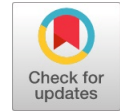


The Impact of Race on Healthcare Coverage for Women in Louisiana and Mississippi

Theresa T Patton, Nazim Najd, Juritsa Ford



Abstract: It is crucial to confront the problem of health inequity that Black women are experiencing. Black women have a higher risk of pregnancy-related complications and experience worse outcomes in cardiovascular diseases, diabetes, high blood pressure, and mental health. Even with the Affordable Care Act, Black women still may not have access to affordable health insurance. This study examines the impact of race on healthcare coverage for women in Louisiana, which expanded Medicaid, and Mississippi, which did not. The study uses a quasi-experimental analysis to compare insurance coverage across states using publicly available data from the 2010 and 2021 American Community Survey. A chi-squared test determined a significant correlation between race and insurance type in both states. Insurance coverage for Black women increased in Louisiana. Women in Mississippi made slight gains even without Medicaid expansion. Despite these gains, racial disparity among women persists. Policymakers should strive for affordable healthcare for all women, regardless of race and geography.

Keywords: Affordable Care Act, Health Equity, Healthcare, Medicaid Expansion, Race

I. INTRODUCTION

Today 27.2 million Americans are uninsured [1]. Health inequities that limit access to affordable care cost the United States \$350 Billion in annual spending [2]. As a result, health inequity involving Black women has gained much attention in recent years [3]. Black women are two to three times more likely to die from pregnancy complications than White women [4]. Black women have worse outcomes in cardiovascular disease, diabetes, high blood pressure, and mental health [3]. And in uterine fibroids, poor outcomes and disparities in care for Black women versus White women can be attributed to systemic racism [5].

Black women can only achieve better health outcomes if they can access affordable healthcare services. However, Black women in the US face higher unemployment rates and lower incomes than other women, earning an average of \$5,500 less annually [3]. Preventive care, such as mammograms, can help detect breast cancer early, but

without insurance, the cost of a mammogram makes it difficult for low-income individuals to afford it. The passage of landmark legislation, the Affordable Care Act (ACA), intended to make health care affordable. Despite these advances, Black women may still lack health insurance, preventing access to preventive care that leads to better outcomes.

This study aims to fill the gap in research by examining the impact of race on insurance coverage for Black women. The study also examines whether the disparity in insurance coverage between Black and White women has improved since the implementation of the ACA. The audience for this research may include health plans making product coverage decisions for their members, legislators making policy decisions, and employers considering health benefits for low-income individuals.

A. The Affordable Care Act

The landmark legislation, the Affordable Care Act (ACA), was signed into law by President Obama in March 2010. The country was politically divided then, making the passage of the law even more monumental. The ACA included three specific goals, 1) to make healthcare more available and affordable to uninsured and underinsured Americans, 2) it required insurance plans to include essential health benefits like preventive care, prescription drugs, and maternity care for women at no cost to its members, and 3) it required the expansion of Medicaid to cover more low-income individuals [6]. However, there was disagreement among lawmakers regarding how much authority states would have in implementing Medicaid programs [7].

Before the ACA, states determined Medicaid eligibility independently. To expand healthcare coverage for low-income individuals, the ACA required states to increase Medicaid eligibility to 138% of the Federal Poverty Level (FPL) while offering federal funding for state expansion. This new mandate ensured that low-income individuals not qualifying for Medicaid would receive government subsidies to purchase health insurance on the newly created online marketplaces for individuals and small businesses [6].

Some states set up their exchanges and expanded Medicaid immediately. However, other states thought the ACA mandates went too far. The State of Florida and 25 other states challenged the law, which reached the Supreme Court [7].

The Supreme Court overruled the Medicaid expansion mandate; at the time of this study, ten states had not expanded Medicaid [8].

