# UNEVEN OPPORTUNITIES

## How conditions for wellness vary across the metropolitan Washington region

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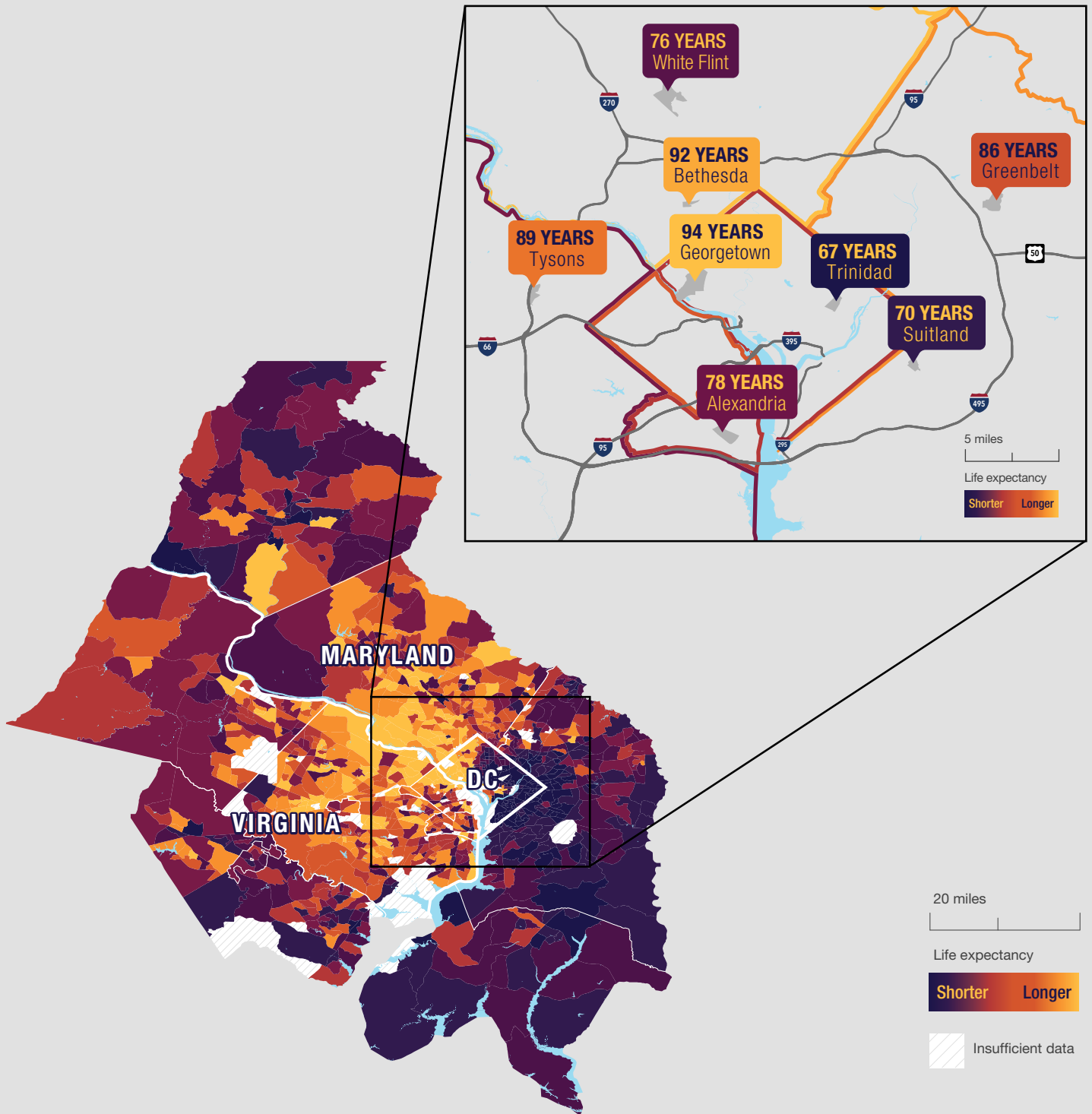
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## INTRODUCTION

