

# Heart to Heart: Discovering the Association between Cardiovascular Disease and Maternal Morbidity among Black Women in the Southern United States

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## Introduction

Cardiovascular disease (CVD) is responsible for over 33 percent of pregnancy-related deaths in the United States. Although CV episodes have been reduced in the United States, the risk of CVD is disproportionately prominent among Black individuals residing in the South.

Black women in the U.S. are also 3-4 times more likely to die from pregnancy-related deaths in comparison to their white counterparts. Out of the ten states that experience the highest maternal mortality and morbidity rates, 6 of said states are located in the South. Socioeconomic status, poor or lack of access to equitable healthcare resources are leading factors in both high maternal morbidity rates and high rates of CVD within the Black community.

**This descriptive study explores the association between cardiovascular disease and maternal morbidity among Black women in the South.**

## Methods

### Data Analysis:

This frequency-trend analysis explored the association between cardiovascular disease and maternal morbidity among Black women in the South.

### Variables:

Race/ethnicity, pre-pregnancy diabetes, gestational diabetes, pre-pregnancy hypertension, gestational hypertension, maternal morbidity, and location were assessed using data from the National Vital Statistics System (NVSS) via CDC Wonder from 2016-2020.



## Results

**North Carolina was the only state that consistently reported maternal morbidity for each CVD risk factor (see Table 1).**

**Many states in the South failed to report maternal morbidity entirely for mothers diagnosed with pre-pregnancy or gestational CVD risk factors; therefore, associations were not able to be tested.**

Table 1. Birth and Maternal Morbidity among Black Women in Southern U.S. states with select Chronic Cardiovascular Health conditions from 2016-2020 (per 100,000 births/deaths)

State	PP Diabetes		Gest Diabetes		PP Hypertension		Gest Hypertension	
	Births	MM	Births	MM	Births	MM	Births	MM
Alabama	330	N/A	693	N/A	1119	18	2208	32
Arkansas	69	N/A	173	N/A	213	N/A	548	N/A
Delaware	23	N/A	104	N/A	173	N/A	308	N/A
District of Columbia	86	N/A	139	N/A	245	N/A	408	N/A
Florida	610	N/A	2153	14	1883	21	4792	60
Georgia	607	N/A	1596	12	1915	35	4028	64
Kentucky	79	N/A	175	N/A	252	N/A	453	N/A
Louisiana	316	N/A	1089	14	1711	34	3219	78
Maryland	305	N/A	1408	N/A	1227	40	2224	59
Mississippi	182	N/A	451	N/A	919	16	1371	19
North Carolina	465	16	1362	26	1494	28	3114	84
Oklahoma	71	N/A	109	N/A	213	N/A	335	N/A
South Carolina	362	N/A	741	N/A	1180	15	1729	21
Tennessee	251	N/A	623	N/A	598	N/A	1464	20
Texas	425	N/A	1630	15	1465	35	4492	71
Virginia	283	N/A	877	N/A	1023	12	1946	N/A
West Virginia	10	N/A	22	N/A	29	N/A	55	N/A

## Discussion

Not reporting or underreporting maternal morbidity rates implies that Black women fail to be provided with the proper post-natal care and appropriate procedures to check for maternal morbidity.

Post-natal health complications can lead to maternal death if left untreated. Proper preconception education and counseling need to be provided to Black women diagnosed with cardiovascular disease to ensure the health of her and their babies before and after pregnancy.

This study also increases the demand for Black physicians educated on health disparities in the Black community to provide personalized and authentic healthcare to Black women. Systems of structural racism and discrimination have produced barriers to the accessibility of adequate healthcare to other Black people.

## Conclusions

This study provides a sufficient framework for future research to be performed on the association between cardiovascular disease and maternal morbidity of Black women in the south. The CDC's Natality database provided valuable statistical information on the number of births per CVD based on the inclusion criteria; however, it failed to report crucial data on maternal morbidity. Qualitative research methods such as open-ended surveys, focus groups, and one-on-one interviews will be essential in gathering information on the experiences of Black women.