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B. Medicaid Expansion

For many Americans, after the implementation of ACA, coverage increased more in states that implemented the Medicaid expansion than in states that did not [9]. As an early adopter of Medicaid expansion, a California study demonstrated increased public coverage for low-income individuals in counties that expanded Medicaid in 2011 [10]. According to Courtemanche et al. [11] literature analysis, the ACA increased the proportion of residents with insurance by 5.9 percentage points in states that expanded Medicaid compared to 2.8 percentage points in states that did not. Mazurenko et al. [12] narrowed their literature search to studies focused on ACA Medicaid expansion with outcomes that included access to care defined as insurance coverage. Of the 440 unique analyses reviewed, 75% reported improvements in insurance coverage following Medicaid expansion [12]. On the other hand, thirty-five percent of Americans in non-expansion states with household incomes under \$25,000 were still without coverage in 2015 [13]. Rudowitz et al. [14] found that states without Medicaid expansion had uninsured rates of 15.4% compared to 8.1% in states with expansion.

States that did not expand Medicaid may leave some individuals making too much money to qualify for Medicaid coverage yet insufficient income for the tax credits to purchase insurance on the health exchange [15]. Perhaps not intended by the law, this created a new construct in Medicaid called the “coverage gap,” leaving some individuals uninsured [8]. In a Missouri study, individuals in the Medicaid coverage gap have significantly lower incomes and higher annual premiums, making it difficult to purchase insurance [16]. Closing the Medicaid coverage gap may be the ACA’s most critical piece of unfinished legislation [17].

C. The Disparity in Healthcare, Black vs. White

Medicaid expansion provided improved insurance coverage for all racial and ethnic groups [18]. However, disparities persist based on Snowden et al. [19] systematic review of 26 studies involving healthcare disparities between Black and White Americans. The research findings were mixed, as only 11 studies evaluated differences between states with and without Medicaid expansion and differences between Black and White Americans [19]. It is unclear whether Medicaid expansion improved for Black Americans as there remains a disparity in health coverage between Black and White Americans, with the uninsured rate being 11% and 7% in 2021 [20].

While ACA improved health coverage for all, this benefit was distributed unevenly across states [21]. Although the states that expanded Medicaid have reduced uninsured rates across racial/ethnic groups, there is only a slight change in coverage disparities by race [22]. Buchmeuller & Levy [23] discovered that while coverage disparities based on race or ethnicity were reduced in 2017, Black adults under 65 are still significantly more likely to be uninsured than White adults.

With individuals unable to access the intended benefits, questions remain about whether ACA's promise to reduce disparities in at-risk populations can be realized [24]. States yet to expand Medicaid are primarily Southern, and people in the Medicaid coverage gap are disproportionately African

American [17]. According to Guerra-Cardus & Lukens [8], 60 percent of individuals who fall within the Medicaid coverage gap are people of color. This may reflect a new form of structural racism embedded in a government system designed to help Americans at higher risk gain coverage [8].

D. Effects on Women

Access to health care has been a barrier to women, especially those of reproductive age [25]. Before the ACA, women faced challenges obtaining health insurance and access to health care [26]. Collins et al. [27] suggests that insurance companies may view women as a preexisting condition, leading to high healthcare costs and utilization. However, the implementation of the ACA brought about numerous benefits for women. In addition to eliminating preexisting conditions exclusions, gender rating, and coverage of preventive screening without cost-sharing, women would gain from expanded Medicaid [26]. Collins et al. [27] shows that women in Florida, a state that chose not to expand Medicaid remain uninsured at a much higher rate than those living in California, which expanded Medicaid. Daw et al. [28] found significant reductions in uninsurance and increased Medicaid insurance among reproductive-aged women. Moss et al. [29] found that women with gynecologic cancers living in states that expanded Medicaid eligibility experienced greater reductions in uninsured rates than those in non-expansion states.

E. Gaps in the literature

Lee et al. [26] acknowledged that a limited number of studies evaluate the ACA’s impact on women. And even fewer studies consider the implications of Medicaid expansion on Black women [20]. Gaps in research exist regarding access to care, insurance coverage, and the impact of Medicaid expansion on women, especially those from minority groups [19,25,26]. This research will address this gap in research by looking at the effects of the Affordable Care Act and Medicaid Expansion on Black women.

