

OBSTETRICS

Maternal outcomes by race during postpartum readmissions



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Background

Maternal race may be an important risk factor for postpartum readmissions and associated adverse outcomes.

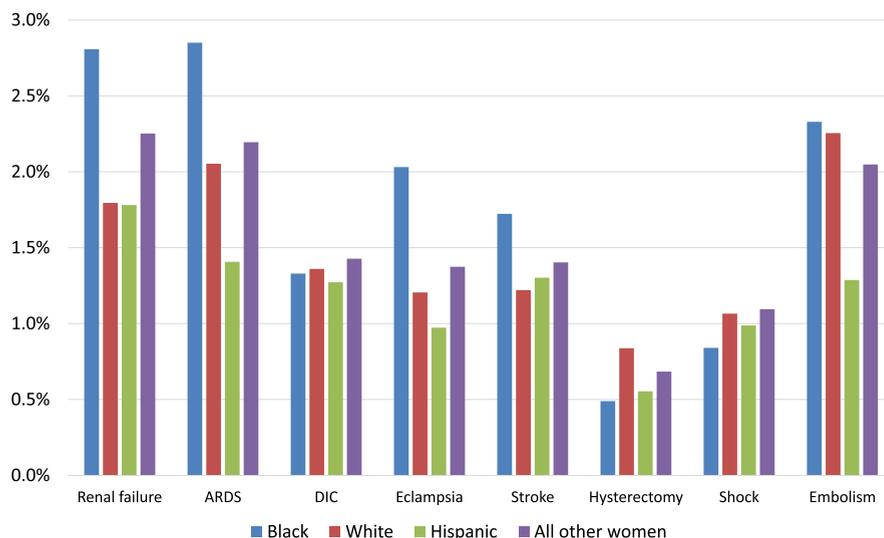
Objective

To determine the association of race with serious complications during postpartum readmissions.

Study Design

This repeated cross-sectional analysis used the National (Nationwide) Inpatient Sample from the Healthcare Cost and Utilization Project from 2012 to 2014. Women ages 15–54 readmitted postpartum after a delivery hospitalization were identified by Centers for Disease Control and Prevention criteria. Race and ethnicity were characterized as non-Hispanic white, non-Hispanic black, Hispanic, Asian or Pacific islander, Native American, other, and unknown. Overall risk for readmission by race was determined. Risk for severe maternal morbidity during readmissions by race was analyzed. Individual outcomes including pulmonary edema/acute heart failure and stroke also were analyzed by race. Log-linear regression models including demographics, hospital

FIGURE
Risk for individual severe morbidity diagnoses by maternal race



Compared with non-Hispanic white women, non-Hispanic black women were at significantly increased risk for acute renal failure, ARDS, eclampsia, and stroke ($P < .01$ for all). Black women were at significantly decreased risk for hysterectomy and shock ($P < .01$), whereas differences in DIC and embolism were not significantly different.

ARDS, acute respiratory distress syndrome; DIC, disseminated intravascular coagulation.

Aziz et al. Maternal outcomes by race during postpartum readmissions. *Am J Obstet Gynecol* 2019.

factors, and comorbid risk were used to analyze risk for severe maternal morbidity during postpartum readmissions.

Results

Of 11.3 million births, 207,730 (1.8%) women admitted postpartum from 2012 to 2014 were analyzed, including 96,670 white, 47,015 black, and 33,410 Hispanic women. Compared with non-Hispanic white women, non-Hispanic black women were at 80% greater risk of postpartum readmission (95% confidence interval, 79%–82%) whereas Hispanic women were at 11% lower

risk of readmission (95% confidence interval, 10%–12%). In unadjusted analysis, compared with non-Hispanic white women, non-Hispanic black women admitted postpartum were at 27% greater risk of severe maternal morbidity (95% confidence interval, 24%–30%) whereas Hispanic women were at 10% lower risk (95% confidence interval, 7%–13%). In the adjusted model, non-Hispanic black women were at 16% greater risk for severe maternal morbidity during readmission than non-Hispanic white women (95% confidence interval, 10%–22%), whereas Hispanic women were at 7%

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lower risk (95% confidence interval, 1%–12%). Differences in severe maternal morbidity risk between other racial groups and non-Hispanic white women were not significant. In addition to overall morbidity, non-Hispanic black women were at significantly greater risk for eclampsia, acute respiratory distress syndrome, and renal failure than other racial groups ($P<.05$ all) (Figure). Black women were at 126% greater risk for pulmonary edema/acute heart failure than white

women (95% confidence interval, 117%–136%).

Conclusion

Black women were more likely (1) to be readmitted postpartum, (2) to suffer severe maternal morbidity during readmission, and (3) to suffer life threatening complications such as pulmonary edema/acute heart failure. At-risk women including black women with cardiovascular risk factors may benefit from short-term postpartum follow-up. ■

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