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Do Underserved and Underrepresented Communities pay a Higher Premium in Employer-Sponsored Healthcare Insurance?

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We investigate the effect of socioeconomic disparities on healthcare coverage discrepancies within underserved and underrepresented communities, particularly examining the effects on average employer-sponsored health insurance premiums at the state level. Our focus analyzes a demographically homogeneous sample of individuals covered by employer-sponsored health insurance, where implicit biases within the healthcare system may be prevalent. Our results reveal that there are variations in employer-sponsored health insurance premiums across different racial and ethnic groups. Without controlling for additional socioeconomic factors, we find that underserved populations, particularly those identifying as Black, contribute a higher proportion of their income to employer-sponsored healthcare coverage compared to Whites and Hispanic groups, with disparities of 16.4 and 11.9 percent, respectively.

Introduction

In the U.S., healthcare gaps and injustices have continually affected marginalized groups, worsening social and health inequalities. Healthcare inequalities affect various aspects of health services, including outcomes, insurance availability, and access to medical care. As scholars and decision-makers have tried to understand the root causes of these inequalities, they have slowly moved toward finding possible solutions (Barr, 2014). Research underscores that impediments to accessing high-quality healthcare services are commonplace within immigrant communities, sexual and gender minorities, and racial and ethnic minority groups, thereby adversely impacting health outcomes. Kardashian et al. (2021) highlight the crucial role played by employer-sponsored healthcare coverage (ESHC)[1] in facilitating public access to treatment. However, Bittker's work (2020) offers a cautionary note, exposing racial and ethnic disparities in ESHC, suggesting there is potentially unequal access to health insurance benefits experienced by different ethnic groups.

Thus, our research aims to answer the following question: Do underserved and underrepresented minorities[2] pay a higher premium in ESHC than other ethnic racial groups? The research question carries significant importance, as

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[1]Employer-Sponsored Health Coverage, Employer-Sponsored Health Insurance, and Employer-Sponsored Health Premiums are interchangeable.
[2]We consider African Americans, Asian Americans, Hispanics or Chicanos/Latinos, and Native Americans as the underserved and underrepresented minority groups.

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comprehending whether certain ethnic groups are subject to higher ESHC premiums becomes crucial within the context of financialization and structural racism in the healthcare setting. Historical and contemporary evidence underscores the existence of disparities in terms of access, outcomes, and affordability for marginalized groups. Should such an underserved and underrepresented individual indeed face elevated premiums, it would exacerbate systemic inequalities, further curtailing their access to quality healthcare. Tackling this matter is of utmost importance to establish an equitable healthcare landscape, eradicate discriminatory practices, and foster inclusivity. Ultimately, these efforts contribute to cultivating a healthcare system that embodies fairness and justice.

The main objective of our study is to determine whether marginalized groups, such as racial and ethnic groups incur higher rates for ESHC considering the issues discussed above. By investigating disparities in employer-sponsored health insurance premiums and the distribution of payment responsibilities between employers and employees across different marginalized demographics, our aim is to furnish health insurance providers with insights to reassess the fairness of the employer and employee-contributed segments of health insurance premiums among various ethnic groups within their organizations and overall population. Additionally, this study could guide healthcare professionals in reviewing the equity of health insurance costs within ethnic groups present in their institutions, aligning with the suggestions of Mahajan et al. (2021) who advocates for evaluating discrepancies in ESHC. From a policy standpoint, our findings highlight the unequal financial burdens placed on specific ethnic groups by employers offering disparate benefits, thereby informing regulatory adjustments aimed at fostering greater parity in healthcare coverage. Furthermore, our study stands to enhance comprehension of healthcare disparities by offering scholars and practitioners a more profound insight into the intricate interplay between social factors and healthcare accessibility.

Regarding the central focus of the primary study, we also identify additional factors that contribute to disparities within various marginalized groups. The additional factors encompass sexual and gender minorities, individuals with lower levels of education, varying income, and poverty levels, as well as older employees. We leverage a robust database encompassing demographic and economic data, healthcare expenses and allocations, health coverage for both insured and uninsured individuals, and household incomes. Our analysis directly focuses on discerning a homogenous subset of individuals who are covered by ESHC[3], which could potentially reveal implicit healthcare provider bias embedded within the healthcare system.

Our analysis indicates that, on a state-by-state basis, an increase in the Black population covered by employer-sponsored health coverage corresponds to a rise in the associated insurance premiums. Upon considering various socioeconomic factors, we further observe that the Black population allocates a larger proportion of their income toward employer-sponsored healthcare coverage compared to Whites, Hispanics, and Asians. The percentage ranges vary between 14.7% and 55.4%, contingent upon the specific ethnic group being compared.

[3]Our ability to observe findings is constrained to a state-by-state level due to HIPAA regulations, which prevent us from accessing individual-level data.

Our findings offer health insurance providers valuable insights to reassess the fairness of health insurance premiums' employer and employee-paid components among ethnic groups within their organizations. Collectively, our findings hold significance for scholars, practitioners, and investors with concerns regarding racial inequity in employer-provided benefits and its potential impact on the firm's prospects. From a regulatory and standard-setting standpoint, a comprehensive understanding of the economic implications for specific ethnic groups arising from a company's uneven benefits package proves beneficial. Subsequent research could explore whether firms face market repercussions for offering disparate healthcare benefits to employees or if regulators impose penalties for such disparities.

The rest of the paper is organized as follows: Section 2 reviews the literature and develops the hypotheses; Section 3 discusses the empirical methods; Section 4 presents the results; and Section 5 concludes the paper.

Literature Review

The persistent disparities and inadequacies in healthcare among marginalized communities have been a longstanding issue in the United States, giving rise to both social and health inequities. These variations manifest in various aspects of healthcare, such as outcomes, insurance coverage, and the accessibility of medical treatments. Scholars and policymakers have devoted efforts to grasp the root causes of these discrepancies and explore potential solutions over the years (Barr, 2014). Many studies have shown that immigrant communities, sexual and gender minorities, and racial and ethnic minorities often face barriers to obtaining high-quality healthcare services, which affects their health outcomes. For instance, Greenwood et al. (2020) found differences in newborn death rates related to racial matching between doctors and patients. Because marginalized communities suffer more from health problems, Kardashian et al. (2021) emphasized the importance of addressing the social factors of liver diseases. Bittker (2020) found racial and ethnic discrepancies in employer-sponsored health insurance, demonstrating that different ethnic groups have unequal access to health insurance benefits. Furthermore, a considerable portion of the public's access to treatment is made possible mainly because of employer-sponsored health insurance. However, the data indicates that employer-sponsored health insurance varies.

The main goal of our study is to determine whether underserved communities incur higher rates for employer-sponsored medical insurance. The primary aim of this literature review is to systematically examine the disparities between health insurance premiums paid by employees and the extent of financial contributions provided by employers for the benefit of employees within diverse marginalized groups. Our research question significantly impacts multiple stakeholders, notably medical professionals, policymakers, businesses, and researchers. Our research has the potential to prompt healthcare professionals to reassess the fairness of health insurance pricing across racial ethnic groups within their organizations, as proposed by Mahajan et al. (2021), through an evaluation of the variations in employer-sponsored health coverage. Our results show how employers that provide unequal benefits packages create a financial hardship for ethnic groups and suggest policy

changes that would promote more fairness in healthcare coverage. Additionally, our study can add to the knowledge of healthcare disparities by giving academics and professionals an in-depth understanding of the intricate relationships between social factors and healthcare access.

