

Hispanic Ethnicity and Nativity Disparities in Maternal Morbidity

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PURPOSE

To examine disparities in maternal morbidity by Hispanic ethnicity and nativity status for mothers who gave birth in Minnesota from 2011-2016.

METHODS

Data source and sample

- MDH natality data for births in Minnesota from 2011-2016
- Self-identified as Hispanic (n=18,407)
- Non-Hispanic White women (n=243,214) and non-Hispanic Black women (n=26,674) (comparison groups)

Measures

- Hispanic subgroups: Mexican, Puerto Rican, Central/South American, and other/multiple
- Nativity status (US Born vs Foreign Born)

Outcomes

- Maternal morbidities from birth certificate checkboxes
- Other checkboxes: cord prolapse, seizure during labor, placental abruption, placenta previa, ruptured uterus, hysterectomy, admission to ICU
- other morbidity (open response)
- C-section delivery

Analysis

- Prevalence ratios, cross tabulations, chi-square tests

RESULTS

- Overall, 4.3% of all MN women and 6.3% of Hispanic women experienced at least one maternal morbidity documented on the vital record.
- US Born Black, Non-Hispanic infants had much higher rates of low birth weight infants (13.2%) compared to US Born White, Non-Hispanic infants (5.5%).
- Puerto Rican's not born in Puerto Rico also had higher rates of infants born with low birth weight (12.1%) or born preterm (13.8%).

Table 1. Selected characteristics by race/ethnicity and nativity status

Nativity	White, Non-Hispanic		Black, Non-Hispanic		Hispanic	
	US	Foreign	US	Foreign	US	Foreign
Teen Births (<19 years)	1.5%	1.1%	10.9%	0.8%	11.8%	4.3%
Education < HS	2.5%	5.2%	17.1%	34.9%	21.3%	52.0%
Married	88.3%	96.1%	38.3%	88.2%	65.3%	68.7%
PNC<adequate	16.7%	28.6%	33.5%	39.3%	26.1%	24.8%
Twins or more	4.0%	3.5%	4.2%	3.3%	3.1%	2.0%
Low BW <2500 grams	5.5%	5.3%	13.2%	6.7%	6.5%	5.6%
Preterm <37 weeks	8.0%	7.0%	13.2%	6.8%	9.0%	7.5%

HS = High School PNC= Prenatal Care

Table 2. Selected characteristics by Hispanic subgroup and nativity status

Nativity	Mexican		Puerto Rican		Central/South American		Multiple/ Other	
	US	Foreign	Not PR	PR	US	Foreign	US	Foreign
Teen Births (<19)	12.6%	4.7%	6.2%	4.3%	11.8%	3.9%	10.3%	2.6%
Education < HS	23.1%	56.9%	15.8%	15.1%	10.2%	47.0%	18.6%	30.5%
Married	65.0%	66.7%	65.8%	83.2%	80.1%	71.2%	61.4%	75.9%
PNC < adequate	26.1%	23.4%	27.4%	24.9%	21.1%	27.7%	26.9%	27.6%
Twins or more	2.9%	2.0%	6.2%	7.6%	2.6%	1.6%	3.2%	3.1%
Low BW <2500 g	5.9%	5.6%	12.1%	9.7%	7.6%	5.2%	7.1%	6.7%
Preterm <37 weeks	8.2%	7.4%	13.8%	9.7%	9.6%	7.1%	10.3%	8.7%