II. STUDY DESIGN

A. Model Framework

The Andersen Behavior Model of Health Services Use is one of the most commonly used models to explain the use of healthcare services [30]. The model explores the relationship between contextual and individual determinants that lead to access to care and health outcomes Fig. 1 [31]. The model employs that predisposing, enabling, and need all contribute to using health services, which ultimately determines health outcomes [32].

Andersen’s Behavior Model of Health Services Use supports the theory that Medicaid expansion (a contextual enabling component) influences insurance coverage (an individual enabling component), leading to access to care and utilization of services that lead to outcomes.



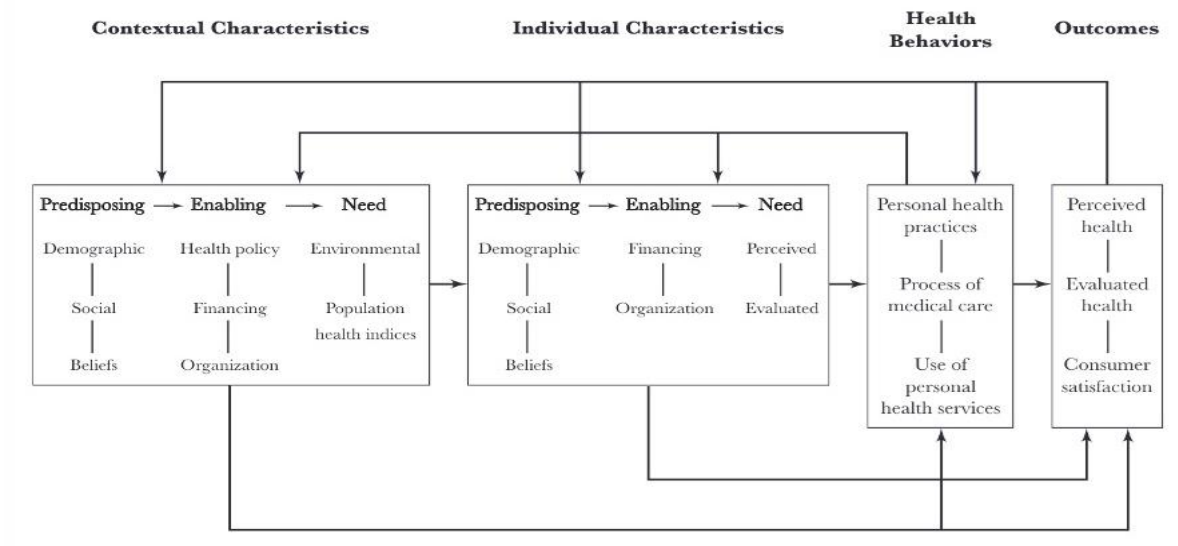


Fig. 1 Andersen’s Behavioral Model of Health Services Use

From [31]. *Changing the U.S. Health Care System: Key Issues in Health Services Policy and Management*. John Wiley & Son

Johnston et al. [33] used this model to demonstrate that “Medicaid expansions led to increased health insurance coverage for women of reproductive age and that this, in turn, led to improved access to care.” Likewise, Narcisse et al. [34] used the model to identify relevant individual factors associated with using breast cancer screening services. A systematic literature review has been completed recently and recommends this as the most current version of the Andersen Behavioral Model of Health Services Use [35]. This paper will focus on two determinants from the model, Potential Access and Equitable Access [32]. Potential Access suggests that more enabling resources (e.g., Medicaid expansion and health insurance) will increase the likelihood of using health services. Equitable Access ensures these services are available based on need and no other determinants such as race [32]. Other models were considered for this research as many theoretical frameworks for healthcare access exist. In Penchansky and Thomas’ framework, access exists between patients’ needs and the healthcare system's capacity to meet the patient's needs [36]. The framework provides a more subjective and qualitative view of access and is unsuited for quantitative research. Another framework considered was Levesque’s Conceptual Framework for Healthcare Access. In the literature review of studies that used this model, researchers that used secondary data indicated they experienced challenges with the model [37]. Levesque’s Framework was not selected since this research will use secondary data. While there may be many other theories and frameworks to define access to care and outcomes exist, the Andersen Behavioral Model of Health Services Use will be the underpinning of this research.