Structural Racism in Historical and Modern Healthcare Policy

In a thorough investigation, Yearby et al. (2022) examine the existence and consequences of structural racism in both historical and contemporary U.S. healthcare systems. Their study highlights ways racial and ethnic minorities have experienced healthcare inequities because of discriminatory laws and procedures. The study stresses the critical need for legislative changes to destroy institutional barriers and advance equitable healthcare for everyone by examining the historical backdrop and current consequences of structural racism.

Greenwood, Hardeman et al. (2020) study how the race match between medical staff and patients affects the differences in mortality rates for neonates. For racial and ethnic minority populations, the research indicates that racial concordance, or aligning the ethnic or racial background of healthcare professionals with that of patients, can significantly impact healthcare outcomes. Their study highlights the need to resolve racial imbalances within the medical field and encourage inclusivity and diversity among medical professionals.

Definition of Healthcare Inequities and Disparities

The disparate allocation of healthcare assets, amenities, and health results among various demographic groups is referred to as healthcare inequalities and disparities. These inequalities in access to, use of, the standard of care, and medical outcomes depending on traits like color, ethnicity, socioeconomic status, gender, and immigrant status can take many forms. In her study on racial and ethnic discrepancies in employer-sponsored health insurance, Bittker (2020) emphasizes how some racial and ethnic groups can experience difficulties accessing sufficient health insurance benefits. The Affordable Care Act's effect on insurance coverage gaps was examined by Courtemanche et al. (2019), which sheds light on the ongoing disparities in the availability of health insurance. The breadth of discrepancies in healthcare outcomes is shown by Mahajan et al. (2021), who also looks at medical conditions and healthcare price variations across racial and ethnic groups.

Racial and Ethnic Disparities in Employer-Sponsored Health Coverage

It is well known that there are considerable racial and ethnic discrepancies in the quality and accessibility of health coverage provided by employers among various racial and ethnic groups. Bittker (2020) examines data from multiple population groups to extensively investigate racial and ethnic discrepancies in employer-sponsored health care. The authors find that some racial and ethnic minorities face more significant obstacles in obtaining health insurance through their employers. Several variables, including hiring methods, socioeconomic status, and location,

impacted these differences. To promote fair access to healthcare, the study stresses the importance of addressing structural imbalances within employer-based health plans.

Mahajan et al. (2021) examine how health status, healthcare access, and cost changed in the U.S. by race and ethnicity, using a 20-year dataset spanning from 1999 to 2018. Their results show that there continue to be racial and ethnic gaps in insurance protection and cost (Mahajan et al., 2021). The study highlights that individuals from underprivileged racial and ethnic backgrounds face higher costs for medical treatments and have limited access to quality employer-sponsored health insurance coverage (Mahajan et al., 2021). This study emphasizes the importance of addressing the root causes of these inequalities to advance health equity. Specifically, a significant increase is observed in the estimated prevalence of adults who reported functional limitations. This increase is noted among Black, Latino/ Hispanic, and White individuals across all income levels (with a statistical significance of $P<0.0001$ for each group) and among low-income Asian individuals (with a significance of $P=0.03$. However, the estimated disparity between White and Asian individuals and Latino/Hispanic individuals remained relatively unchanged (Mahajan et al., 2021).

In 2018, the highest estimated prevalence of functional limitations was found among low-income White individuals, at 57.0% (with a 95% confidence interval of 54.8% to 59.2%). In contrast, Asian individuals with middle and high incomes recorded the lowest prevalence, at 20.4% (with a 95% confidence interval of 17.4% to 23.8%) (Mahajan et al., 2021). When examining the trends in racial and ethnic differences, similar patterns were observed regardless of whether physical tasks or social and leisure activities were analyzed separately. Further, the study shows a noticeably more significant estimated percentage of Latino/Hispanic people who lacked a regular source of medical care in comparison to White individuals (Mahajan et al., 2021). This trend was evident in the general population and across different income brackets. Specifically, the difference was statistically significant among the overall population and those in the middle and high-income groups (with a significance level of $P<0.001$), as well as among those in the low-income category (with a significance level of $P=0.002$) (Mahajan et al., 2021).

NORC (2022) agrees that employer-sponsored health insurance (ESHI) is one of the primary sources of health insurance in the U.S., providing coverage to nearly 155 million Americans, or about half of the country's total population. Despite its extensive reach, understanding the health conditions and outcomes of ESHI still needs to be clarified. Most research efforts related to ESHI have been directed toward understanding its economic importance, the expenses related to medical care and insurance (including personal expenditures), the utilization of healthcare services, and accessibility to medical care (NORC, 2022). In addition, the study of health inequalities and disparities within ESHI needs to be addressed more extensively. The need for historical data regarding aspects like race, ethnicity, and income in ESHI claims hamper what can currently be examined in claims-based analyses concerning health disparities. Many studies that use surveys or qualitative methods provide information on income, race, and sexual orientation. However, they often lack the necessary health-related details for a meaningful comparison of health behaviors or outcomes across different racial and income groups (NORC, 2022).

Moreover, Gangopadhyaya et al. (2020) report that more than three million people lost their ESHI coverage, and two million became uninsured. The report underscores the urgent requirement for focused efforts to lessen healthcare access inequities while tackling the effects of the pandemic on disadvantaged communities. The gaps in healthcare were made worse by the exorbitant impact of these setbacks on already vulnerable communities. The study underscores the significance of preserving the availability of healthcare in times of economic hardship and a public health crisis. Mahajan et al. (2021) also indicate that despite a broad range of healthcare and social policies and a significant increase in healthcare spending, there needs to be more evidence of improvement in health inequities. Factors rooted in U.S. society, such as systemic racism and obstacles related to citizenship status, may contribute to these persistent disparities. Seccombe et al. (2014) add to this discussion by exploring the difference in the predictors and incidence of ESHI among Whites, Blacks, and Hispanics. Hispanics are least likely, and Whites are most likely to have insurance covered by employers. However, Hispanics are more likely to be uninsured, and the factors which increase the odds of receiving employer-sponsored coverage in one's own name are relatively similar across racial groups, though they differ substantially in magnitude.

The comprehensive literature review offers significant insights into the complexities of healthcare inequities in the U.S., particularly concerning employer-sponsored health insurance across various ethnic and racial groups. Evidence from multiple studies underscores the presence of disparities in employer-sponsored health insurance, with different ethnic groups experiencing unequal access to health insurance benefits. While Bittker (2020) identifies racial and ethnic disparities in access to employer-sponsored health insurance, Mahajan et al. (2021) reveals nuanced patterns, including inequalities in functional limitations and healthcare costs across racial lines. Contrarily, Seccombe, et al. (2014) suggest that the odds of receiving coverage on employer-sponsored insurance are the same across different races, but with a difference in magnitude. This conflicting evidence highlights the complex and multifaceted nature of healthcare inequities in employer-sponsored insurance. The literature emphasizes the need for policy interventions, structural changes, and further research to promote equity in healthcare coverage. While there are clear disparities in healthcare access and outcomes, the evidence on whether marginalized groups incur higher rates for employer-sponsored medical insurance is not uniform, pointing to the need for a more targeted and nuanced understanding.

Research Gap

Several restrictions exist, even if this literature analysis offers insightful information about healthcare inequities. First, most of the research discussed examines inequalities only inside the United States, restricting the generalizability of the results to other nations. Second, there may be additional variables and groups that have yet to be thoroughly examined, and the research that is currently available might not address every facet of healthcare inequalities. Research on these issues is needed to overcome the restrictions and deepen our understanding of healthcare disparities. Additional research is required to examine differences in healthcare

access and coverage among different ethnic backgrounds, which were not included in the literature review. Further investigation of the effect of intersectionality on disparities in healthcare may also shed light on the experiences of disadvantaged groups. Evidence-based solutions must also be informed by research on the efficacy of policies and interventions to eliminate healthcare disparities.