HS = High School, PNC = Prenatal Care, g = grams, PR = Puerto Rico

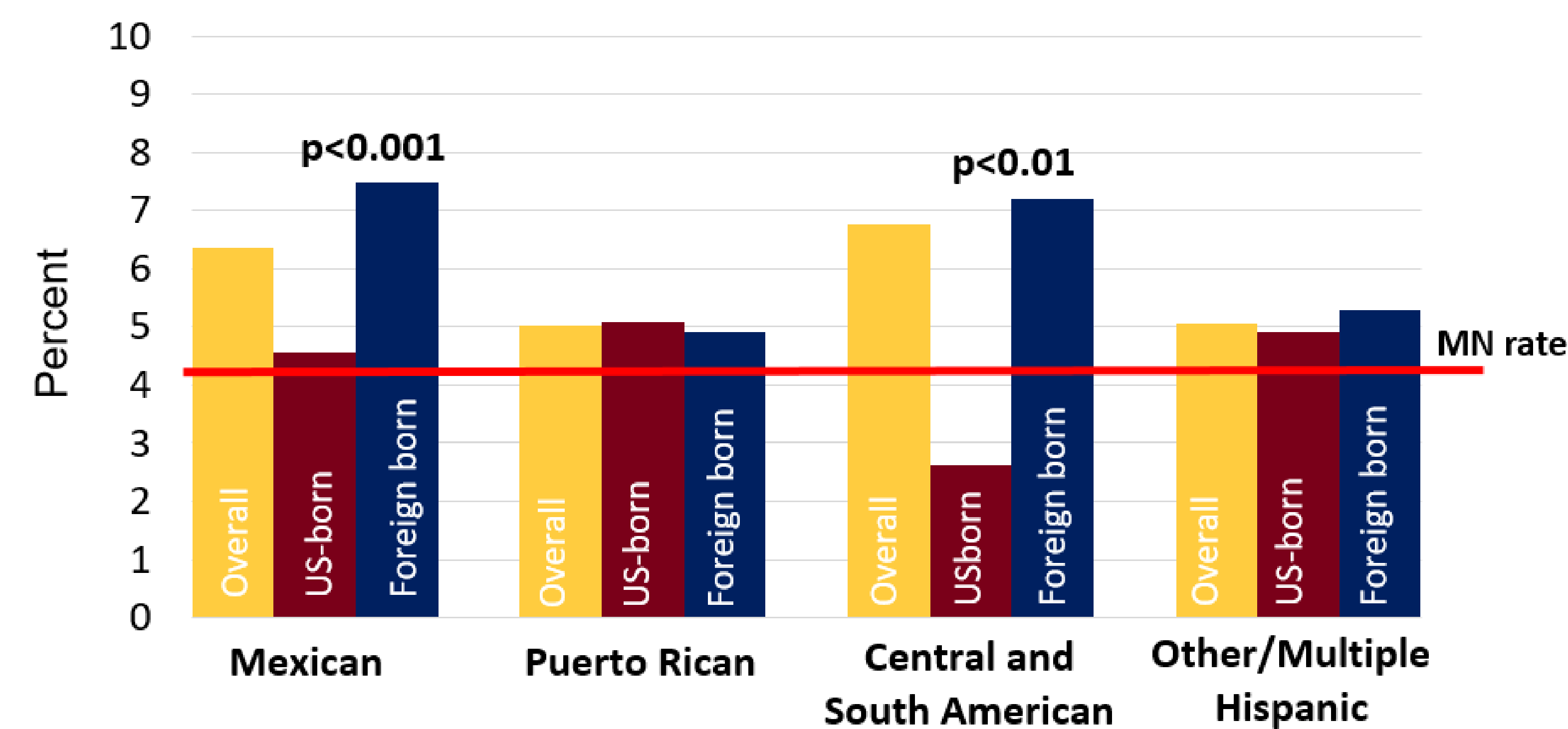


Figure 1. Any morbidity by Hispanic subgroup and nativity status

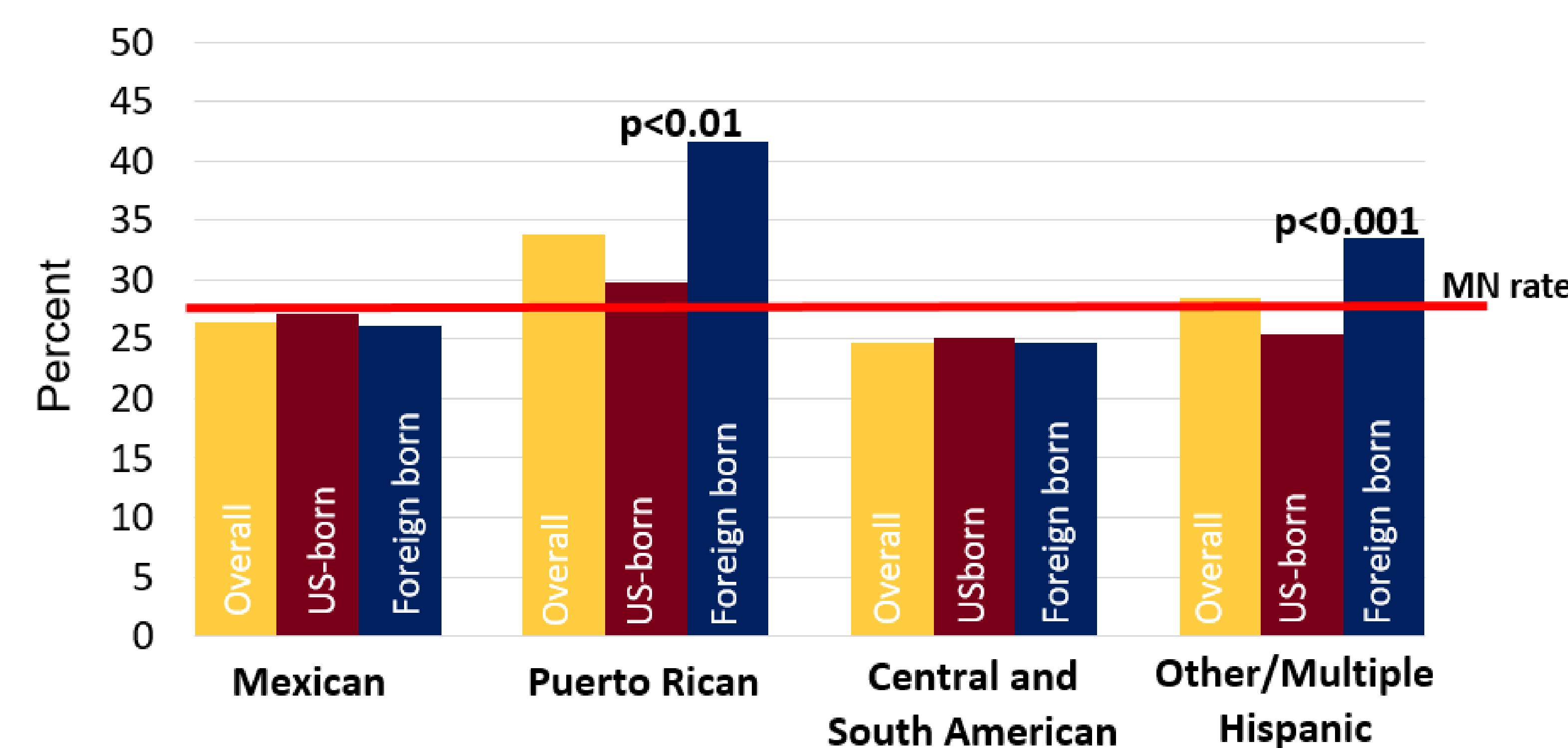


Figure 2. C-section delivery by Hispanic subgroup and nativity status

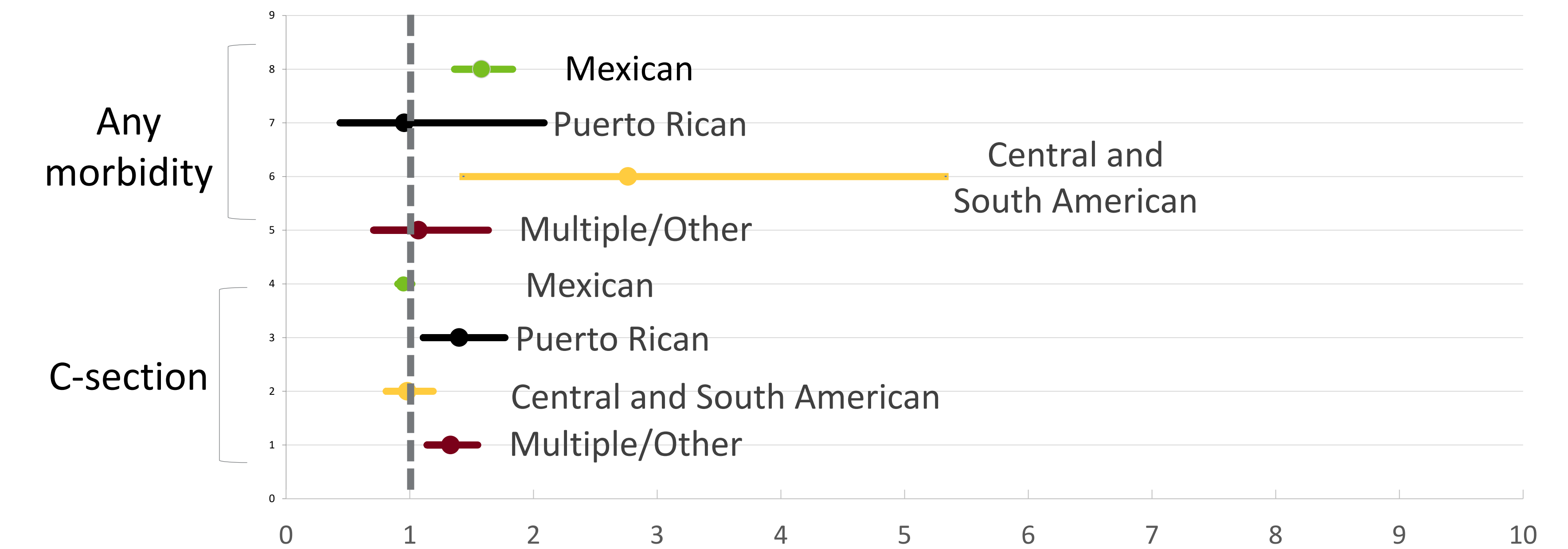


Figure 3. Prevalence ratios (foreign-born vs. US-born) by Hispanic Subgroup

Table 3. Maternal morbidities by race/ethnicity, nativity

Nativity	White, Non-Hispanic			Black, Non-Hispanic			Hispanic			Across races
	All (%)	US (%)	Foreign (%)	All (%)	US (%)	Foreign (%)	All (%)	US (%)	Foreign (%)	
