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Severe maternal morbidity and mortality at the intersection of race and insurance status: a national serial cross-sectional study of United States births

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Objective

Medicaid, a public insurance program for low-income individuals, covers over 40% of United States births. It disproportionately serves racial minority groups who already face elevated obstetrical risks. Coverage gaps compared to private insurance may further exacerbate these adverse outcomes. Our objective was to assess severe maternal morbidity (SMM) and in-hospital mortality at the intersection of race and insurance status.

Study design

We analyzed obstetric deliveries from 2015-2022 using the National Inpatient Sample. Ten interaction terms compared Medicaid versus private insurance across White, Black, Hispanic, Asian, and Native American groups. SMM complications were defined using ICD-10 codes. Demographics were compared using bivariate tests [$p<0.05$ and standardized differences>0.2]. Multivariable logistic regression models estimated odds ratios and 95% confidence intervals of SMM and mortality, adjusted for preexisting/gestational comorbidities, year, caesarean section, and hospital region.

Results

Among 23.5 million weighted deliveries, 43.8% were insured by Medicaid. Medicaid coverage was higher among Black (66.7%), Hispanic (66.6%) and Native American (67.6%) individuals compared to White (32.3%) and Asian (27.9%) patients. Adjusted odds of SMM were higher among all intersectional groups compared to White patients with private insurance (all $p<0.001$). Within each racial category, SMM odds were significantly greater for the Medicaid versus private groups. However, increased odds of mortality were primarily observed for those with Medicaid rather than by race.

Conclusion

Racial disparities in SMM are amplified for those with public insurance. However, mortality risk is primarily driven by insurance rather than race. Policy reform ensuring equitable coverage is critical to mitigate obstetrical inequities.

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