

# Severe maternal morbidity among US- and African-born Black women in California, 1997-2019

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## Risk of severe maternal morbidity was 20% higher among African-born Black women compared to United States-born Black women in California.

### BACKGROUND

- In the United States (US), Black women have the highest risk of severe maternal morbidity (SMM) compared to women of other racial groups.
- Past research has identified important nativity-based disparities in the risk of adverse perinatal outcomes among Black women, with African-born Black women having a lower risk of preterm birth and low birthweight compared to US-born Black women.
- It is possible that similar nativity-based disparities exist in the risk of SMM among US- and African-born Black women in California.

### METHODS

- Dataset: linked vital records and hospital discharge data from the Department of Healthcare Access and Information (HCAI).
- Eligibility: Self-identified non-Hispanic Black women with births (live birth or stillbirth) in California 1997-2019 (n=636,364) and information on their country of birth on the vital record.
- Exposure: Maternal nativity (US-born or African-born).
- Outcome: SMM and SMM excluding transfusion-only cases. SMM is a composite outcome measured using a CDC index of 21 indicators identified from ICD-9 & ICD-10 diagnosis and procedure codes.

### RESULTS

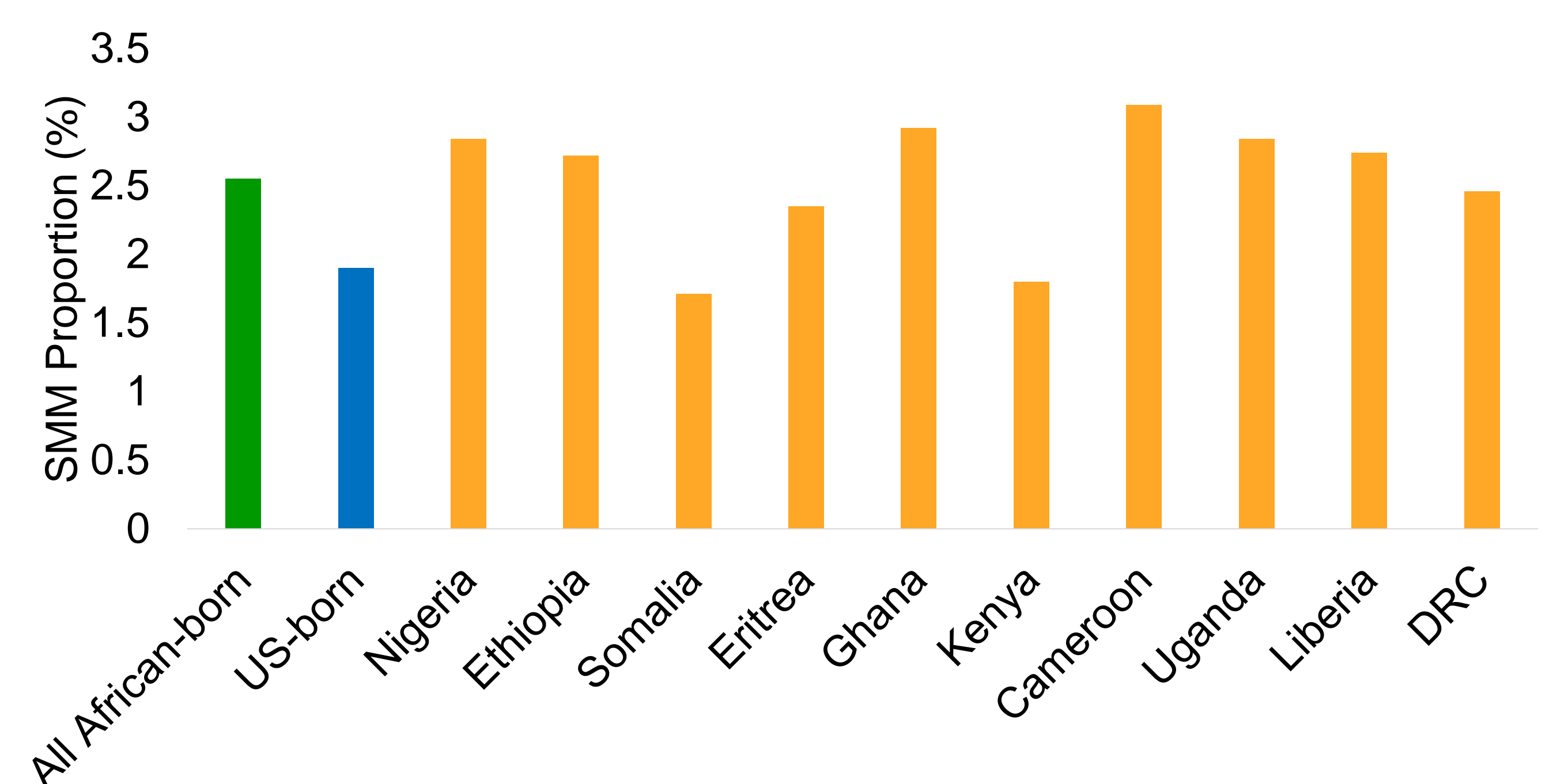
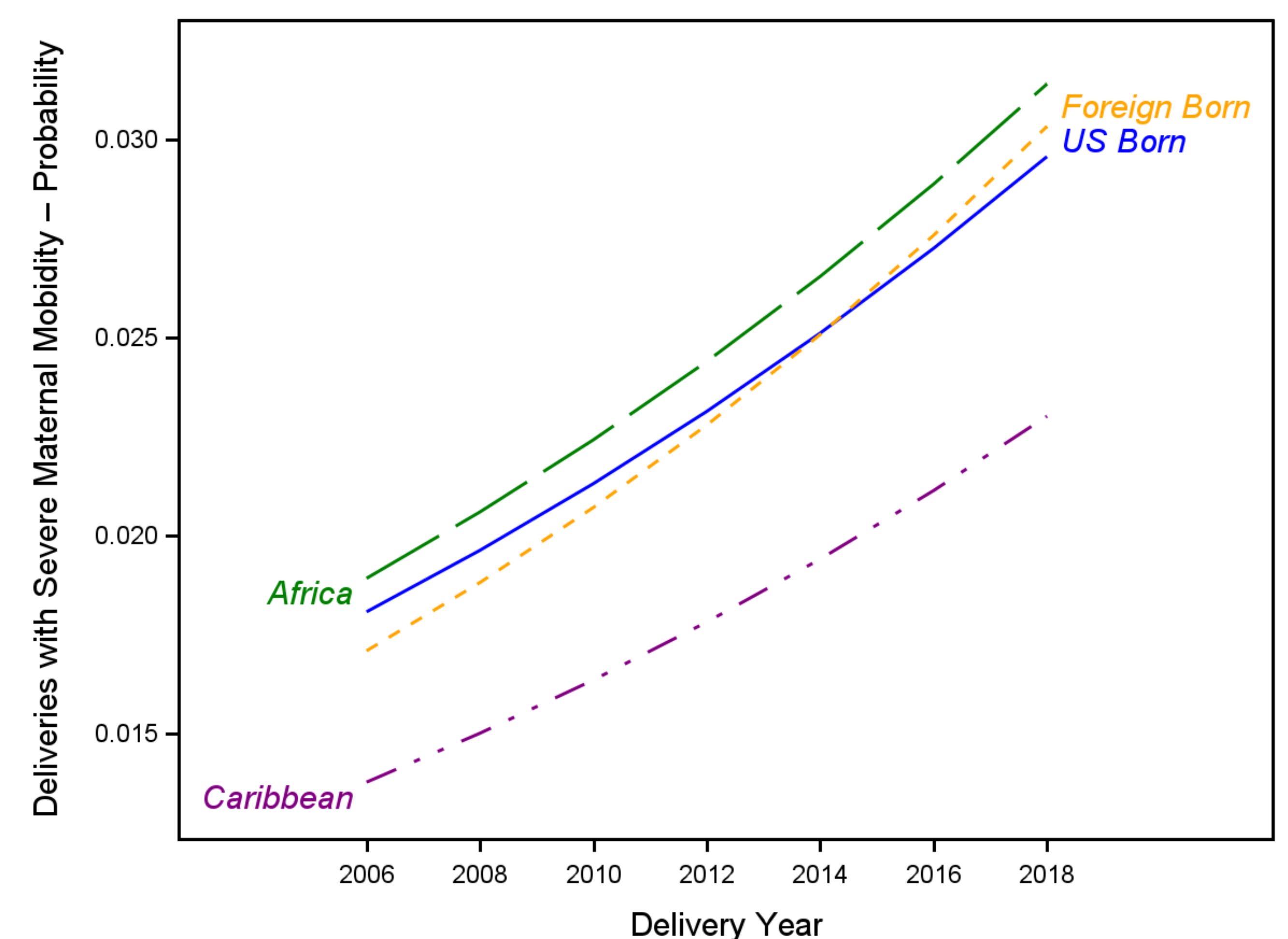
- While the probability of SMM increased steeply for all women during the study period, the trend was steepest for African-born women. African-born women also had the highest proportion of SMM (2.6%), compared to US-born (1.9%) women.
- Hysterectomy and sepsis were among the most frequent SMM complications for African-born Black women. While eclampsia and acute renal failure were more frequent among US-born Black women.