Healthcare professionals, decision-makers, and communities must all work together to develop a comprehensive strategy to address healthcare disparities. Achieving health equity requires acknowledging the role of institutional racism and implementing policies that support racial harmony in the provision of healthcare (Yearby et al., 2022; Greenwood et al., 2020). Additionally, as shown by Khatana and Groeneveld (2020) and Gangopadhyaya et al. (2020), targeted interventions and assistance for vulnerable individuals can help lessen the adverse effects of crises on access to healthcare. Healthcare professionals and policymakers must give the socioeconomic determinants of health top priority if they are to make significant progress in decreasing healthcare disparities (Kardashian et al., 2021; McMaughan et al., 2020). Stakeholders may develop a fairer and more accessible medical system by addressing problems with the movement of people, financial status, schooling, and other social factors.

Empirical Model

To examine our research question on whether marginalized groups incur higher rates for ESHC we employ the following model to test whether a specific ethnic group faces higher ESHC premiums as a percentage of total health premiums at the state level. We estimate the following regression:

$$\begin{aligned} EmployeeBC_{s,t} = {} & \beta_0 + \beta_1 Ethnic\ Group_{CAT,s,t} + \beta_2 UnemploymentRate_{s,t} \\ & + \beta_3 Age_{CAT,s,t} + \beta_4 Gender_{CAT,s,t} + \beta_5 Citizenship_{CAT,s,t} \\ & + \beta_6 Education_{CAT,s,t} + \beta_7 WorkStatus_{CAT,s,t} + \beta_8 Income_{CAT,s,t} \\ & + \beta_9 Poverty_{CAT,s,t} + \epsilon_{s,t} \qquad (1) \end{aligned}$$

where, CAT = categorial groups or levels, s = state, and t = time;
$EmployeeBC_{s,t}$ = Employer Sponsored Health Premiums divided by the Total Health Premiums by state;
$Ethnic\ Group_{CAT,t}$ = Different ethnic and racial groups with health insurance are segmented by the overall number of the insured population, followed by multiplication with the percentage of ESHI per state (e.g., *Black_Insured, White_Insured, Asian_Insured,* and *HispLat_Insured*);
$UnemploymentRate_{s,t}$ = Annual state-specific unemployment rate;
$Age_{CAT,t}$ = Different age groups with health insurance are segmented by the overall number of the insured population, followed by multiplication with the percentage of ESHI per state (e.g., *U18, 18-64_Insured, 65+_Insured,* and *19-25_Insured*);
$Citizenship_{CAT,t}$ = Different levels of citizenship with health insurance are segmented by the overall number of the insured population, followed by

multiplication with the percentage of ESHI per state (e.g., *NativeBorn_Insured, ForeignBorn_Insured, NaturalBorn_Insured,* and *NoCitizen_Insured*);
$Education_{CAT,t}$ = Different levels of educational background[4] with health insurance are segmented by the overall number of the insured population, followed by multiplication with the percentage of ESPI per state (e.g., *LessHS_Insured, HSGrad_Insured, SomeCollege_Insured,* and *BSGrad_Insured*);
$WorkStatus_{CAT,s,t}$ = Different levels of work status[5] with health insurance are segmented by the overall number of the insured population, followed by multiplication with the percentage of ESPI per state (e.g., *LaborForce_Insured, NoLabor_Insured, LessFullTime_Insured,* and *DoNotWork_Insured*);
$Income_{CAT,s,t}$ = Different levels of income with health insurance are segmented by the overall number of the insured population, followed by multiplication with the percentage of ESPI per state (e.g., *SalaryU25k_Insured, Salary50_74k_Insured, Salary75_99k_Insured,* and *Salary100plus_Insured*);
$Poverty_{CAT,s,t}$ = Different levels of poverty[6] with health insurance are segmented by the overall number of the insured population, followed by multiplication with the percentage of ESPI per state (e.g., *Poverty138_199_Insured* and *Poverty200 +_Insured*).
Appendix A provides definitions of all variables used in the regressions.

We predict that the coefficient on *EthnicGroup* for underrepresented and underserved ethnic groups is positive and significant. Thus, we expect that marginalized groups pay higher employer sponsored health premiums as a percentage of total health premiums by state. We control for the annual state-specific unemployment rate and individual characteristics such as age, citizenship, education, work-status, income level, and poverty level.

Sample Selection

We identify data from several sources including the American Community Survey available on census.gov, National Association of Insurance Commissioners, as reported in the Insurance Department Resources Reports, and the U.S. Bureau of Labor Statistics bls.gov. Our final sample consists of a 9-year period covering 2013-2021 comprising 51 states, consisting of 459 total state-year observations.

[4]This calculation is grounded in the demographic of individuals aged 25 years or older within the civilian noninstitutionalized population.
[5]This calculation is grounded in the demographic of individuals aged 18 years or older within the civilian noninstitutionalized population.
[6]This calculation is grounded in the demographic of individual poverty levels in the past 12 months within the civilian noninstitutionalized population.

Results

Tables 1-8 present the results of this study. Table 1 presents results for the descriptive statistics for the dependent, explanatory, and control variables in equation (1). If a marginalized ethnic group faces higher employer sponsored health premiums divided by total health premiums on a state level basis, β_1 is expected to be positive. The dependent variable $Employee\ BC_{s,t}$, has a mean of 0.21 which suggests that employer sponsored health insurance premiums are approximately 21% of total health premiums on average per state. The average *Black_Insured* in our sample is 0.0550, *HispLat_Insured* is 0.0531, *White_Insured* is 0.3911 and *Asian_Insured* is 0.0220. The aforementioned variables suggest that in our sample, Whites are most likely to be insured and Asians are least likely to be insured.[7] Our control variables indicate that the mean unemployment rate over our sample time period is approximately 5 percent. The mean for insured individuals under the age of 18 is 0.1267, age 18-64 is 0.2991, for age 65 and over is 0.0872, and age 19-25 is 0.0454. The statistics suggest that individuals that are college-age are least likely to be insured, followed by the elderly, and then individuals over age 18. The age group 18-64 is most likely to be insured. The average of insured individuals that identify as *Male_Insured* (*Female_Insured*) is fairly similar at 0.2488 (0.2641).

When we examine citizenship, we find that the mean of insured native-born individuals is 0.4713, foreign born is 0.0417, natural born in 0.0235, and not having U.S. citizenship is 0.0182. Native born individuals are most likely to be insured in our sample by a large margin. Individuals who are not U.S. citizens are least likely to be insured. We next examine education level and find that the mean of insured individuals with less than a high school degree is 0.0459, a high school degree is 0.1385, some college is 0.1539, and a college degree is 0.1747, which suggests that as more education is attained an individual is more likely to be insured.

