How Zip Codes Affect Auto Insurance Premiums in Maryland

Auto insurers use numerous socioeconomic factors to set auto insurance rates and charge people premiums. In Maryland, auto insurance companies cannot use race or income to set premiums; however, auto insurers can use a number of rating factors that are proxies for race and income.

A driver's home zip code is used as a primary factor in setting an individual's insurance premium. As we illustrate, its use also reveals the extraordinary price disparities faced by safe drivers in communities of color compared with those in predominantly white communities. In particular, this research shows that the heavy reliance on zip code by insurance carriers disproportionately impacts African American drivers, even if those drivers have pristine driving records.

Auto insurers argue that considering the residential zip codes of policyholders is a useful way to assess drivers' risk and establish their premiums. In particular, insurance companies focus on the frequency of losses associated with a zip code (how often will claims be filed) and the severity of losses for each zip code (how much will an average claim cost). However, for reasons that may be wholly unintended or deeply linked with historic zip code-based discrimination, the outcome of zip code pricing in Maryland is that people of color consistently pay significantly higher premiums for the coverage mandated by state law.

Consumer Federation of America (CFA) recently acquired data from Quadrant Information Services, LLC that includes auto insurance premiums in every Maryland zip code from 10 of the largest insurance carriers in the state, representing almost 90% of the market. The premiums in the dataset reflect the cost of a policy covering only the state's mandatory coverages for a customer with no accidents, tickets, or claims on their driving record. The findings include:

- Drivers pay dramatically different rates for auto insurance based on their zip code
- Zip codes that have a majority African American population pay significantly higher premiums compared to zip codes where the majority of the population is white.

Relationship between Zip Codes and Percentage of African Americans in Each Area

We combined 2019 data from the American Community Survey with our data from Quadrant on auto insurance premiums by Maryland zip code. This enabled us to calculate the percentage of African Americans living in each area and assign the zip codes a score from 1 to 10 based on the African American population (1 being the lowest percentage and 10 being the highest).

The results were very dramatic. As the percentage of African Americans living in the zip code increases, the average annual premium increases. Below is a chart detailing the results:

Table 1. Auto Insurance Premiums By Zip Code and Percentage of African American Residents

African American Population of ZIP Code	Average Annual Auto Premium	How Many Zip Codes	Sum of Total Population in Zip Codes	Percentage of Total Maryland Population in Zip Codes
<10%	$987.77	240	1,606,469	26.72%
10% - 20%	$1,101.15	78	1,362,334	22.66%
20% - 30%	$1,149.44	51	1,078,968	17.95%
30% - 40%	$1,180.37	23	348,807	5.80%
40% - 50%	$1,360.54	13	322,389	5.36%
50% - 60%	$1,406.73	15	266,039	4.43%
60% - 70%	$1,472.74	12	257,278	4.28%
70% - 80%	$1,962.19	8	329,633	5.48%
80% - 90%	$1,664.36	12	409,251	6.81%
>90%	$2,424.92	1	30,179	0.50%

Relationship between Zip Codes and Percentage of White Residents in Each Area

Another way to look at the interplay of race, ethnicity, and zip code is to consider the percentage of white residents in each zip code. Because there are several communities with significant populations of residents that are neither African American nor white, including zip codes with large Latino and Asian American populations, this analysis includes a smoother distribution of both the number of zip codes and the population size captured by each decile of white residents in each group. Rather than looking solely at the impact of pricing on African American communities, this table follows the trajectory of pricing as communities become less diverse and more white.

What becomes immediately clear is that auto insurance premiums decline as the diversity in a community declines and the white population grows. The average premium for basic coverage decreases by $72 for each 10% increase in the proportion of white residents in a zip code. A useful comparison can be made between the two least white and two most white groups of zip codes, as each set represents 19.1% of the state's population. The 1.15 million residents living

in zip codes where less than 20% of the population is white face average premiums of more than $1,600. The 1.15 million residents living in zip codes where more than 80% of the population is white see average premiums of less than $1,000.

