

Obstetric (Postpartum) Hemorrhage

Topic & Clinical Relevance

- Postpartum hemorrhage (PPH), a blood loss after birth of >1000mL, is a leading cause of death both worldwide and in the U.S. The most common cause of PPH is uterine atony, in which the uterine muscles do not contract adequately after birth, which leads to a lack of compression of the blood vessels, resulting in significant bleeding (Oyelese & Ananth, 2020; Bateman et al., 2010).
- Racial and ethnic disparities persist in atonic PPH and severe atonic PPH despite adjustment for numerous potential explanatory variables. Literature demonstrates that Hispanic and Asian/Pacific Islander birthing people have higher rates of PPH. While Black/African American birthing people have a similar or even slightly lower rate of PPH overall in these studies, they experience a higher rate of severe PPH that result in blood transfusions and hysterectomy as a measure to stop the bleeding (Bryant et al., 2012; Gyamfi-Bannerman et al., 2018; Wetta et al., 2013).
- Identifying risk factors for severe PPH in advance and being prepared for and ready to treat heavy bleeding are key interventions to reducing morbidity and mortality due to PPH. Widely used models to identify those at high risk such as the California Maternal Quality Care Collaborative (CMQCC) [OB Hemorrhage Toolkit V3.0 Errata 7.18.22 | California Maternal Quality Care Collaborative](#) have historically used Asian race and Hispanic ethnicity, but not Black race, as independent risk factors for PPH. Many hospitals may still be using these older tools, which lead to differential risk stratification and care based on race (Lagrew et al., 2022).

Historical Roots

- Black, Indigenous, and other birthing people of color experience high rates of maternal morbidity and mortality (Artiga, 2020). This phenomenon has often been misattributed to genetics and culture. Multiple organizations are working toward eliminating these disparities and inequities by centering those most impacted, including [Every Mother Counts](#) and [National Birth Equity Collaborative](#).
- Race and ethnic categories are not discrete biological groups. The U.S. Office of Management and Budget, whose definition is used on the U.S. Census, defines "Hispanic or Latino" as a person of Cuban, Mexican, Puerto Rican, South or Central American, or other Spanish culture or origin regardless of race (U.S. Census Bureau, 2022). Hispanic ethnicity is thus a broad category that encompasses a wide range of ancestries and races. Additionally, Asian/Pacific Islander race includes individuals from countries and ancestral origins as different as India, the Philippines, Japan, and Cambodia (U.S. Census Bureau, 2022). Racial and ethnic groupings are thus poor proximate indicators for genetic ancestry.

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Frequent Misconceptions

“Higher rates of PPH in Hispanic and Asian Pacific Islander birthing people, and higher rates of severe PPH in Black birthing people, represent race-based, biological differences in birthing risk”

- Review articles from electronic health record data describe higher rates of PPH in patients with Asian/Pacific Islander race and Hispanic ethnicity, and higher rates of severe PPH requiring transfusion and hysterectomy in non-Hispanic Black patients (Bryant et al., 2012; Gyamfi-Bannerman et al., 2018; Wetta et al., 2013). In the papers, authors explicitly state that the higher rates of PPH in Hispanic and Asian Pacific Islander patients may indicate a genetic or biological cause.
- Given that these articles were primarily retrospective chart reviews, it is unclear how racial and ethnic data points were collected and entered, rendering these categorical associations unreliable.
- Even if the racial and ethnic data points collected were an accurate approximation of an individual’s self-identified race and ethnicity, neither race nor ethnicity are an accurate predictor of genetic makeup (Cerdeña, 2022).

How Adjustment Contributes to Health Inequity

- Using a PPH risk assessment tool that includes Asian race and Hispanic ethnicity as biological markers for PPH may lead to Asian and Hispanic patients having higher PPH risk scores and an increase in the rate of intervention, including blood draws, administration of additional medications, and reduced access to birthing options that are restricted to “low risk” birthing patients.
- Black patients experience severe PPH resulting in transfusion and hysterectomy at higher rates. If using a risk scoring system like the one above, clinicians may develop a false sense of security of lower risk of PPH, delayed diagnosis, and worse outcomes related to PPH.

Possible Solutions

- We should acknowledge that multiple studies have found increased frequency of significant maternal morbidities among specific racial and ethnic groups (Asian or Hispanic), including PPH, and we should use this increased rate to guide our caution in caring for patients from these backgrounds in order to not underdiagnose or undertreat them.
- We must also acknowledge that it is possible that Black patients are not actually experiencing a lower rate of PPH, but that they are receiving a delayed or under-diagnosis, such that once PPH is recognized, it is severe and more likely to require transfusions and dramatic measures to stop bleeding such as a hysterectomy.
- Race and ethnicity should not be used as a proxy for biological risk factors but as markers of increased risk of misdiagnosis and exposure to the effects of clinician bias.

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Takeaway Points

- Racial and ethnic disparities exist for postpartum hemorrhage, with Hispanic and Asian Pacific Islander birthing people having higher overall rates of PPH, and non-Hispanic Black individuals having higher rates of severe PPH, but these inequities are not due to inherent biological or genetic differences.
- Clinicians should use utilize risk assessment tools using demonstrated biological, perinatal, and obstetric conditions that increase the risk of atonic PPH, such as the CMQCC updated hemorrhage toolkit (Lagrew, 2022) and take adequate measures (e.g., active management of the 3rd stage of labor, having uterotonics readily available) to reduce the incidence and consequences of PPH in all birthing people.

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