Maternal transfusion	0.26	0.26	0.21	0.36	0.34	0.36	0.38	0.42	0.36	***
Placental abruption	0.38	0.38	0.37	0.51	0.70	0.42**	0.39	0.39	0.39	**
Placenta previa	0.29	0.29	0.23	0.32	0.34	0.31	0.37	0.31	0.41	
3rd/4th° perineal laceration	1.20	1.20	1.12	0.96	0.34	1.25***	0.77	0.73	0.79	***
Other checkboxes	0.28	0.28	0.24	0.61	0.54	0.65	0.35	0.39	0.32	***
Other specified	1.77	1.77	1.71	3.45	3.27	3.54	4.53	2.82	5.51***	***
Any morbidity	3.85	3.86	3.62	5.58	4.93	5.89***	6.28	4.56	7.27***	***
C-section	27.29	27.40	24.56***	28.83	29.10	28.70	26.53	27.28	26.15	***

*p<0.05, **p<0.01, *** p<0.001

CONCLUSIONS

- Prevalence of poor infant outcomes varied by race and nativity status.
- Strengths include exploration of birth outcomes and examination of Hispanic subgroups not previously studied.
- The study is limited by small subgroup sample sizes. There is likely measurement error with the morbidity checkboxes such as underreporting. Also, the other specified option includes items that are lower severity or might not be considered morbidities.
- The validity of the maternal morbidity checkboxes is unknown. Thus, we must be cautious in the interpretation of these results.
- Further research will examine factors that contribute to or mediate these differences.