

22 Communication and Linguistic Barriers and Perinatal Outcomes Amongst Women with and without Diabetes



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OBJECTIVE: Communication and linguistic barriers (CLB) in clinical care inhibit the relationship between provider and patient. CLB may be a risk factor for adverse perinatal outcomes (APO), especially when counseling is a critical part of care. We examined whether the relationship between CLB and APO differed between women with and without diabetes mellitus (DM).

STUDY DESIGN: Secondary analysis of 10,038 women in a multi-site prospective cohort study. Excluded women had missing data on key variables, demise <20 weeks' gestation, or fetal anomaly/aneuploidy. CLB was defined as any of: Rapid Estimate Adult Literacy in Medicine-Short Form score <7, self-defined poor English proficiency, or study interview in Spanish. Outcomes were a composite for obstetric morbidity (preterm birth, cesarean delivery, and hypertensive disorder of pregnancy) and neonatal morbidity (small or large for gestational age, 5-minute Apgar <7, NICU admission, neonatal hypoglycemia, or stillbirth). Difference in association of CLB with obstetric and neonatal outcomes for women with and without DM were estimated with adjusted logistic regression, including a term to assess the interaction between CLB and DM. Covariate selection was based on univariable analyses and clinical relevance.

RESULTS: Of 8,511 women included, 20.8% had CLB. Women with CLB were more likely to be younger, self-identify as Black or Hispanic, have government insurance, use tobacco, and have a poorer diet. The association between CLB and obstetric morbidity differed by DM status (interaction $p < 0.001$, Figure). Among women with DM, CLB was associated with a higher odds of maternal morbidity (aOR 2.52, 95% CI 1.50-4.23) although this association was not present among women without DM (aOR 0.99, 95% CI 0.87-1.13). CLB was significantly associated with neonatal morbidity, but there was no difference between women with and without DM (interaction $p > 0.05$, Figure).

CONCLUSION: CLB were associated with higher obstetric morbidity among women with DM, and with poor neonatal outcomes regardless of DM status. Addressing CLB may improve APO, particularly among women with DM.

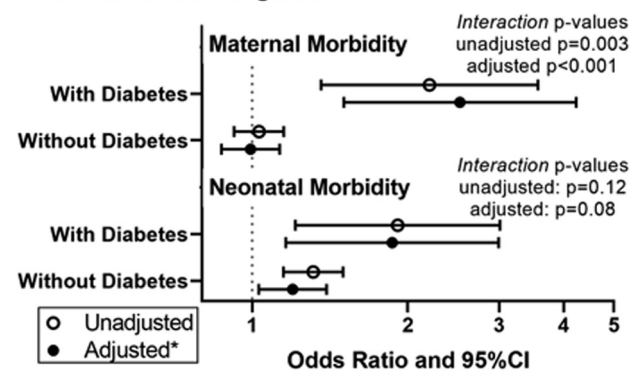
Table: Obstetric and neonatal outcomes for women with and without risk for communication and linguistic barriers

Variable	Value	CLB N=1772	No CLB N=6739	p
Obstetric Composite	Yes	713 (40.24)	2599 (38.57)	0.199
Gestational age at delivery	Preterm birth (<37 weeks)	183 (10.33)	496 (7.36)	<.001
	Term (> 37 weeks)	1589 (89.67)	6243 (92.64)	
Mode of Delivery	Cesarean	474 (26.76)	1819 (27.00)	0.84
	Vaginal	1297 (73.24)	4917 (73.00)	
Preeclampsia/Gestational Hypertension	Hypertensive Disorder of Pregnancy	253 (14.31)	869 (12.90)	0.119
Neonatal Composite	Yes	413 (23.31)	1240 (18.40)	<.001
Neonatal diagnoses	SGA*	71 (4.01)	199 (2.95)	0.024
	LGA*	37 (2.09)	183 (2.72)	0.139
	Neonatal hypoglycemia**	48 (2.71)	161 (2.39)	0.439
	5 minute Apgar <7	45 (2.54)	131 (1.94)	0.117
	NICU*	286 (16.14)	845 (12.54)	<.001
Stillbirth	No	1760 (99.32)	6714 (99.63)	0.081
	Yes	12 (0.68)	25 (0.37)	

*SGA- Small for gestational age, LGA- Large for gestational age, NICU- neonatal intensive care unit
** Neonatal hypoglycemia requiring treatment

Figure: Odds ratio for morbidity associated with communication and linguistic barriers

Figure: Odds ratio for morbidity associated with communication and linguistic barriers



Interaction testing whether difference in association between CLB and morbidity differed between women with and without DM
*Adjusted for Age (35+ vs. <35), Race (White, non-Hispanic black, Hispanic, other), Tobacco use, BMI (continuous variable)

23 Race Matters: Maternal Morbidity in the Military Health System



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OBJECTIVE: In the United States, Black women are 3-4 times more likely to die from childbirth, and have a twofold greater risk of maternal morbidity than their White counterparts. This disparity is theorized to be due to differences in access to health care and/or socioeconomic status. Military service members and their dependents are a diverse community and have equal access to healthcare and similar socioeconomic statuses. We hypothesize that universal access to health care, as seen in the military health care system, leads to similar rates of maternal morbidity regardless of race.

STUDY DESIGN: We reviewed data from the Neonatal Perinatal Information Center special report from April 1 2018 through March