**W**ashington, D.C. is the nation's capital and a center of geopolitical influence. The metropolitan Washington region—the District of Columbia and the surrounding suburbs of suburban Maryland and Northern Virginia—is not only the seat of government but also home to major industries such as information technology, health care, research, and tourism, among others. The population of the District of Columbia was approximately 680,000 in 2016, but more than 4.5 million people lived in the suburban Maryland and Virginia communities that surround the city.[a]

At first glance, the health of this population is excellent, well above the national average. According to an Institute for Health Metrics and Evaluation report, as of 2014, life expectancy in Fairfax County and Loudoun County was among the highest of any county in the United States.[1] For many years, the counties in the metropolitan Washington region have ranked among the healthiest in Maryland and Virginia.[2]

But the health status of the local population is not uniform across the region. In fact, the statistics of individual neighborhoods vary dramatically. As discussed below, this study examined mortality rates across the region's 1,223 census tracts[b] and found that life expectancy at birth—how long a newborn baby can expect to live—varied by 27 years (see Figure 1). The census tracts with the lowest and highest life expectancies were both in the District, ranging from 67 years in a neighborhood of Trinidad near Gallaudet University (tract 88.04) to 94 years in the Foxhall area of Georgetown (tract 8.01). Other reports have shown striking geographic differences in other health measures such as infant mortality, obesity, heart disease and diabetes.[3,4]

a.  This report defines the metropolitan region as including the District of Columbia; Maryland (Charles County, Frederick County, Montgomery County, Prince George's County); and Virginia (City of Alexandria, Arlington County, City of Fairfax, Fairfax County, City of Falls Church, Loudoun County, City of Manassas, City of Manassas Park, and Prince William County).

b.  Census tracts are small, relatively permanent statistical subdivisions of a county (or independent city in states like Virginia) created by the U.S. Census Bureau and updated every 10 years. Designed to provide stable estimates of population data, and typically smaller than ZIP codes, census tracts contain a population between 1,200 and 8,000 people, with an optimum size of 4,000 people. For more information see: https://www.census.gov/geo/reference/gtc/gtc_ct.html.