Individuals engaged in the labor force have a mean of 0.3744, while individuals not engaged in the labor force have a mean of 0.1385. As expected by the construction of our sample, this statistic documents that a higher percentage of working individuals have employer sponsored health insurance as compared to individuals that are not employed. To examine this univariate finding in more detail, we note that the average insured full-time workers in our sample is 0.2762, less than full time is 0.1247, and individuals that do not work is 0.1121. These statistics suggest that individuals that work more hours are more likely to be insured. The mean for insured individuals with less than an average annual household income of $25,000 is 0.0709, salary between $25,000 and $49,000 is 0.0955, salary between $50,000 and $74,000 is 0.0917, salary between $75,000 and $99,000 is 0.0748 and salary of $100,000 or more is 0.1802. These univariate statistics indicate that individuals with salaries on

[7]There are several factors of why Asians are less likely to have employer-sponsored health insurance. For example, *occupation distribution:* Asians are often concentrated in industries or occupations that may not offer comprehensive employee benefits, including health insurance. Some may work in small businesses or sectors with a higher likelihood of not providing health coverage. Another example, is related to *Immigration status:* the Asian population in the U.S. includes a significant number of immigrants. Immigrants, especially those who are not citizens, may face barriers to accessing employer-sponsored health insurance.

the lowest end of the scale are least likely to be insured, while individuals with the highest salaries on the scale are most likely to be insured. Lastly, we examine poverty level and find that the mean for insured individuals at the poverty level of 138% is 0.0931, between 138-199% is 0.1369 and 200% and above is 0.2830. These findings suggest that individuals at a higher poverty level are more likely to be insured.

Equation (1) is estimated from 2013 to 2021. The model includes year fixed effects and state fixed effects. 459 state-years are included in the model. The adjusted r-square is 0.3252, suggesting that the model explains employer sponsored health premiums fairly well. The coefficient on *Black_Insured* (*HispLat_Insured*) is 0.261 (0.142) and is significant at the one percent level. This finding suggests that insured Black and Hispanic/ Latino individuals pay higher employer sponsored health premiums. The magnitude of the coefficient for *Black_Insured* is higher than the coefficient on the other ethnic groups, which suggests Black insured individuals pay the highest health insurance premiums. We further examine F-tests and find that the coefficient on *Black_Insured* is significantly higher than the coefficient on *White_Insured*. Similarly, a second F-test indicates that the coefficient on *HispLat_Insured* is higher than the coefficient on *White_Insured.* This baseline regression provides support for our research question that marginalized ethnic groups are paying higher employer sponsored health premiums. In Columns [2] and [3], we include additional socioeconomic control variables and run the regression separately for insured males and females. We find that the coefficient for both male and female *Black_Insured* individuals is positive and significant suggesting both genders are paying higher employer sponsored health care premiums. The coefficient for male black insured individuals is higher than for female black insured individuals, suggesting that male black individuals pay even higher health care premiums than females.[8] We find similar results for both male and female *HispLat_Insured* individuals. For the control variables, we find that *NativeBorn_Insured* employees pay lower health care premiums, effectively receiving a discount and employees with a lower education level pay higher health care premiums.

Table 3 further examines the effects of ethnic group and age on employer sponsored health premiums. The baseline model has an adjusted r-square of 0.3564. In columns [1]–[3], the age categories include insured individuals under age 18, over age 65 and between the ages of 19 to 25, respectively. The coefficient on *Black_Insured* is positive and significant, which suggests that black insured individuals are positively related to employer sponsored health premiums in each age category. The coefficient on *Black_Insured* is significantly higher than the other ethnic groups in each age category suggesting that black individuals are paying higher employer sponsored higher premiums than the other ethnic groups. The coefficient on *U18* is positive and significant in column [1] suggesting that younger individuals are paying higher employer sponsored health premiums.

[8]Prior research has shown gender inequity in wages earned, for example a gender earnings gap in the veterinary profession (Smith et al., 2021). Similarly, an inequitable difference in employer provided health insurance premiums affects the earnings gap because the wages employees receive in their net pay is lower when health care premiums are higher. Other prior research measures the opportunity cost of self-employment by the foregone income of a job that pays a wage (Papanikos, 2024). Future research could examine the foregone income of a job that pays a wage after benefits are deducted. For example, the foregone income of a job that pays a wage will be lower (higher) for individuals paying higher (lower) health insurance premiums.

We generally find similar results for the control variables as in the baseline model in Table 2. For example, we find that individuals with a lower education level, *HSGrad_Insured*, are positively related to employer sponsored health premiums, while native born individuals are negatively related to employer sponsored healthcare premiums.

Table 4 examines the effects of ethnic group and citizenship on employee sponsored health premiums. Column [1] examines individuals that are foreign born, *ForeignBorn_Insured*. The coefficient on *ForeignBorn_Insured* is positive and significant suggesting individuals born outside of the United States bear higher employer sponsored health care premiums. In Column [2], the coefficient on *NaturalBorn_Insured* is not significant. Similarly, in Column [3] the coefficient on *NoCitizen_Insured* is not significant. *Black_Insured* is the largest coefficient of the ethnic groups in each citizenship category.

Table 5 provides a multivariate regression of the effect of education by ethnic group on employer sponsored health premiums. The coefficients for *Black_Insured* are positive and significant if the individual has less than a high school degree Column [1], some college Column [2], or is a college graduate Column [3]. Consistent with prior results, this suggests that black individuals insured via their employer sponsored healthcare plan are paying significantly more for health insurance premiums. The coefficient on *LessHS_Insured* is positive and significant, while the coefficients on *SomeCollege_Insured* and *BSGrad_Insured* are negative and significant. These results collectively suggest that individuals with a lower education level are paying higher employer sponsored health care premiums, while individuals with relatively more education are earning a discount on premiums.

Table 6 includes the estimation of the effects of Ethnic Group based on their participation in the work force on employee sponsored healthcare premiums. In Column [1], we examine insured individuals that are not participating in the work force. In Column [2], we examine insured individuals that work less than full time. In Column [3], we examine insured individuals that do not work. We find that the coefficient on *Black_Insured* is the highest of the ethnic groups for each work status category.

Table 7 provides estimates of the effects of ethnic group and income level on employee sponsored healthcare premiums. Column [1] examines insured individuals with salaries less than $25,000. Column [2] includes insured individuals with $50,000-$74,000 salary levels. Column [3] examines individuals with salaries between $75,000-$99,000. Column [4] includes individual salaries greater than $100,000. The coefficient on *SalaryU25k_Insured* is positive and significant while the coefficients on the other salary categories are not significant. The results, together, suggest that individuals with the lowest salary levels are paying higher employer provided health insurance premiums.

Table 8 includes estimates of the effects of ethnic group and poverty level on employee sponsored healthcare premiums. The adjusted r-squares are 0.4206 and 0.4494 respectively, which suggests the models explain employer sponsored healthcare premiums well. Column [1] includes insured individuals in the 138-199 percent poverty level while Column [2] includes insured individuals in the 200 percent and above poverty level. We find the coefficient for black insured individuals is positive and significant in both categories of poverty and has the highest coefficient of the ethnic groups. We also

find the coefficient on 200 percent and above poverty level is positive and significant suggesting that individuals in greater poverty levels pay higher health insurance premiums.

