

Supplemental Online Content

Mi T, Hung P, Li X, McGregor A, He J, Zhou J. Racial and ethnic disparities in postpartum care in the greater Boston area during the COVID-19 pandemic. *JAMA Netw Open*. 2022;5(6):e2216355. doi:10.1001/jamanetworkopen.2022.16355

eTable. Full Model of Multinomial Logistic Regression With Covariates

This supplemental material has been provided by the authors to give readers additional information about their work.

eTable. Full Model of Multinomial Logistic Regression With Covariates

	Canceled vs. Attended		Non-scheduled vs. Attended	
	Average marginal effects (%) (95% CI)	P-value	Average marginal effects (%) (95% CI)	P-value
Race and ethnicity				
Asian	-1.2 (-2.3, 0.0)	.05	-1.1 (-2.1, -0.1)	.03
Black	1.9 (-0.4, 4.2)	.11	1.6 (0.2, 3.0)	.02
Hispanic	1.9 (-0.2, 4.0)	.07	3.7 (2.6, 4.9)	<.001
White	Reference		Reference	
Other ^a	0.0 (-2.2, 2.2)	.99	-0.6 (-3.0, 1.8)	.61
Delivery month	0.1 (0.0, 0.2)	.06	0.7 (0.5, 0.8)	<.001
Time period				
Pre-pandemic	Reference		Reference	
Early-pandemic	1.2 (-1.0, 3.4)	.27	33.7 (27.8, 39.5)	<.001
Late-pandemic	0.4 (-0.4, 1.2)	.34	22.2 (20.2, 24.2)	<.001
Level changes				
Level changes in early-pandemic compared to pre-pandemic by race and ethnicity				
Asian	8.1 (4.9, 11.2)	<.001	10.3 (7.7, 13.0)	<.001
Black	5.2 (0.5, 9.9)	.03	16.2 (11.3, 21.1)	<.001
Hispanic	6.6 (4.3, 8.9)	<.001	15.0 (10.1, 19.8)	<.001
White	4.8 (0.8, 8.9)	.02	16.2 (13.2, 19.1)	<.001
Other	4.5 (-4.2, 13.2)	.31	15.4 (7.0, 23.8)	<.001
Level changes in late-pandemic compared to pre-pandemic by race and ethnicity				
Asian	-0.1 (-0.4, 0.1)	.33	-2.7 (-3.5, -2.0)	<.001
Black	-0.1 (-1.0, 0.7)	.79	-1.3 (-2.3, -0.3)	.01
Hispanic	-0.3 (-1.1, 0.4)	.40	-1.0 (-1.6, -0.3)	.002
White	0.0 (0.0, 0.1)	.35	-3.0 (-3.3, -2.8)	<.001
Other	0.0 (-0.2, 0.3)	.91	-2.5 (-4.1, -0.9)	.002
Changes in monthly trend				
Changes in monthly trends between race and ethnicity groups in pre-pandemic				
Asian	-0.1 (-0.2, 0.1)	.54	0.0 (-0.5, 0.4)	.84
Black	0.1 (-0.2, 0.5)	.47	-0.3 (-1.0, 0.4)	.40
Hispanic	0.2 (-0.1, 0.4)	.24	-0.3 (-0.7, 0.2)	.22
White	Reference		Reference	
Other	-0.1 (-0.5, 0.3)	.75	0.0 (-0.9, 0.9)	.99
Changes in monthly trends between race and ethnicity groups in early-pandemic				
Asian	-1.8 (-7.0, 3.4)	.49	6.7 (-2.2, 15.6)	.14
Black	-1.1 (-5.7, 3.5)	.64	-4.4 (-17.9, 9.2)	.53
Hispanic	2.7 (-1.0, 6.3)	.15	-12.0 (-20.5, -3.5)	.006
White	Reference		Reference	
Other	-1.0 (-11.5, 9.5)	.85	-2.3 (-24.5, 20.0)	.84
Changes in monthly trends between race and ethnicity groups in late-pandemic				
Asian	-0.1 (-0.2, 0.0)	.17	0.1 (-0.3, 0.6)	.54
Black	0.1 (-0.1, 0.2)	.21	1.1 (0.6, 1.6)	<.001
Hispanic	0.03 (-0.1, 0.1)	.56	1.3 (0.9, 1.6)	<.001
White	Reference		Reference	