Table 2. Auto Insurance Premiums By Zip Code and Percentage of White Residents

White Population of ZIP Code	Average Annual Auto Premium	How Many Zip Codes	Sum of Total Population in Zip Codes	Percentage of Total Maryland Population in Zip Codes
<10%	$1,611.36	20	684,492	11.39%
10% - 20%	$1,675.51	19	462,198	7.69%
20% - 30%	$1,389.97	18	558,641	9.29%
30% - 40%	$1,288.07	20	470,345	7.82%
40% - 50%	$1,212.54	20	518,236	8.62%
50% - 60%	$1,191.33	35	673,558	11.20%
60% - 70%	$1,123.81	49	829,731	13.80%
70% - 80%	$1,040.79	61	667,960	11.11%
10% - 90%	$970.00	93	812,539	13.52%
>90%	$963.76	118	333,647	5.55%

Bethesda 20816 is a wealthy, largely white zip code. African Americans make up only 2% of its population, while 82% of the residents are white. In 2020 the zip code's median household income was $200,001. The average annual premium for 20816 is $1,051.22.

The moderately well-off zip code 20901 is located in Silver Spring. African Americans make up 27% of its population, Hispanic or Latino residents are 22% of the population, and 40% of the residents are white. Its 2020 median household income was $109,246. This zip code pays an average annual premium of $1,310.18, a significant increase from the amount paid in Bethesda.

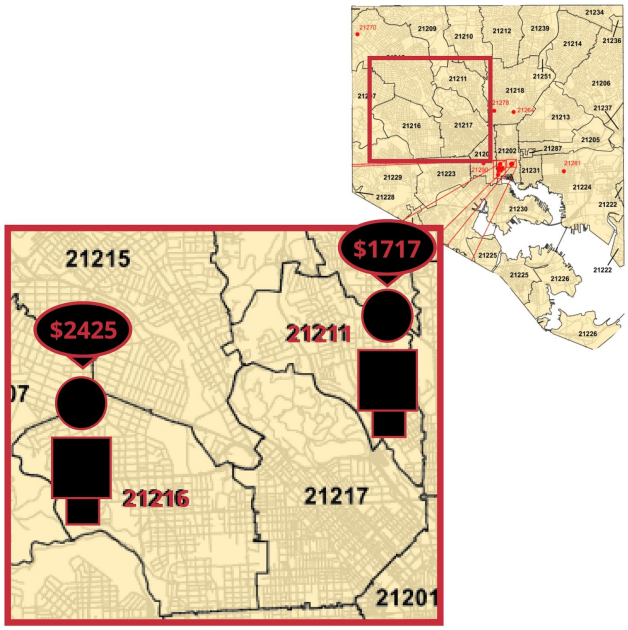
By contrast, the low-income zip code 21216 in Baltimore is 95% African American and has a median household income of $40,178. This zip code pays an average annual premium of $2,424.92, over $1,000 more than the average premium in the Silver Spring zip code and almost $1,400 more than the average premium in the Bethesda zip code.

Analysis of Nearby Zip Codes

Next, we looked again at the pricing of auto insurance premiums in nearby zip codes. Using the data from the Quadrant Information Services, we analyzed data on auto insurance premiums in different zip codes. Although insurance companies often claim that differences in street width, accident rates, or other factors are the reasons that there are dramatic differences in premium pricing in nearby or adjacent zip codes, we looked at zip codes that were near one another where there were few if any differences in road width, road surfacing, accident rates, or other factors.

Our analysis of adjacent zip codes shows that the best predictor of higher rates is, once again, the percentage of African Americans or Latinx residents in a zip code. The more people of color living in a zip code, the higher the rate charged for auto insurance. In other words, auto insurance companies are engaging in a new form of redlining - making it more costly for communities of color to insure their cars.