B. Research Question

The Andersen Behavioral Model of Health Services Use framework identified a theory to address Potential Access (Medicaid Expansion and Insurance Coverage) and Equitable Access (independent of determinants such as race) to healthcare services. The gap in the literature review provides

the basis for this research to examine the impact of the ACA and Medicaid expansion on Black women.

Research Question: How does race impact healthcare coverage for women in Louisiana and Mississippi?

The study will measure the impact of race and gender as independent variables on insurance coverage to address literature gaps. To assess the effects of the ACA and Medicaid expansion, the research examines sample populations from Louisiana, a state that expanded Medicaid, and Mississippi, a state that did not expand Medicaid.

The study tests the following hypothesis for each state:

- H₀: Race and type of insurance are not related
- H₁: Race and type of insurance are related

C. Research Methodology

To understand the relationship between Medicaid expansion, health insurance, and Black women, the research methodology will employ a quasi-experimental design that examines cause and effect. Other researchers have also used quasi-experimental methods to determine insurance coverage and access to care [11,12]. Mazurenko et al. [12] literature search identified that eighty-one percent of the 77 studies used quasi-experimental designs, with 44.1 percent examining insurance coverage. The research method will assess contingency tables to evaluate the correlation of the categorical variables and use a chi-squared test to evaluate the significance. Mazurenko et al. [12] systematic literature review also used quantitative analyses and chi-squared tests to determine each study's significance in reporting the effect of Medicaid expansion on insurance coverage. Different methods, such as the Difference-in-Difference design, were used in other studies to examine health coverage by race after ACA [38,39].

D. Target Population

In considering race, this research focuses on Black and White women in Louisiana and Mississippi.

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Black women are defined as Non-Hispanic Black respondents who did not choose mixed-race options, while White women are defined as Non-Hispanic White respondents who did not choose mixed-race options. Louisiana expanded Medicaid while Mississippi did not. As neighboring states with sizable Black populations, they are ideal representatives of the South, see [Table 1](#). The sample will be limited to respondents aged 19-64 with incomes below 138% of the Federal Poverty Level. The age group and income level are consistent with previous research; however, previous literature has not broken out race by gender [12,19,40]. Data will be collected at the state level, including only respondents who selected healthcare coverage as Medicaid, private insurance, or uninsured.

E. Data Sources

This research will use 2010 and 2021 secondary data from the American Community Survey (ACS) to compare insurance coverage disparities before and after the ACA. These data are accessible to the public at <https://data.census.gov/mdat/#/>. Data from the ACS was selected as the source because of the larger number of respondents, representing roughly 1% of the US population. In addition, it includes the categories needed for the analysis, including target population and demographics (gender, race, income), geographic information by state, the aforementioned Louisiana and Mississippi, and insurance coverage information by type (Medicaid, private, uninsured). Other research addressing the impact of ACA uses ACS as a data source and mentions the consistency of how the ACS data is collected over time, the categories included in the survey, and the large sample size, as reasons to use this data source [18,23,39].

Table 1: Demographics in 2021 and Study Statistics

Demographics (2021)	Mississippi	Louisiana
Total Population	29,61,279	46,57,757
Median Household Income	\$48,716	\$52,087
Poverty	19.40%	19.60%
Employment Rate	52.50%	53.40%
Without Health Insurance	11.90%	7.60%
Black Population	36.60%	31.40%
Medicaid Expansion	NO	YES
FMAP (FY 2024)	77.27%	67.67%
eFMAP (FY 2024)	84.09%	77.37%
Study Statistics		
<i>Participants selected Medicaid, Private Insurance, or Uninsured</i>		
Gender	Female	Female
Age	19-64	19-64
Income	<=138% FPL	<=138% FPL
Black Women (# of participants)	541	626
White Women (# of participants)	328	565
Average Age (years)	44	43
Average Income (\$)	\$9,771	\$9,614

Author's Analysis of Census Bureau, Federal Register

Notes: Mississippi and Louisiana were chosen as they are neighboring states located in the deep south, with large Black populations and similar demographics. However, the Louisiana uninsured rate was 4.3% lower than Mississippi.

