

## FELLOWS PLENARY

### Abstracts 36-43

#### 36 Racially inequitable definitions of anemia perpetuate disparities in maternal outcomes: time to change



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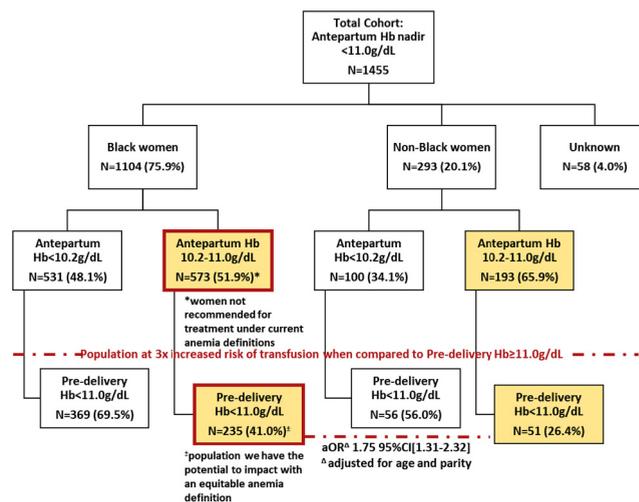
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**OBJECTIVE:** When defining anemia in pregnancy, ACOG recommends lower hemoglobin (Hb) cutoffs for Black vs. non-Black women (3rd trimester Hb<10.2g/dL in Black women; <11g/dL in non-Black women). We aimed to determine the impact of this definition on Hb at delivery and blood transfusion rates.

**STUDY DESIGN:** We performed a prospective cohort study of women with antepartum Hb<11g/dL delivering at our institution from 2018-2019. During the study period, treatment of anemia with iron supplementation occurred per race-based recommendations. For example, using these definitions, Hb=10.3g/dL in a non-Black woman warranted iron, while the same Hb in a Black woman did not. Antepartum anemia was categorized by severity (Hb<10.2g/dL; 10.2-11.0g/dL) and analyses stratified by self-reported race (Black; non-Black).

**RESULTS:** The Figure depicts the cohort (n=1455) by antepartum Hb and race. 51.9% of Black women had an antepartum Hb 10.2-11.0g/dL; unlike the rest of the cohort, these women did not meet the race-based anemia cutoff for treatment. As a result, 41.0% of Black women with antepartum Hb 10.2-11.0g/dL remained <11g/dL at delivery compared to 26.4% of non-Black women with antepartum Hb 10.2-11.0g/dL (p<0.001). This equates to 75% increased odds of presenting for delivery with Hb<11.0 for Black vs. non-Black women even when controlling for age and parity (aOR 1.75 95%CI [1.31-2.32]). Importantly, the transfusion rate was the same among Black and non-Black women who presented for delivery with Hb<11g/dL (8.4% vs. 9.4%, p=0.76), and all women with Hb<11g/dL at delivery were at 3 times higher odds of transfusion when compared to those ≥11g/dL (aOR 3.43 95%CI[2.09-5.65]).

**CONCLUSION:** Hb<11g/dL at delivery, regardless of race, is a risk factor for transfusion, and Black women are more likely to present to delivery with Hb<11g/dL due to differential treatment of anemia by race. If these Black women had been treated, 1 in 7 may have Hb≥11g/dL by delivery, significantly decreasing transfusion risk. Race-based treatment thresholds need to change to eradicate systemic inequities that perpetuate disparities in maternal morbidity.



#### 37 The shadow of social determinants: Geographic obstetric disparities predict regional COVID-19 burden



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**OBJECTIVE:** Similar to obstetrics outcomes, rates of SARS-CoV-2 (COVID-19) infection are not homogeneously distributed among populations; risk factors accumulate in discrete locations. Our objective was to investigate the geographical correlation between pre-COVID-19 regional preterm birth (PTB) disparities and subsequent COVID-19 disease burden.

**STUDY DESIGN:** This is a retrospective, ecological cohort study of a regional birth database from 2004-2018 merged with publicly available community resource data. COVID-19 rates from 2020 were used to allocate zip codes to “low,” “moderate,” and “high” groups as defined by median COVID-19 diagnosis rates. These COVID-19 cohorts were then associated with poverty and educational attainment data from the US Census Bureau. The dataset was analyzed for a primary outcome of PTB using ANOVA. Geographic information system (GIS) mapping was used to visualize PTB rates and COVID-19 disease rates by zip code.

**RESULTS:** 123,909 births within 38 zip codes were included. The median COVID-19 rate was 616.5 (per 100K). Historical community prevalence of PTB varied directly with 2020 cohort prevalence of COVID-19 and reached significance for PTB < 28 weeks and periviable births. Odds of PTB < 28 weeks were significantly higher in the “high” COVID-19 cohort compared to the “low” COVID 19 cohort (OR 3.27 (95% CI 2.42-4.42)). COVID-19 prevalence was directly associated with number of individuals below poverty level and indirectly associated with median gross income and educational attainment (Figure 1). GIS mapping demonstrated ZIP code