Racial disparities in cesarean delivery rates

While racial disparities continue to exist, a number of interventions have the potential for reducing increased CD rates in minority women

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IN THIS ARTICLE

CASE Patient wants to reduce her risk of cesarean delivery (CD)

A 30-year-old primigravid woman expresses concern about her increased risk for CD as a Black woman. She has been reading in the news about the increased risks of CD and birth complications, and she asks what she can do to decrease her risk of having a CD.

What is the problem?

Recently, attention has been called to the stark racial disparities in severe maternal morbidity and mortality. Cesarean delivery rates illustrate an area in obstetric management in which racial disparities exist. It is well known that morbidity associated with CD is much higher than morbidity associated with vaginal delivery, which begs the question of whether disparities in mode of delivery may play a role in the disparity in maternal morbidity and mortality.

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In the United States, 32% of all births between 2018 and 2020 were by CD. However, only 31% of White women delivered via CD as compared with 36% of Black women and 33% of Asian women.[1] In 2021, the primary CD rates were 26% for Black women, 24% for Asian women, 21% for Hispanic women, and 22% for White women.[2] This racial disparity, particularly between Black and White women, has been seen across nulliparous, term, singleton, vertex (NTSV) groups as well as multiparous women with prior vaginal delivery.[3,4] The disparity persists after adjusting for risk factors.

A secondary analysis of groups deemed at low risk for CD within the ARRIVE trial study group reported the adjusted relative risk of CD birth for Black women as 1.21 (95% confidence interval [CI], 1.03–1.42) compared with White women and 1.26 (95% CI, 1.08–1.46) for Hispanic women.[5] The investigators estimated that this accounted for 15% of excess maternal morbidity.[5] These studies also have shown that a disparity exists in indication for CD, with Black women more likely to have a CD for the diagnosis of nonreassuring fetal tracing while White women are more likely to have a CD for failure to progress.

Patients who undergo CD are less likely to breastfeed, and they have a more difficult recovery, increased risks of infection, thromboembolic events, and increased risks for

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future pregnancy. Along with increased focus on racial disparities in obstetrics outcomes within the medical community, patients also have become more attuned to these racial disparities in maternal morbidity as this has increasingly become a topic of focus within the mainstream media.

What is behind differences in mode of delivery?

The drivers of racial inequities in mode of delivery remain unclear. One might question whether increased prevalence of morbidities in pregnancy, such as diabetes and hypertension, in minority women might influence the disparity in CD. However, the disparity persists in studies of low-risk women and in studies that statistically adjust for factors that include preeclampsia, obesity, diabetes, and fetal growth restriction, which argues that maternal morbidity alone is not responsible for the differences observed.

FAST TRACK

Clearly, more research is needed for the mechanisms behind inequities in mode of delivery and the influence of provider factors

Race is a social construct, and as such there is no biologically plausible explanation for the racial disparities in CD rates. Differences in health outcomes should be considered a result of the impact of racism. Disparities can be influenced by patient level, provider level, and systemic level factors.[6] Provider biases have a negative impact on care for minority groups and they influence disparities in health care.[7] The subjectivity involved in diagnoses of nonreassuring fetal tracing as an indication for CD creates an opportunity for implicit biases and discrimination to enter decision-making for indications for CD. Furthermore, no differences have been seen in Apgar score or admission to the neonatal intensive care unit in studies where indication of nonreassuring fetal heart tracing drove the disparity for CD.[5]

A study that retrospectively compared labor management strategies intended to reduce CD rates, such as application of guidelines for failed induction of labor, arrest of dilation, arrest of descent, nonreassuring fetus status, or cervical ripening, did not observe differential use of labor management strategies intended to reduce CD rate.[8] By contrast, Hamm and colleagues observed that implementation of a standardized induction protocol was associated with a decreased CD rate among Black women but not non-Black women and the standardized protocol was associated with a decrease in the racial disparity in CD.[9] A theory behind their findings is that provider bias is less when there is implementation of a standardized protocol, algorithm, or guidelines, which in turn reduces disparity in mode of delivery.

Clearly, more research is needed for the mechanisms behind inequities in mode of delivery and the influence of provider factors. Future studies also are needed to evaluate how patient level factors, including belief systems and culture preferences, and how system level factors, such as access to prenatal care and the health system processes, are associated with CD rates.

Next steps

While the mechanisms that drive the disparities in CD rate and indication may remain unclear, there are potential areas of intervention to decrease CD rates among minority and Black women.

Continuous support from a doula or layperson has been shown to decrease rates of cesarean birth,[10,11] and evidence indicates that minority women are interested in doula support but are less likely than White women to have access to doula care.[12] Programs that provide doula support for Black women are an intervention that would increase access to support and advocacy during labor for Black women.

Group prenatal care is another strategy that is associated with improved perinatal outcomes among Black women, including decreased rates of preterm birth.[13] In women randomly assigned to group prenatal care or individual prenatal visits, there was a trend toward decreased CD rate, although this was not significant. Overall, increased support and engagement during prenatal care and delivery will benefit our Black patients.

Data from a survey of 2,000 members of the Society for Maternal-Fetal Medicine

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suggest that obstetrics clinicians do recognize that disparities in birth outcomes exist. While clinicians recognize this, these data also identified that there are deficits in clinician knowledge regarding these disparities.[14] More than half of surveyed clinicians disagreed that their personal biases affect how they care for patients. Robust data demonstrate broad-reaching differences in the diagnosis and treatment of Black and White patients by physicians across specialties.[7] Such surveys illustrate that there is a need for more education regarding disparities, racism in medicine, and implicit bias. As race historically has been used to estimate increased maternal morbidity or likelihood of failure for vaginal birth after CD, we must challenge the idea that race itself confers the increased risks and educate clinicians to recognize that race is a proxy for socioeconomic disadvantages and racism.[15]

The role of nurses in mode of delivery only recently has been evaluated. An interesting recent cohort study demonstrated a reduction in the NTSV CD rate with dissemination of nurse-specific CD rates, which again may suggest that differing nursing and obstetric clinician management in labor may decrease CD rates.[16] Dashboards can serve as a tool within the electronic medical record that can identify unit- or clinician-specific trends and variations in care, and they could serve to identify and potentially reduce group disparities in CDs as well as other obstetric quality metrics.[17]

Lastly, it is imperative to have evidence-based guidelines and standardized protocols regarding labor management and prenatal care in order to reduce racial disparities. Additional steps to reduce Black-White differences in CD rates and indications should be addressed from multiple levels. These initiatives should include provider training and education, interventions to support minority women through labor and activate patient engagement in their prenatal care, hospital monitoring of racial disparities in CD rates, and standardizing care. Future research should focus on further understanding the mechanisms behind disparities in obstetrics as well as the efficacy of interventions in reducing this gap. ●

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