Preterm Birth Risk and Maternal Nativity, Ethnicity and Race

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IMPORTANCE: Immigrant birthing people have lower rates of preterm birth compared with their US-born counterparts. This advantage and associated racial and ethnic disparities across the gestational age spectrum have not been examined nationally. OBJECTIVE: To examine associations of maternal nativity, ethnicity, and race with preterm birth. DESIGN, SETTING, AND PARTICIPANTS: This cohort study used birth certificates from the National Vital Statistics System to analyze in-hospital liveborn singleton births in the US between January 1, 2009, and December 31, 2018. Data were analyzed from January to June 2023. EXPOSURE: Mutually exclusive nativity, ethnicity, and race subgroups were constructed using nativity (defined as US-born or non–US-born), ethnicity (defined as Hispanic or non-Hispanic), and race (defined as American Indian or Alaska Native, Asian, Black, Native Hawaiian or Other Pacific Islander, White, or other [individuals who selected other race or more than 1 race]). MAIN OUTCOMES AND MEASURES: The primary outcome of interest was preterm birth. Modified Poisson and multinomial logistic regression models quantified relative risk (RR) of preterm birth overall (<37 weeks' gestation) and by gestational category (late preterm: 34-36 weeks' gestation; moderately preterm: 29-33 weeks' gestation; and extremely preterm: <29 weeks' gestation) for each maternal nativity, ethnicity, and race subgroup compared with the largest group, US-born non-Hispanic White (hereafter, White) birthing people. The RR of preterm birth overall and by category was also measured within each racial and ethnic group by nativity. Models were adjusted for maternal demographic and medical covariates, birth year, and birth state. RESULTS: A total of 34?468?901 singleton live births of birthing people were analyzed, with a mean (SD) age at delivery of 28 (6) years. All nativity, ethnicity, and race subgroups had an increased adjusted risk of preterm birth compared with US-born White birthing people except for non–US-born White (adjusted RR, 0.85; 95% CI, 0.84-0.86) and Hispanic (adjusted RR, 0.98; 95% CI, 0.97-0.98) birthing people. All racially and ethnically minoritized groups had increased adjusted risks of extremely preterm birth compared with US-born White birthing people. Non–US-born individuals had a decreased risk of preterm birth within each subgroup except non-Hispanic Native Hawaiian or Other Pacific Islander individuals, in which immigrants had significantly increased risk of overall (adjusted RR, 1.07; 95% CI, 1.01-1.14), moderately (adjusted RR, 1.10; 95% CI, 0.92-1.30), and late (adjusted RR, 1.11; 95% CI, 1.02-1.22) preterm birth than their US-born counterparts. CONCLUSIONS AND RELEVANCE: Results of this cohort study suggest heterogeneity of preterm birth across maternal nativity, ethnicity, and race and gestational age categories. Understanding these patterns could aid the design of targeted preterm birth interventions and policies, especially for birthing people typically underrepresented in research.

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