nations.

(2.) The United Nations (UN) should establish a collaborative initiative aimed at fostering global cooperation between developed and developing nations to enhance maternal healthcare through comprehensive educational programs. This initiative will focus on increasing the number of trained health personnel present at each birth in developing nations. To achieve this, the UN can facilitate partnerships between developed countries with advanced healthcare systems and developing nations facing challenges in maternal care. The program should emphasize the importance of training midwives as key frontline healthcare providers in developing countries, ensuring their equitable accessibility everywhere.

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