Other	-0.1 (-0.2, 0.1)	.42	0.4 (-0.2, 1.0)	.23
Age				
<18	2.4 (-2.0, 6.7)	.29	1.7 (-4.8, 8.1)	.61
18-24	1.6 (0.1, 3.1)	.04	0.3 (-1.1, 1.7)	.65
25-34	Reference		Reference	
35-44	0.1 (-0.3, 0.6)	.57	0.9 (0.0, 1.8)	.06
≥45	-1.6 (-3.6, 0.5)	.14	-0.1 (-5.2, 5.0)	.97
Marital status				
Single	2.3 (0.7, 3.9)	.004	2.5 (1.6, 3.5)	<.001
Married/life partner	Reference		Reference	
Other ^a	2.1 (0.0, 4.1)	.05	5.1 (3.0, 7.2)	<.001
PNC attendance				
Delayed PNC	3.78 (3.42, 4.17)	<.001	11.89 (11.19, 12.63)	<.001
Timely PNC	Reference		Reference	
GA at delivery				
<28	1.7 (-1.7, 5.0)	.34	-4.1 (-11.3, 3.2)	.27
28-36	1.3 (0.1, 2.6)	.04	-2.9 (-4.4, -1.4)	<.001
≥37	Reference		Reference	
Delivery mode				
Natural Vaginal	Reference		Reference	
Cesarean	0.2 (-0.2, 0.6)	.30	-2.9 (-3.7, -2.1)	<.001
VBAC	0.6 (-0.7, 1.9)	.37	-0.8 (-4.2, 2.7)	.67
Other	-1.1 (-35.6, 33.5)	.95	-11.4 (-23.5, 0.7)	.07
Severe Morbidity^b				
Positive	0.0 (-1.4, 1.4)	.99	0.1 (-3.4, 3.5)	.97
Negative	Reference		Reference	
Diabetes				
Positive	0.9 (0.1, 1.7)	.03	-2.7 (-3.9, -1.5)	<.001
Negative	Reference		Reference	
Hypertension				
Positive	-0.3 (-0.9, 0.3)	.33	-3.5 (-4.5, -2.5)	<.001
Negative	Reference		Reference	
Depression				
Positive	2.1 (0.3, 4.0)	.02	-1.9 (-3.1, -0.8)	.001
Negative	Reference		Reference	
Smoking				
Positive	3.1 (0.1, 6.0)	.04	2.8 (-0.7, 6.2)	.12
Negative	Reference		Reference	
County-level vulnerability^c				
Bottom quartile	Reference		Reference	
Second quartile	-5.3 (-9.3, -1.3)	.01	7.2 (4.2, 10.3)	<.001
Third quartile	-0.9 (-3.8, 2.1)	.57	-2.2 (-5.4, 1.0)	.17
Top quartile	-4.6 (-8.2, -0.9)	.01	3.0 (-0.1, 6.0)	.06
Hospital				
BWH	Reference		Reference	
CDH	-4.4 (-5.7, -3.1)	<.001	10.1 (7.5, 12.8)	<.001
MGH	0.2 (-0.6, 1.0)	.58	15.7 (14.8, 16.7)	<.001
MVH	-9.1 (-10.2, -8.0)	<.001	84.4 (81.7, 87.1)	<.001
NCH	1.5 (-2.1, 5.1)	.41	-2.3 (-6.4, 1.9)	.29
NWH	-7.1 (-8.1, -6.2)	<.001	26.7 (25.8, 27.6)	<.001
SLM	-4.7 (-5.8, -3.6)	<.001	22.7 (21.3, 24.1)	<.001
WDH	-9.1 (-10.1, -8.0)	<.001	26.5 (24.7, 28.3)	<.001

Note. Pre-pandemic: January 2019-December 2019; early-pandemic: January 2020-March 2020; late-pandemic: April 2020-November 2021.

^aOther racial groups include American Indian or Alaska Native, Native Hawaiian or Other Pacific Islander, and multiple races.

^bSevere maternal morbidity was identified with the CDC list of 21 indicators, including acute myocardial infarction, aneurysm, acute renal failure, adult respiratory distress syndrome, amniotic fluid embolism, cardiac arrest/ventricular fibrillation, conversion of cardiac rhythm, disseminated intravascular coagulation, eclampsia, heart failure/arrest during surgery or procedure, puerperal cerebrovascular disorders, pulmonary edema/acute heart failure, severe anesthesia complications, sepsis, shock, sickle cell disease with crisis, air and thrombotic embolism, blood products transfusion, hysterectomy, temporary tracheostomy, and ventilation.

^cSocial vulnerability was indicated by the social vulnerability index and was categorized into quartiles. Higher quartile indicates greater vulnerability.

Abbreviations: GA-gestational age; PNC-prenatal care; BWH-Brigham and Women's Hospital; CDH-Cooley Dickinson Hospital; MGH-Massachusetts General Hospital; MVH-Martha's Vineyard Hospital; NCH-Nantucket Cottage Hospital; NWH-Newton-Wellesley Hospital; SLM-Salem Hospital; WDH-Wentworth-Douglass Hospital.