Baltimore City

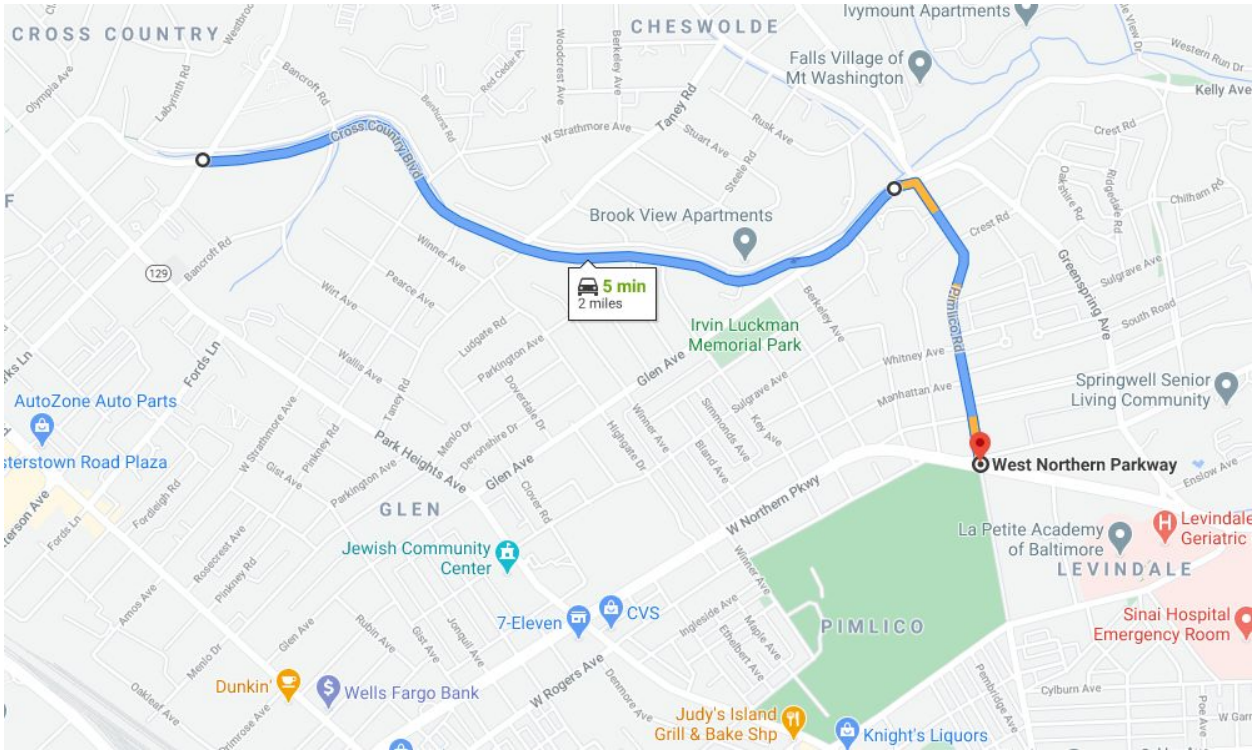


In Baltimore City, we compared insurance rates for residents of 21216, Greater Mondawmin compared to those of residents of 21211, Hampden/Remington/Medfield. Greater Mondawmin (21216) community is comprised of 95% African American residents with a median household income of $40,178. Hampden/Remington/Medfield is a community comprised of 11% African American residents with a median household income of $58,210.[1] These communities are two miles apart. Yet, drivers in Greater Mondawmin pay an average of $2,424 for auto insurance, while drivers in Hampden/Remington/Medfield pay an average of $1,717 - more than $700 less for auto insurance. This is a 70% surcharge for drivers living two miles west of Hampden/Remington/Medfield.

We also compared rates for drivers for drivers living near Pimlico (21215) in Baltimore City to Mount Washington (21209). While there are two miles that separate the community, in some

[1] Baltimore City Neighborhood Health Profiles

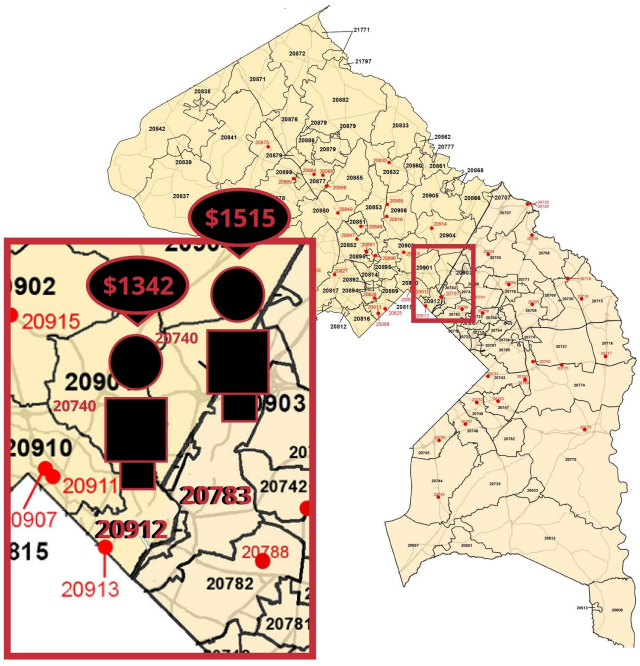
areas, there is simply a street. One street difference means a 36% increase in auto insurance rates. Pimlico is a community that is 79% African-American with a median household income of $38,651. Adjacent to Pimlico lies Mount Washington, a community that is 69% white with a median household income of $83,202. Mirroring our other findings, drivers in Mount Washington pay an average premium of $1745, while their neighbors in Pimlico pay $2,367 a $621.88 increase.



