Racial, Ethnic, and Language Disparities in Type of Anesthesia for Cesarean Delivery in Obstetric Patients

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Background

- Health disparities in medicine remains a predominant concern for health care providers and patients.[1, 2]
- Differences in geography, lack of access to health coverage, language barriers, cultural barriers, socioeconomic factors, education, provider stereotyping, or non-culturally respectful care all can affect access to modalities of care and outcomes.[2]
- Regional anesthesia has become the default anesthetic technique for cesarean deliveries due to decreased risk of morbidity and mortality when compared to general anesthesia (GA).[1, 3]

Objective

This study aims to recognize any racial, ethnic, or language disparities in the type of anesthesia received by minority women who had cesarean deliveries at Oregon Health and Science University (OHSU) hospital.

Methods

- Retrospective cohort study of 4726 pregnant patients who underwent cesarean deliveries at OHSU between January 2012 to March 2022.
- Data collection was obtained by an IT specialist using the Epic Clarity package to extract predetermined variables from electronic health records.
- Chi-square analysis was employed for statistical comparisons.
- Multivariable logistic regression analysis was used to examine association of race and ethnicity with GA while adjusting for maternal age and insurance type.
- Similarly, multivariable logistic regression analysis was used to examine association of language with GA after adjusting for age and preterm birth.

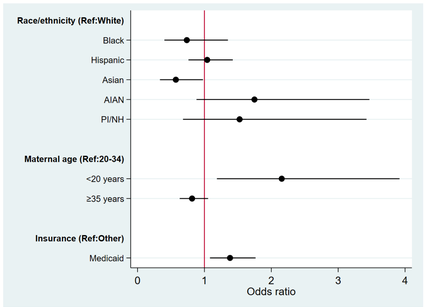
Results

Table 1. Maternal Demographics by Anesthesia Type at OHSU (n=4,726)

	Anesthesia Type		P Value*
	Regional (n=4381)	General (n=345)	
Total	92.7%	7.3%	
Race/Ethnicity			
Non-Hispanic White	69.9%	68.9%	<0.05
Non-Hispanic Black	4.2%	3.6%	
Hispanic	14.7%	18.0%	
Asian	8.4%	4.5%	
American Indian/Alaskan Native	1.5%	2.9%	
Pacific Islander/Native Hawaiian	1.2%	2.1%	
Language Spoken			
English	91.1%	89.8%	0.44
Other	8.9%	10.%	
Age (years)			
<20	1.6%	4.4%	<0.001
20-34	64.0%	68.7%	
≥35	34.4%	26.9%	
Insurance			
Medicaid	38.3%	49.6%	<0.001

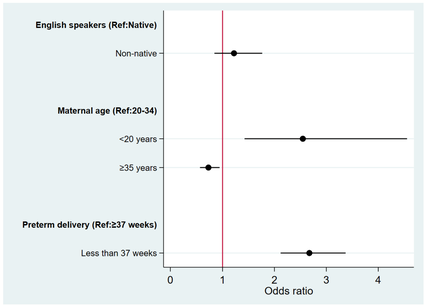
*Chi-square test

Figure 1. Multivariable logistic regression results showing association of race and ethnicity with GA. Adjusted odds ratio (95% CI) presented.



- Asian pregnant individuals were LESS likely to receive GA (aOR 0.57; 95% CI 0.33-0.97).
- Pregnant individuals <20 years old were MORE likely to receive GA (aOR 2.16; 95% CI 1.19-3.92).
- Pregnant individuals with Medicaid were MORE likely to receive GA (aOR 1.38; 95% CI 1.08-1.76).

Figure 2. Multivariable logistic regression results showing association of non-native English speakers with GA. Adjusted odds ratio (95% CI) presented.



- Pregnant individuals <20 years old were MORE likely to receive GA (aOR 2.55; 95% CI 1.42-4.56).
- Pregnant individuals ≥35 years old were LESS likely to receive GA (aOR 0.73; 95% CI 0.57-0.94).
- Pregnant individuals that delivered preterm (<37 weeks) were MORE likely to have received GA (aOR 2.67; 95% CI 2.12-3.37).

Conclusion

- Race/ethnicity of pregnant individuals and non-native English speakers were not associated with increased odds of receiving general anesthesia when undergoing cesarean deliveries.
- Delivery at maternal ages <20 and use of Medicaid insurance were significantly associated with receiving general anesthesia.
- Future studies should assess causes of disparities and address solutions to mitigate health disparities in medicine.

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