Table 1. *Descriptive Statistics*

	Mean	Std. Dev.	Median	Min	Max
Dependent Variable					
EmployeeBC	0.2132	0.0302	0.2170	0.0845	0.2728
Independent Variable of Interests					
Black_Insured	0.0550	0.0521	0.0376	0	0.2496
White_Insured	0.3911	0.0891	0.4002	0.0486	0.6004
Asian_Insured	0.0220	0.0284	0.0147	0	0.204
HispLat_Insured	0.0531	0.0445	0.0406	0.0043	0.1925
Control Variables					
Unemployment Rate	0.0501	0.0174	0.0470	0.0200	0.1480
U18_Insured	0.1267	0.0196	0.1259	0.0158	0.2094
18-64_Insured	0.2991	0.0375	0.3026	0.0331	0.4598
65+_Insured	0.0872	0.0106	0.0883	0.0111	0.1224
19-25_Insured	0.0454	0.0075	0.0452	0.0049	0.0703
Male_Insured	0.2488	0.0280	0.2512	0.0289	0.3629
Female_Insured	0.2641	0.0270	0.2643	0.0301	0.3971
NativeBorn_Insured	0.4713	0.0559	0.4722	0.0539	0.6721
ForeignBorn_Insured	0.0417	0.0291	0.0318	0.0059	0.1226
NaturalBorn_Insured	0.0235	0.0180	0.0176	0.0031	0.0796
NoCitizen_Insured	0.0182	0.0115	0.0142	0.0025	0.0534
LessHS_Insured	0.0459	0.0109	0.0448	0.0064	0.0744
HSGrad_Insured	0.1385	0.0231	0.1397	0.0140	0.1989
SomeCollege_Insured	0.1539	0.0275	0.1517	0.0209	0.2436
BSGrad_Insured	0.1747	0.0420	0.1703	0.0188	0.3487
LaborForce_Insured	0.3744	0.0627	0.3760	0.0357	0.5260
NoLabor_Insured	0.1385	0.0406	0.1178	0.0243	0.2393
FullTime_Insured	0.2762	0.0467	0.2774	0.0243	0.3827
LessFullTime_Insured	0.1247	0.0216	0.1278	0.0125	0.1950
DoNotWork_Insured	0.1121	0.0356	0.1005	0.0232	0.2305
SalaryU25K_Insured	0.0709	0.0160	0.0695	0.0109	0.1166
Salary25K-49K_Insured	0.0955	0.0171	0.0974	0.0136	0.1360
Salary50K-74K_Insured	0.0917	0.0148	0.0910	0.0118	0.1435
Salary75K-99K_Insured	0.0748	0.0127	0.0743	0.0084	0.1180
Salary100K+_Insured	0.1802	0.0552	0.1788	0.0152	0.3303
Poverty138%_Insured	0.0931	0.0151	0.0931	0.0140	0.1336
Poverty138-199%_Insured	0.1369	0.0776	0.1702	0.0068	0.2991
Poverty200%+_Insured	0.2830	0.0921	0.2727	0.0392	0.5931

Refer to Appendix A for detailed definitions of all variables used in these analyses.

Table 2. *Estimation of the effects of Ethnic Group (Sex) on Employee Based Health Premiums (EmployeeBC)*

Dependent Variable: ***EmployeeBC***			
Variables	*Baseline*	*Male*	*Female*
Black_Insured	0.261***	0.438***	0.301***
	(9.04)	(8.06)	(3.82)
White_Insured	0.097***	0.291***	0.150**
	(4.95)	(4.75)	(2.11)
Asian_Insured	-0.009***	-0.116	-0.488***
	(-7.16)	(-1.01)	(-3.60)
HispLat_Insured	-0.142***	-0.276***	-0.137***
	(5.16)	(6.39)	(2.99)
Unemployment Rate		-0.146	-0.237**
		(-1.36)	(-2.22)
18-64_Insured		-0.102	-0.418***
		(-0.77)	(-2.76)
Male		-0.957***	
		(-3.37)	
Female			0.680**
			(2.36)
NativeBorn_Insured		-0.156*	-0.409***
		(-1.76)	(-5.27)
HSGrad_Insured		0.577***	0.530***
		(7.70)	(6.89)
LaborForce_Insured		0.358***	0.126
		(3.24)	(1.32)
Salary25K-49K_Insured		-0.042	-0.256
		(-0.22)	(-1.30)
Poverty138%_Insured		-0.159	-0.204
		(-0.96)	(-0.51)
Prob > F	0.0000	0.0000	0.0000
Year Fixed Effects	Yes	Yes	Yes
State Fixed Effects	Yes	Yes	Yes
Obs.	459	459	459
R-Square	0.3252	0.3683	0.4253

Note: This table presents multivariate regressions of Employee Based Health Premiums (*EmployeeBC*) on the different ethnic groups. Standard errors are robust. All variables are defined in Table 1. *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively. The t-statistics are reported in parentheses.

Table 3. *Estimation of the effects of Ethnic Group (Age) on Employee based Health Premiums (EmployeeBC)*

Dependent Variable: ***EmployeeBC***			
Variables	*U18*	*65+_nsured*	*19-25 Insured*
Black_Insured	0.445***	0.447***	0.438***
	(9.15)	(8.41)	(8.06)
White_Insured	0.339***	0.308***	0.291***
	(5.65)	(4.92)	(4.75)
Asian_Insured	-0.055	-0.070	-0.116
	(-0.49)	(-0.58)	(-1.01)
Latino_Insured	0.255***	0.287***	0.276***
	(5.91)	(6.70)	(6.39)
Unemployment Rate	-0.112	-0.152	-0.146
	(-1.06)	(-1.44)	(-1.36)
U18	0.337***		
	(2.88)		
65+_Insured		-0.216	
		(-1.28)	
19-25_Insured			-0.102
			(-0.77)
Male	-1.386***	-1.066***	-0.957***
	(-4.63)	(-3.88)	(-3.37)
NativeBorn_Insured	-0.192**	-0.154*	-0.156*
	(2.17)	(-1.75)	(-1.76)
HSGrad_Insured	0.619***	0.610***	0.577***
	(8.17)	(7.65)	(7.70)
LaborForce_Insured	0.397***	0.324***	0.358***
	(3.75)	(3.11)	(3.24)
Salary25K-49K_Insured	-0.106	0.118	-0.042
	(-0.66)	(0.72)	(-0.22)
Poverty138%_Insured	-0.171	-0.296*	-0.159
	(-1.15)	(-1.83)	(-0.96)
Prob > F	0.0000	0.0000	0.0000
Year Fixed Effects	Yes	Yes	Yes
State Fixed Effects	Yes	Yes	Yes
Obs.	459	459	459
R-Square	0.3564	0.3943	0.4221

Note: This table presents multivariate regressions of Employee Based Health Premiums (*EmployeeBC*) on the different ethnic groups. Standard errors are robust. All variables are defined in Table 1. *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively. T-statistic is reported in parentheses.

Table 4. *Estimation of the effects of Ethnic Group (Citizenship) on Employee based Health Premiums (EmployeeBC)*

Dependent Variable: ***EmployeeBC***			
Variables	*ForeignBorn_Insured*	*NaturalBorn_Insured*	*NoCitizen_Insured*
Black_Insured	0.387***	0.371***	0.424***
	(6.76)	(6.48)	(7.49)
White_Insured	0.256***	0.248***	0.285***
	(4.10)	(3.97)	(4.53)
Asian_Insured	-0.210*	-0.238**	-0.114
	(-1.72)	(-1.99)	(-0.92)
Latino_Insured	0.233***	0.222***	0.286***
	(5.04)	(5.09)	(5.89)
Unemployment Rate	-0.164	-0.184*	-0.129
	(-1.53)	(-1.72)	(-1.20)
18-64_Insured	-0.174	-0.170	-0.129
	(-1.28)	(-1.28)	(-0.92)
Male	-1.131***	-1.150***	-1.181***
	(-4.92)	(-5.08)	(-4.98)
ForeignBorn_Insured	0.245***		
	(2.78)		
NaturalBorn_Insured		0.449	
		(3.49)	
NoCitizen_Insured			0.277
			(1.12)
HSGrad_Insured	0.570***	0.545***	0.583***
	(7.67)	(7.35)	(7.64)
LaborForce_Insured	0.365***	0.390***	0.342***
	(3.32)	(3.55)	(3.09)
Salary25K-49K_Insured	-0.051	-0.039	-0.081
	(-0.27)	(-0.21)	(-0.43)
Poverty138%_Insured	-0.121	-0.061	-0.194
	(-0.73)	(-0.37)	(-1.17)
Prob > F	0.0000	0.0000	0.0000
Year Fixed Effects	Yes	Yes	Yes
State Fixed Effects	Yes	Yes	Yes
Obs.	459	459	459
R-Square	0.3669	0.3625	0.3702

Note: This table presents multivariate regressions of Employee Based Health Premiums (*EmployeeBC*) on the different ethic groups. Standard errors are robust. All variables are defined in Table 1. *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively. T-statistic is reported in parentheses.