III. RESULTS AND FINDINGS

In this study, Black women make up 53% and 62% of the sample sizes in Louisiana and Mississippi, respectively, See [Table 1](#). The contingency tables show a strong correlation between race and insurance coverage, as confirmed by the chi-squared test results (see appendix). [Fig. 2](#) shows the percentage of Medicaid, private insurance, and uninsured for 2010 and 2021 in Louisiana. [Fig. 3](#) shows the percentage of Medicaid, private insurance, and uninsured for 2010 and 2021 in Mississippi.

A. Black Women's Insurance Coverage in MS vs. LA

Louisiana expanded Medicaid; as a result, 72.5% of Black women have Medicaid coverage, see [Fig. 2](#). In comparison, only 46.4% of Black women in Mississippi are covered by Medicaid, where they didn't expand Medicaid, see [Fig. 3](#). In Louisiana, 16.4% of Black women have private insurance, whereas 26.2% of Black women in Mississippi have private insurance. In Mississippi, 27.4% of Black women do not have any insurance, compared to 11.1% of Black women in Louisiana.

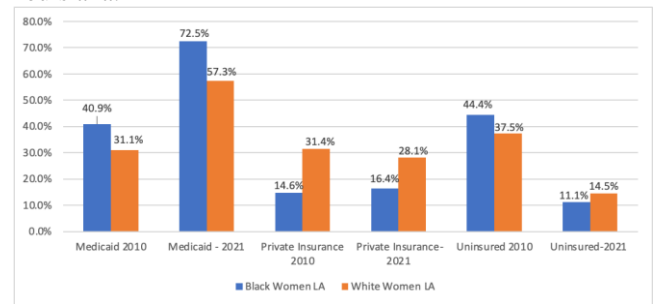


Fig. 2 Percentage of non-elderly women by Insurance Coverage in Louisiana-Expansion State, 2010 and 2021

Source: Author's Analysis of American Community Survey, 1-year Estimates Public Use Microdata Sample, 2010 and 2021

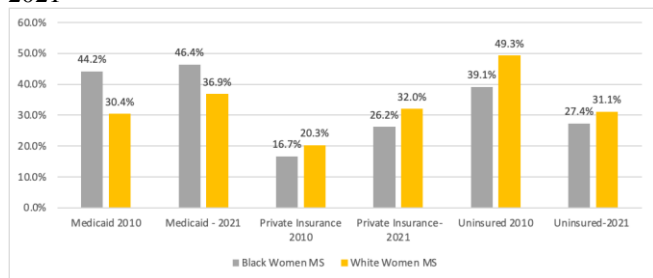


Fig. 3 Percentage of non-elderly women by Insurance Coverage in Mississippi – Non-Expansion State, 2010 and 2021

Source: Author's Analysis of American Community Survey, 1-year Estimates Public Use Microdata Sample, 2010 and 2021

B. Louisiana Coverage Disparities (Fig. 2)

In 2021, the percentage of Black women with Medicaid in Louisiana is 72.5%, compared to 57.3% of White women. However, only 16.4% of Black women have private insurance compared to 28.1% of White women. The percentage of Black women uninsured is 11.1%, slightly lower than White women, with 14.5% uninsured.



The difference in Medicaid coverage may have offset this difference in the uninsured. In Louisiana, where Medicaid was expanded, the proportion of Black women covered by Medicaid increased from 40.9% in 2010 to 72.5% in 2021. Additionally, the percentage of uninsured Black women in Louisiana decreased from 44.4% in 2010 to 11.1% in 2021. In a state where the ACA was expanded, Black women experienced a significant increase in Medicaid coverage by over 32% and a decrease in uninsured rates by 33%.