In terms of data, a 2013 study from the National Institutes of Health looked at hotspots and geography of crashes in Baltimore City and using statistical analysis found that income, age, sex, and population size was not a predictor of crashes, explaining only about 20% of crashes.[2] Therefore, auto insurance rates that use these non-driving factors to set prices are not using factors that explain crashes.

[2] Hotspots and Causes of Motor Vehicle Crashes in Baltimore

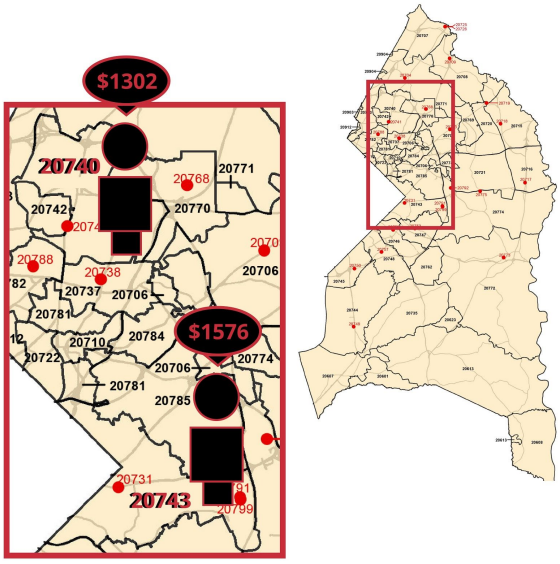
Montgomery County



In Montgomery County, we found similar results. We compared insurance rates for Hyattsville/Langley Park which is comprised of 89% people of color (24% African Americans, 65% Hispanic residents) and a median income of $70,052 to insurance rates for residents of Takoma Park, a community which straddles the Washington D.C./Maryland line. Takoma Park is comprised of 56% people of color (35% African American, 21% Hispanic) and has a median income of $86,439.

These communities are separated by about 2.3 miles. Yet, there are substantial differences in what they are charged for auto insurance. In Hyattsville/Langley Park, drivers are charged, on average, $1,515 for car insurance while an identical driver living in Takoma Park, two miles away, would be charged $1,342 - a $173 increase, or 88% surcharge.

Prince George's County[3]



Finally, even in Prince George's County, an affluent, largely African American county, there are still differences based on the percentage of people of color in a community. In Prince George's County, we analyze the average auto insurance rates between Fairmount Heights (20743) and College Park (20740). Fairmount Heights is a community comprised of 95% people of color (85% African American, 10% Hispanic) with a median household income of $64,141. College Park is a community comprised of 41% people of color (21% African American and 20% Hispanic) with a median income of $66,679. The communities have similar economic profiles and are separated by 8 miles. Yet, drivers in Fairmount Heights are charged, on average, $1,576 for insurance, while drivers in College Park pay, on average, $1,302 - saving $274, an 83% discount.

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Policy Recommendations

- Draw zip codes over larger territories to smooth the stark differences made within a two mile radius as currently exists.
- Reduce the disparity in pricing between zip codes by regulating the percentage by which zip codes can vary. For example, policymakers could address the disparate impact of zip code pricing by capping the difference between zip codes to no more than 25% range.
- Pilot a low-cost auto insurance program for low-income drivers with good driving records, modeled on the California low-cost program. The pilot program should focus on Baltimore City and Prince George's County, the two highest-priced communities in Maryland.
- Eliminate or minimize the use of non-driving related factors in setting auto insurance rates.

Conclusion

The data demonstrate that when zip codes are used in auto insurance pricing, African Americans wind up paying substantially more for auto insurance. This factor has a disparate impact, adversely affecting African Americans and perpetuating systemic racism. This modern-day redlining must end.

Data Source

Data for this report were acquired by Consumer Federation of America from Quadrant Information Services, LLC. The data are representative of publicly sourced data using the variables and base profile defined below and individual rates may differ.

Base Profile

About our Driver	Vehicle and Coverage
35-year-old, unmarried driver	2011 Honda Civic LX
Licensed for 19 years	12-mile commute, 5 days/week
No accidents, moving violations, or license suspensions	12,000 miles annually
No lapse in coverage	Coverage Quoted: 30/60/15 + UM + $2500 PIP
High school diploma	
Rents home	