Table 5. *Estimation of the effects of Ethnic Group (Education) on Employee based Health Premiums (EmployeeBC)*

Dependent Variable: ***EmployeeBC***			
Variables	*LessHS_Insured*	*SomeCollege_Insured*	*BSGrad_Insured*
Black_Insured	0.281***	0.416***	0.585***
	(4.96)	(6.94)	(10.42)
White_Insured	0.259***	0.312***	0.441***
	(4.34)	(4.71)	(7.24)
Asian_Insured	-0.145	0.014	0.136
	(-1.32)	(0.11)	(1.22)
Latino_Insured	0.092**	0.170***	0.278***
	(2.22)	(3.90)	(6.20)
Unemployment Rate	-0.059	-0.020	-0.118
	(-0.57)	(-0.18)	(-1.08)
18-64_Insured	-0.064	-0.379**	0.381**
	(-0.50)	(-2.38)	(2.51)
Male	-1.452***	-0.087	-1.365***
	(-5.16)	(-0.25)	(-4.55)
NativeBorn_Insured	0.106	-0.087	-0.081
	(1.21)	(-0.95)	(-0.90)
LessHS_Insured	1.717***		-0.409***
	(9.65)		(-5.27)
SomeCollege_Insured		-0.404***	
		(-4.10)	
BSGrad_Insured			-0.458***
			(-6.31)
LaborForce_Insured	0.483***	0.209*	0.372***
	(4.42)	(1.84)	(3.26)
Salary25K-49K_Insured	0.248	0.444**	-0.069
	(1.38)	(2.26)	(-0.35)
Poverty138%_Insured	-0.860***	-0.272	-0.303*
	(-4.93)	(-1.56)	(-1.78)
Prob > F	0.0000	0.0000	0.0000
Year Fixed Effects	Yes	Yes	Yes
State Fixed Effects	Yes	Yes	Yes
Obs.	459	459	459
R-Square	0.3252	0.3808	0.3600

Note: This table presents multivariate regressions of Employee Based Health Premiums (*EmployeeBC*) on the different ethnic groups. Standard errors are robust. All variables are defined in Table 1. *, **, and ***indicate significance at the 10%, 5%, and 1% levels, respectively. The t-statistics are reported in parentheses.

Table 6. *Estimation of the effects of Ethnic Group (Work Force) on Employee based Health Premiums (EmployeeBC)*

Dependent Variable: ***EmployeeBC***			
Variables	*NoLabor_Insured*	*LessFullTime_Insured*	*DoNotWork_Insured*
Black_Insured	0.482***	0.415***	0.473***
	(8.52)	(6.94)	(8.14)
White_Insured	0.304***	0.274***	0.289***
	(4.76)	(4.45)	(4.52)
Asian_Insured	-0.086	-0.174	-0.114
	(-0.72)	(-1.50)	(-0.94)
Latino_Insured	0.292***	0.258***	0.290***
	(6.67)	(5.58)	(6.56)
Unemployment Rate	-0.183*	-0.191*	-0.197*
	(-1.69)	(-1.77)	(-1.78)
18-64_Insured	0.010	0.124	0.022
	(0.08)	(0.91)	(0.17)
Male	-0.482**	-0.386	-0.475*
	(-1.98)	(-1.55)	(-1.94)
NativeBorn_Insured	-0.141	-0.163*	-0.146
	(-1.58)	(-1.82)	(-1.64)
HSGrad_Insured	0.564***	0.494***	0.551***
	(7.37)	(6.38)	(7.10)
NoLabor_Insured	-0.184*		
	(-1.78)		
LessFullTime_Insured		-0.237	
		(-1.65)	
DoNotWork_Insured			-0.092
			(-0.92)
Salary25K-49K_Insured	0.002	-0.033	-0.013
	(0.01)	(-0.17)	(-0.07)
Poverty138%_Insured	-0.275*	-0.383**	-0.308*
	(-1.68)	(-2.48)	(-1.83)
Prob > F	0.0000	0.0000	0.0000
Year Fixed Effects	Yes	Yes	Yes
State Fixed Effects	Yes	Yes	Yes
Obs.	459	459	459
R-Square	0.4198	0.4304	0.4279

Note: This table presents multivariate regressions of Employee Based Health Premiums (*EmployeeBC*) on the different ethnic groups. Standard errors are robust. All variables are defined in Table 1. *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively. The t-statistics are reported in parentheses.

Table 7. *Estimation of the effects of Ethnic Group (Income) on Employee based Health Premiums (EmployeeBC)*

Dependent Variable: ***EmployeeBC***				
Variables	*SalaryU25k_Insured*	*Salary50_74k_Insured*	*Salary75_99k_Insured*	*Salary100plus_Insured*
Black_Insured	0.402***	0.432***	0.432***	0.418***
	(7.35)	(8.31)	(8.07)	(7.65)
White_Insured	0.253***	0.294***	0.288***	0.292***
	(4.22)	(5.01)	(4.91)	(4.99)
Asian_Insured	-0.151	-0.120	-0.118	-0.136
	(-1.33)	(-1.06)	(-1.04)	(-1.19)
Latino_Insured	0.272***	0.273***	0.275***	0.268***
	(6.34)	(6.35)	(6.39)	(6.18)
Unemployment Rate	-0.164	-0.171	-0.149	-0.164
	(-1.53)	(-1.57)	(-1.39)	(-1.52)
18-64_Insured	-0.141	-0.198	-0.108***	-0.223
	(-1.30)	(-1.50)	(-0.91)	(-1.51)
Male	-0.694**	-0.812***	-0.936***	-1.051***
	(-2.30)	(-2.71)	(-3.24)	(-3.66)
NativeBorn_Insured	-0.201**	-0.134	-0.150*	-0.130
	(-2.28)	(-1.51)	(-1.69)	(-1.45)
HSGrad_Insured	0.492***	0.581***	0.576***	0.596***
	(6.15)	(7.97)	(7.88)	(7.99)
LaborForce_Insured	0.351***	0.363***	0.367***	0.377**
	(3.20)	(3.30)	(3.25)	(3.40)
SalaryU25k_Insured	0.751**			
	(2.39)			
Salary50_74k_Insured		-0.285		
		(-1.47)		
Salary75_99k_Insured			-0.110	
			(-0.44)	
Salary100plus_Insured				0.123
				(1.36)
Poverty138%_Insured	-0.756	-0.127	-0.188	0.001
	(-2.81)	(-0.98)	(-1.51)	(0.00)
Prob > F	0.0000	0.0000	0.0000	0.0000
Year Fixed Effects	Yes	Yes	Yes	Yes
State Fixed Effects	Yes	Yes	Yes	Yes
Obs.	459	459	459	459
R-Square	0.3907	0.3575	0.3654	0.3463

Note: This table presents multivariate regressions of Employee Based Health Premiums (*EmployeeBC*) on the different ethnic groups. Standard errors are robust. All variables are defined in Table 1. *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively. The t-statistics are reported in parentheses.