**Table 1. Incidence and odds ratios of SMM among African-born compared to US-born Black women**

Maternal nativity	SMM		SMM (excl. transfusion-only cases)	
	Incidence <sup>b</sup>	Adjusted OR <sup>c</sup> (95%CI)	Incidence <sup>b</sup>	Adjusted OR <sup>c</sup> (95%CI)
US-born	190	Reference	90	Reference
African-born <sup>a</sup>	260	1.2 (1.1, 1.3)	130	1.2 (1.1, 1.4)

<sup>a</sup> Data only shown for births from 2006 onwards, as country of birth information was unavailable for prior years. <sup>b</sup> Incidence per 10,000 birth hospitalizations. <sup>c</sup> Adjusted for delivery year, maternal education, insurance coverage for delivery, parity, preterm birth, obstetric comorbidity index, anemia and cesarean birth. Abbreviations: CI, confidence interval; OR, Odds Ratio; SMM, Severe Maternal Morbidity.

### RESULTS CONTINUED



### CONCLUSIONS

- In this study of SMM among Black women in California, the odds of SMM were significantly higher among African-born women, compared to US-born Black women.
- Our work highlights African immigrants as an important population to target with interventions to reduce SMM.
- Future studies should disaggregate SMM data among Black women as it may mask important nativity disparities.

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