When looking at the changes in coverage between Black and White women from 2010 to 2021, the gap increased for Black women in Medicaid coverage from 9.8% to 15.2% and for private insurance coverage from 16.8% to 11.7%. The most notable change is that the gap in uninsured rates between Black and White women has shifted from Black women 6.9% more uninsured than White women in 2010 to 3.4% less uninsured than White women in 2021.

C. Mississippi Coverage Disparities (Fig. 3)

In 2021, the percentage of Black women with Medicaid is 46.4% compared to 36.9% of White women. However, only 26.2% of Black women have private insurance compared to 32% of White women. The percentage of Black women uninsured is 27.4%, slightly lower than White women, with 31.1% uninsured. In the state that did not expand Medicaid, the percentage of Black women with Medicaid in Mississippi rose only 2.2% from 44.2% in 2010 to 46.4% in 2021. The percentage of Black women with private insurance increased from 16.7% in 2010 to 26.2% in 2021. The percentage of Black women uninsured in Mississippi went from 39.1% in 2010 to 27.4% in 2021. The uninsured percentage decreased for both Black and White women. However, the decline was more significant for White women at 18.2% vs Black women at 11.7%. Comparing the disparity from 2010 to 2021, White women gained in all three categories. White women experienced a 6.5% increase in Medicaid vs. only 2.2% for Black women, private insurance increased by 11.7% vs. 9.5%, and the percent uninsured dropped by 18.2% vs. Black women only saw a decline of 11.7%.

IV. DISCUSSION

There were multiple reasons for selecting Mississippi and Louisiana for this study. First, these two states share a border in the southern region. In one particular area along the border, there is only a small bridge that separates them. Moreover, both states have a significant Black population and almost identical poverty levels (Table 1). However, in 2021, Louisiana's uninsured rate was 7.6% and 4.3 percentage points lower than Mississippi's uninsured rate. This study was completed to determine if race and zip code determined access to health insurance in these two states. Our data suggests it does. Medicaid expansion helped Black women access insurance in Louisiana as uninsured rates declined from 44% to 11%. This means that over a third of low-income Black women in Louisiana now have access to preventive care services. It is important to note that most funding for state Medicaid comes from the federal government. Additionally, states with the lowest per capita income receive the most funding. In the next fiscal year, Mississippi will receive the highest Enhanced Federal Medical Assistance Percentage (eFMAP) at 84.09%. Despite receiving similar federal financial assistance in the past,

Mississippi has yet to expand Medicaid, resulting in a high uninsured rate of over 27% for low-income Black women in the state. Unfortunately, this means Black women cannot access preventative care services like a mammogram without cost. Getting a mammogram can be expensive, often exceeding \$400. Given that the average income in this study population is just under \$10,000, this can be a substantial financial burden. Not expanding Medicaid also means Mississippi does not receive other federal funding to support hospitals or fund resources such as healthcare providers, which strains other parts of the healthcare system.

Black women in both states experienced an increase in private insurance. However, low-income women likely had to purchase private health insurance for this to happen. Whether private insurance is more affordable remains to be determined due to its premium cost. Some employers only offer health plans with low premiums but high deductibles. Low-income individuals often work in jobs where employers cannot afford to provide health insurance, which means they may have to purchase healthcare on the health exchange to obtain private insurance. Therefore, the rise in private insurance may also be attributed to policies implemented by the Biden administration in 2021. Premiums for health insurance on the exchanges have been lowered to increase affordability for low-income individuals as part of the American Rescue Act. A limitation of this study is that it did not differentiate the type of private insurance held by the participants.

V. CONCLUSION

Living on one side of a bridge that spans two states should not affect your ability to access quality and affordable healthcare due to a lack of health insurance. This study has shown that access to healthcare can be influenced by geography and race. In Louisiana, Medicaid expansion brought some relief to Black women, offering them the coverage they desperately needed. Black and White women in Mississippi showed slight gains even without Medicaid expansion. However, the disparity between Black and White women persists in all insurance coverage categories.

It is essential to understand the effect of government policies on the affordability of healthcare for Black women in southern states, where a significant percentage of the Black community resides, and 60% of the individuals in the coverage gap are people of color. More research is required to determine whether the Affordable Care Act and Medicaid expansion have reduced the cost barrier for Black women to access healthcare.