Table 8. *Estimation of the effects of Ethnic Group (Poverty Level) on Employee based Health Premiums (EmployeeBC)*

Dependent Variable: ***EmployeeBC***		
Variables	*Poverty138_199_Insured*	*Poverty200+_Insured*
Black_Insured	0.437***	0.411***
	(8.05)	(7.46)
White_Insured	0.307***	0.279***
	(5.12)	(4.61)
Asian_Insured	-0.093	-0.139
	(-0.82)	(-1.21)
Latino_Insured	0.265***	0.265***
	(6.33)	(6.35)
Unemployment Rate	-0.154	-0.143
	(-1.44)	(-1.34)
18-64_Insured	-0.227*	-0.235*
	(-1.74)	(-1.91)
Male	-0.911***	-1.094***
	(-3.19)	(-3.77)
NativeBorn_Insured	-0.159*	-0.153*
	(-1.82)	(-1.75)
HSGrad_Insured	0.577***	0.566***
	(7.71)	(7.57)
LaborForce_Insured	0.430***	0.404***
	(4.12)	(3.99)
Salary25K-49K_Insured	-0.096	0.030
	(-0.63)	(0.18)
Poverty138_199_Insured	-0.102	
	(-1.28)	
Poverty200+_Insured		0.144**
		(2.24)
Prob > F	0.0000	0.0000
Year Fixed Effects	Yes	Yes
State Fixed Effects	Yes	Yes
Obs.	459	459
R-Square	0.4206	0.4494

Note: This table presents multivariate regressions of Employee Based Health Premiums (*EmployeeBC*) on the different ethnic groups. Standard errors are robust. All variables are defined in Table 1. *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively. The t-statistics are reported in parentheses.

Conclusion

This paper examines the effect of socioeconomic disparities on healthcare coverage discrepancies within underserved and underrepresented communities, particularly examining their effects on average employer-sponsored health insurance premiums at the state level. While other papers generally explore health inequities across all racial and ethnic groups, our study addresses a critical gap in the literature by specifically focusing on ethnic groups with employer-sponsored health insurance (ESHI).

The insights gained from our analysis at the state level underscore a crucial connection between the increase in Black population coverage by Employer-Sponsored Health Insurance (ESHI) and a simultaneous uptick in associated insurance premiums. Notably, when accounting for various socioeconomic factors, our findings reveal that this ethnic group allocates a higher percentage of their income to employer-sponsored healthcare coverage compared to Whites, Hispanics/Latinos, and Asians. This highlights the need to investigate into the "true" cost structure of ESHI for all ethnic and racial groups. As we consider these disparities, it becomes evident that future research and policy considerations should place heightened emphasis on understanding and addressing the unique challenges faced by different communities in accessing affordable healthcare coverage.

Moving forward, it is imperative for future research endeavors to explore deeper into this subject by employing individual-level data. By doing so, researchers can gain a more nuanced understanding of the factors influencing the disproportionate costs faced by marginalized groups in obtaining health insurance. Additionally, ongoing investigations can expand their scope through further cross-sectional analyses, exploring the broader impact of various socioeconomic factors on the disparate costs of health premiums for marginalized communities. Furthermore, expanding the dataset to include samples beyond the United States could provide valuable insights, allowing researchers to generalize findings and uncover similarities or differences in healthcare costs affecting marginalized groups in diverse populations. These avenues of inquiry hold the potential to inform more targeted and equitable healthcare policies.

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Appendix A. *Variable Definitions*

Variable		Definition
T_Total civilian noninstitutionalized population	=	The estimated population for a specific year in a U.S. state, estimated from the American Community Survey data available on census.gov.
T_ Employment-based health insurance	=	The estimated employment-based health insurance, encompassing multiple insurance plans, for a particular year within a U.S. state. This estimation is derived from data sourced from the American Community Survey, accessible on census.gov.
T_Employment based health insurance alone	=	The estimated health insurance coverage through employment alone for a particular year in a U.S. state, derived from the data provided by the American Community Survey on census.gov.
I_Total civilian noninstitutionalized population	=	The estimated number of insured individuals within a U.S. state for a particular year, derived from data obtained from the American Community Survey available on census.gov.
Multiplier Employee-based health insurance	=	This matrix is derived by dividing the estimated employment-based health insurance, which includes multiple insurance plans, by the estimated number of insured individuals for a specific year within a U.S. state.
Multiplier Employee-based health insurance alone	=	This matrix is derived by dividing the health insurance coverage through employment alone by the estimated number of insured individuals for a specific year within a U.S. state.
Average Employee-based health insurance	=	The average health insurance expenditure for individual employees in a particular year within a U.S. state, derived from data sourced from the American Community Survey accessible on census.gov.
Health Premium	=	Employer-provided health premiums sourced from the National Association of Insurance Commissioners, as reported in the Insurance Department Resources Reports.
Average Health Premium	=	Calculated by dividing Health Premium by estimated number of insured individuals within a U.S. state for a particular year.
Unemployment Rate	=	Calculated by dividing the number of unemployed people by the total labor force, then multiply by 100. Source: U.S. Bureau of Labor Statistics (bls.gov)
EmployeeBC	=	Calculated by dividing Employee Sponsored Health Premiums by the Total Health Premiums for a particular year in a U.S. state, derived from the data provided by the American Community Survey on census.gov.
U18_Insured	=	Calculated by dividing the estimated number of insured individuals **under the age of 18** population within a U.S. state for a particular year, derived from data obtained from the American Community Survey available on census.gov by *I_Total civilian noninstitutionalized population* then multiplying by the *Multiplier Employee-based health insurance alone*.
18-64_Insured	=	Calculated by dividing the estimated number of insured individuals **between the ages of 18 and 64** population within a U.S. state for a particular year, derived from data obtained from the American Community Survey available on census.gov by *I_Total civilian noninstitutionalized population* then multiplying by the *Multiplier Employee-based health insurance alone*.
65+_Insured	=	Calculated by dividing the estimated number of insured individuals **equal or greater than the age of 65** population within a U.S. state for a particular year, derived from data obtained from the American Community Survey available on census.gov by *I_Total civilian noninstitutionalized population* then multiplying by the *Multiplier Employee-based health insurance alone*.
19-25_Insured	=	Calculated by dividing the estimated number of insured individuals **between the ages of 19 and 25** population within a U.S. state for a particular year, derived from data obtained from the American Community Survey available on census.gov by *I_Total civilian noninstitutionalized population* then multiplying by the *Multiplier Employee-based health insurance alone*.

