

Evaluating the Elimination of Race from VBAC Calculators

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Objective: To describe an approach for clinicians and healthcare systems to evaluate the removal of the race term from clinical decision support tools to predict vaginal birth after cesarean section (VBAC) success.

Background

In the United States, 13.8% of birthing people have VBACs instead of an Elective Repeat Cesarean Delivery (ERCD).¹ This falls short of the Healthy People 2020 goal of an 18% national VBAC rate and reflects increasing cesarean rates across the country.^{2,3} Estimating the likelihood of VBAC success is useful for clinical decision-making when counseling patients on risks/benefits of trial of labor after cesarean section (TOLAC), due to increased morbidity when repeat cesareans are unplanned or emergent. In theory, being mindful of those with the highest probability of VBAC success allows providers to increase overall VBAC rates.^{4,5} Additionally, by maintaining patient-centered mode-of-birth discussions, maternal and fetal risks are minimized.^{5,6} However, the incorporation of race/ethnicity in VBAC probability calculations can result in a self-fulfilling prophecy,⁷ i.e., while VBAC tools intend to optimize patient outcomes, the racial/ethnic penalty may paradoxically exacerbate existing maternal health disparities.⁸

In the most commonly used VBAC calculator, the Maternal Fetal Medicine Units Network (MFMU) VBAC Success Calculator, the probability of a successful VBAC was modeled with a multivariable logistic regression.⁹ This prominent algorithm, which has been studied extensively and validated externally in diverse populations, calculates a score from the following parameters: patient's birth and clinical history, maternal age, body mass index (itself computed in racialized ways)¹⁰, vaginal delivery history, reason for previous C-section, and race/ethnicity defined as either White, Hispanic, or Black. Patients who identify as Black or Hispanic were calculated as having 5-15% lower success rate of VBAC than others, thereby encouraging clinicians to recommend fewer TOLACs to Black and Hispanic patients.^{8,9} The inclusion of race/ethnicity thus presents numerous concerns.^{8,11-16} As such, MFMU has since released a VBAC calculator which no longer includes race adjustments.¹⁷

Recent medical consensus established the need to eliminate race-based corrections in medical care and instead evaluate clinical adjustments in a race-conscious manner.^{16,18} In 2020, a retrospective chart review of 302 women electing TOLAC compared actual VBAC rates to predicted VBAC rates using both a race-based and race-neutral calculator. Faulkner *et al.* found that 44.6% of Hispanic women and 43.9% of non-Hispanic Black women who had a successful VBAC would have been given an unfavorable score in a race-based calculation compared to only 9.5% and 12.1% respectively when using a race-neutral calculation.¹⁹ Several other race-free VBAC algorithms also exist, though most have not yet been validated.⁸ Thus, it is essential to evaluate how the de-implementation of race adjustments in favor of either race-free MFMU or other algorithms impacts TOLAC likelihood and outcomes.

Proposed Research & Evaluation Plan

Once CERCA members have implemented a race/ethnicity-free VBAC calculator we recommend a **pre-post prospective** study examining key birth metrics by race/ethnicity and insurance status. We recommend use of self-identified race rather than only EHR-collected race, as well as collection of social identities, socioeconomic status, education status, geographic indicators for mapping to ZIP or tract-level disadvantage indices, etc. for a more complete picture of a patient's risk conditions.

1. Primary measures (stratify by race/ethnicity):
 - a. Vaginal birth after cesarean section rates
 - b. Trial of labor after cesarean section rates
 - c. Birth experience on standardized measures

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