Further research is needed to determine if removing insurance coverage barriers increases healthcare utilization among Black women. My dissertation will focus on the impact of healthcare affordability on Black women, an important topic that requires more research. I am enthusiastic about delving deeper into this issue and contributing to the existing knowledge pool.

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DECLARATION STATEMENT

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Authors Contributions	Theresa T Patton, doctoral student and primary author CRediT Statement: Conceptualization, Data Curation, Methodology, Writing-Original Draft Dr. Nizam Najd CRediT Statement: Supervision, Formal Analysis, Writing-Review & Editing Dr. Juritsa Ford CRediT Statement: Supervision, Writing-Review & Editing

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The Impact of Race on Healthcare Coverage for Women in Louisiana and Mississippi

APPENDIX

Statistical Significance Analysis Louisiana 2010

Observed	Medicaid	Private	Uninsured	
Black Women	257	92	279	628
White Women	175	177	211	563
	432	269	490	1191
Expected	Medicaid	Private	Uninsured	
Black Women	228	142	258	628
White Women	204	127	232	563
	432	269	490	1191
Significance level	0.05			
p value	0.000000003004			
df	2			
x2 computed	48.457178			
x2 critical	5.991464547			
H0: Race and type of insurance are not related				Null Hypothesis is rejected
H1: Race and type of insurance are related				
	Medicaid	Private Insurance	Uninsured	
Black Women	40.9%	14.6%	44.4%	
White Women	31.1%	31.4%	37.5%	

Statistical Significance Analysis Mississippi 2010

Observed	Medicaid	Private	Uninsured	
Black Women	236	89	209	534
White Women	102	68	165	335
	338	157	374	869
Expected	Medicaid	Private	Uninsured	
Black Women	208	96	230	534
White Women	130	61	144	335
	338	157	374	869
Significance level	0.05			
p value	0.0002748			
df	2			
x2 computed	16.39884007			
x2 critical	5.991464547			
H0: Race and type of insurance are not related				Null Hypothesis is rejected
H1: Race and type of insurance are related				
	Medicaid	Private Insurance	Uninsured	
Black Women	44.2%	16.7%	39.1%	
White Women	30.4%	20.3%	49.3%	

Statistical Significance Analysis Louisiana 2021

Observed	Medicaid	Private	Uninsured	
Black Women	454	102	70	626
White Women	324	159	82	565
	778	261	152	1191
Expected	Medicaid	Private	Uninsured	
Black Women	409	137	80	626
White Women	369	124	72	565
	778	261	152	1191
Significance level	0.05			
p value	0.0000010823665			
df	2			
x2 computed	32.07789164			
x2 critical	5.991464547			
H0: Race and type of insurance are not related				Null Hypothesis is rejected
H1: Race and type of insurance are related				
	Medicaid	Private Insur	Uninsured	
Black Women	72.5%	16.3%	11.2%	
White Women	57.3%	28.1%	14.5%	
Black women	53%			
White women	47%			
Black Average Income	\$ 9,933			
White Average Income	\$ 9,260			
All Average Income	\$ 9,614			
Average Age	43			

Statistical Significance Analysis Mississippi 2021

Observed	Medicaid	Private	Uninsured	
Black Women	251	142	148	541
White Women	121	105	102	328
	372	247	250	869
Expected	Medicaid	Private	Uninsured	
Black Women	232	154	156	541
White Women	140	93	94	328
	372	247	250	869
Significance level	0.05			
p value	0.0213826			
df	2			
x2 computed	7.690358048			
x2 critical	5.991464547			
H0: Race and type of insurance are not related				Null Hypothesis is rejected
H1: Race and type of insurance are related				
	Medicaid	Private Insurance	Uninsured	
Black Women	46.4%	26.2%	27.4%	
White Women	36.9%	32.0%	31.1%	
Black women	62%			
White women	38%			
Black Average Income	\$ 9,476			
White Average Income	\$ 10,258			
All Average Income	\$ 9,771			
Average Age	44			

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