Male_Insured	=	Calculated by dividing the estimated number of insured identified as **Male** population within a U.S. state for a particular year, derived from data obtained from the American Community Survey available on census.gov by *I_Total civilian noninstitutionalized population* then multiplying by the *Multiplier Employee-based health insurance alone*.
Female_Insured	=	Calculated by dividing the estimated number of insured identified as **Female** population within a U.S. state for a particular year, derived from data obtained from the American Community Survey available on census.gov by *I_Total civilian noninstitutionalized population* then multiplying by the *Multiplier Employee-based health insurance alone*.
White_Insured	=	Calculated by dividing the estimated number of insured individuals classify as **White** population within a U.S. state for a particular year, derived from data obtained from the American Community Survey available on census.gov by *I_Total civilian noninstitutionalized population* then multiplying by the *Multiplier Employee-based health insurance alone*.
Black_Insured	=	Calculated by dividing the estimated number of insured individuals classify as **Black** population within a U.S. state for a particular year, derived from data obtained from the American Community Survey available on census.gov by *I_Total civilian noninstitutionalized population* then multiplying by the *Multiplier Employee-based health insurance alone*.
Asian_Insured	=	Calculated by dividing the estimated number of insured individuals classify as **Asian** population within a U.S. state for a particular year, derived from data obtained from the American Community Survey available on census.gov by *I_Total civilian noninstitutionalized population* then multiplying by the *Multiplier Employee-based health insurance alone*.
HispLat_Insured	=	Calculated by dividing the estimated number of insured individuals classify as **Hispanic or Latino** population within a U.S. state for a particular year, derived from data obtained from the American Community Survey available on census.gov by *I_Total civilian noninstitutionalized population* then multiplying by the *Multiplier Employee-based health insurance alone*.
NativeBorn_Insured	=	Calculated by dividing the estimated number of insured individuals **Native Born** population within a U.S. state for a particular year, derived from data obtained from the American Community Survey available on census.gov by *I_Total civilian noninstitutionalized population* then multiplying by the *Multiplier Employee-based health insurance alone*.
ForeignBorn_Insured	=	Calculated by dividing the estimated number of insured individuals **Foreign Born** population within a U.S. state for a particular year, derived from data obtained from the American Community Survey available on census.gov by *I_Total civilian noninstitutionalized population* then multiplying by the *Multiplier Employee-based health insurance alone*.
NaturalBorn_Insured	=	Calculated by dividing the estimated number of insured individuals **Natural Born** population within a U.S. state for a particular year, derived from data obtained from the American Community Survey available on census.gov by *I_Total civilian noninstitutionalized population* then multiplying by the *Multiplier Employee-based health insurance alone*.
NoCitizen_Insured	=	Calculated by dividing the estimated number of insured individuals **not as US citizens** population within a U.S. state for a particular year, derived from data obtained from the American Community Survey available on census.gov by *I_Total civilian noninstitutionalized population* then multiplying by the *Multiplier Employee-based health insurance alone*.
LessHS_Insured	=	Calculated by dividing the estimated number of insured individuals **less than a High School diploma** population within a U.S. state for a particular year, derived from data obtained from the American Community Survey available on census.gov by *I_Total civilian noninstitutionalized population* then multiplying by the *Multiplier Employee-based health insurance alone*.
HSGrad_Insured	=	Calculated by dividing the estimated number of insured individuals **with a High School diploma** population within a U.S. state for a particular year, derived from data obtained from the American Community Survey available on census.gov by *I_Total civilian noninstitutionalized population* then multiplying by the *Multiplier Employee-based health insurance alone*.
SomeCollege_Insured	=	Calculated by dividing the estimated number of insured individuals **with some College experience** population within a U.S. state for a particular year, derived from data obtained from the American Community Survey available on census.gov by *I_Total civilian noninstitutionalized population* then multiplying by the *Multiplier Employee-based health insurance alone*.
BSGrad_Insured	=	Calculated by dividing the estimated number of insured individuals with a **Bachelor Degree** population within a U.S. state for a particular year, derived from data obtained from the American Community Survey available on census.gov by *I_Total civilian noninstitutionalized population* then multiplying by the *Multiplier Employee-based health insurance alone*.

LaborForce_Insured = Calculated by dividing the estimated number of insured individuals **that work in the labor force** population within a U.S. state for a particular year, derived from data obtained from the American Community Survey available on census.gov by *I_Total civilian noninstitutionalized population* then multiplying by the *Multiplier Employee-based health insurance alone*.

NoLabor_Insured = Calculated by dividing the estimated number of insured individuals **that do not work in the labor force** population within a U.S. state for a particular year, derived from data obtained from the American Community Survey available on census.gov by *I_Total civilian noninstitutionalized population* then multiplying by the *Multiplier Employee-based health insurance alone*.

FullTime_Insured = Calculated by dividing the estimated number of insured individuals that are **Full Time Employee** population within a U.S. state for a particular year, derived from data obtained from the American Community Survey available on census.gov by *I_Total civilian noninstitutionalized population* then multiplying by the *Multiplier Employee-based health insurance alone*.

LessFullTime_Insured = Calculated by dividing the estimated number of insured individuals that are **Less than Full Time Employee** population within a U.S. state for a particular year, derived from data obtained from the American Community Survey available on census.gov by *I_Total civilian noninstitutionalized population* then multiplying by the *Multiplier Employee-based health insurance alone*.

DoNotWork_Insured = Calculated by dividing the estimated number of insured individuals that **Do Not Work Employees** population within a U.S. state for a particular year, derived from data obtained from the American Community Survey available on census.gov by *I_Total civilian noninstitutionalized population* then multiplying by the *Multiplier Employee-based health insurance alone*.

SalaryU25K_Insured = Calculated by dividing the estimated number of insured individuals **that receive a salary under $25,000 per year** population within a U.S. state for a particular year, derived from data obtained from the American Community Survey available on census.gov by *I_Total civilian noninstitutionalized population* then multiplying by the *Multiplier Employee-based health insurance alone*.

Salary25K-49K_Insured = Calculated by dividing the estimated number of insured individuals **that receive a salary between $25,000 and $49,000 per year** population within a U.S. state for a particular year, derived from data obtained from the American Community Survey available on census.gov by *I_Total civilian noninstitutionalized population* then multiplying by the *Multiplier Employee-based health insurance alone*.

Salary50K-74K_Insured = Calculated by dividing the estimated number of insured individuals **that receive a salary between $50,000 and $74,000** population within a U.S. state for a particular year, derived from data obtained from the American Community Survey available on census.gov by *I_Total civilian noninstitutionalized population* then multiplying by the *Multiplier Employee-based health insurance alone*.

Salary75K-99K_Insured = Calculated by dividing the estimated number of insured individuals **that receive a salary between $75,000 and $99,000** population within a U.S. state for a particular year, derived from data obtained from the American Community Survey available on census.gov by *I_Total civilian noninstitutionalized population* then multiplying by the *Multiplier Employee-based health insurance alone*.

Salary100K+_Insured = Calculated by dividing the estimated number of insured individuals **that receive a salary over $100,000 per year** population within a U.S. state for a particular year, derived from data obtained from the American Community Survey available on census.gov by *I_Total civilian noninstitutionalized population* then multiplying by the *Multiplier Employee-based health insurance alone*.

Poverty138%_Insured = Calculated by dividing the estimated number of insured individuals **that are at the 138% poverty level** population within a U.S. state for a particular year, derived from data obtained from the American Community Survey available on census.gov by *I_Total civilian noninstitutionalized population* then multiplying by the *Multiplier Employee-based health insurance alone*.

Poverty138-199%_Insured = Calculated by dividing the estimated number of insured individuals **that are between the 138% and 199% poverty level** population within a U.S. state for a particular year, derived from data obtained from the American Community Survey available on census.gov by *I_Total civilian noninstitutionalized population* then multiplying by the *Multiplier Employee-based health insurance alone*.

Poverty200%+_Insured = Calculated by dividing the estimated number of insured individuals **that are above 200% poverty level** population within a U.S. state for a particular year, derived from data obtained from the American Community Survey available on census.gov by *I_Total civilian noninstitutionalized population* then multiplying by the *Multiplier Employee-based health insurance alone*.