**FIGURE 1. LIFE EXPECTANCY AT BIRTH IN THE METROPOLITAN WASHINGTON REGION**

Life expectancy, how long a newborn can expect to live, varies 27 years across the census tracts of the metropolitan Washington region. Darkly shaded tracts, reflecting lower life expectancy, exist in every jurisdiction—not just the District of Columbia and nearby neighborhoods but also suburban Maryland (Charles County, Frederick County, Montgomery County, Prince George's County) and Virginia (Alexandria, Arlington County, Fairfax County, Loudoun County, and Prince William County). See Table 1-A in the appendix for life expectancy ranges for individual jurisdictions and Figure 1-A in the appendix for a full-size map.
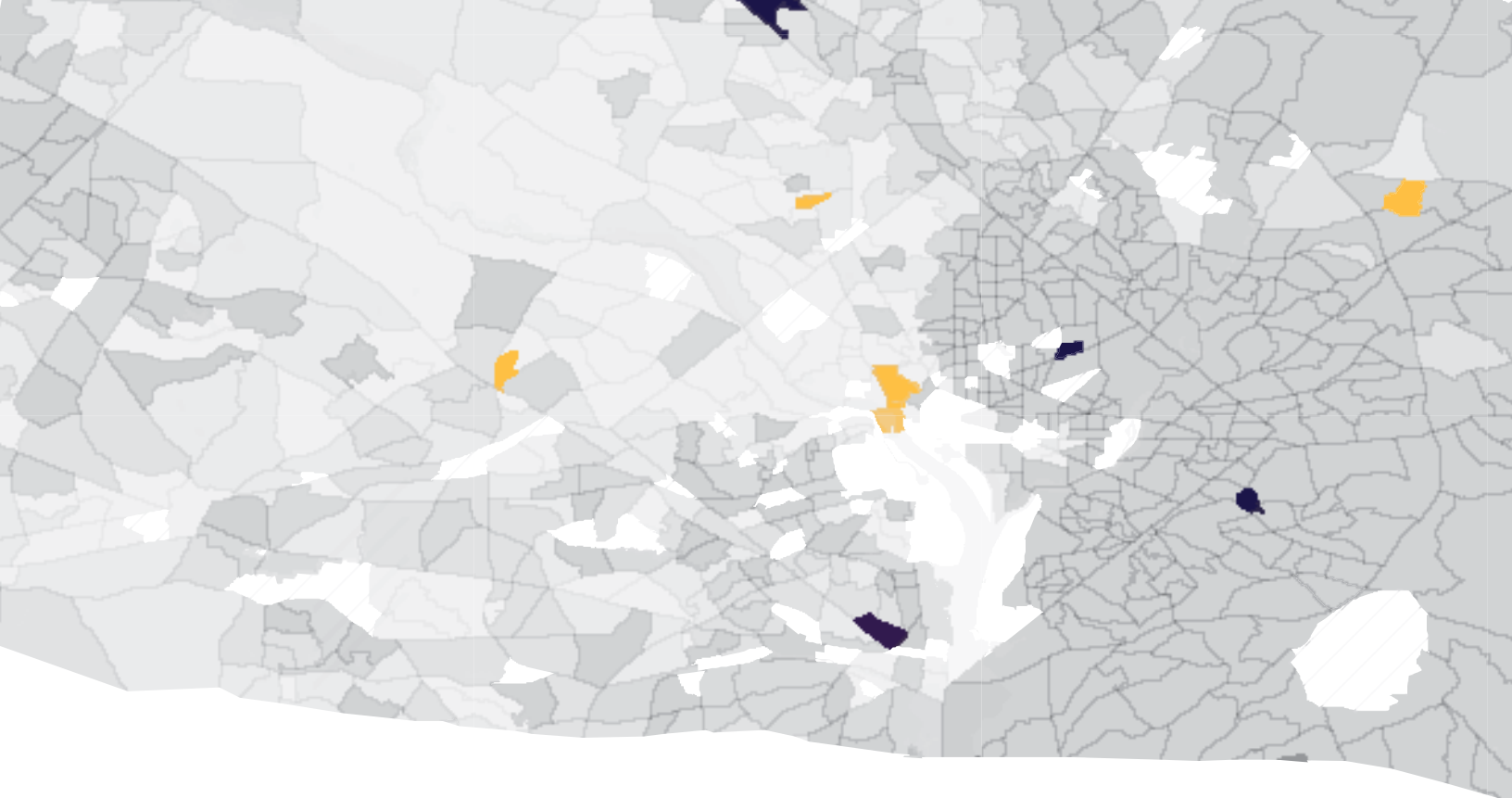
## WHAT EXPLAINS DIFFERENCES IN HEALTH?

A common misconception in American society is that health is determined by health care, but studies show that health care accounts for only 10–20% of health outcomes.[5] Access to affordable, high-quality health care—including health insurance—is "necessary but not sufficient" for good health. We need access to doctors and hospitals to prevent and treat disease, but our health is shaped at a more fundamental level by other factors. For example, by some estimates, tobacco use (e.g., smoking), physical inactivity, unhealthy diets, and problem drinking account for 40% of deaths from chronic diseases like diabetes and heart disease.[6]

Another common misconception is that our personal health choices—whether to engage in healthy behaviors or go to the doctor—are matters of personal responsibility that are fully under our own individual control. People can only make the choices they have. An individual's access to medical care or ability to live a healthy lifestyle depends partly on personal choice but also on socioeconomic circumstances and one's environment.[7] For example, families cannot eat healthy diets if nutritious food is unaffordable or sold only outside their neighborhoods, or if local restaurants consist largely of fast food outlets. Low income urban families without transportation are living in a "food desert" if a supermarket or other outlet is more than a half mile from where they live. Children cannot regularly exercise if their neighborhoods lack access to sidewalks, playgrounds, parks, or other areas for safe, active play. Our health, and the large geographic differences in health that exist across neighborhoods or the metropolitan Washington region, is shaped largely by the social determinants of health.

## THE SOCIAL DETERMINANTS OF HEALTH AND WHY THEY MATTER

### Education: why it matters

Individuals with less education (e.g., adults who have not graduated from high school or attended college) have significantly poorer health than those with more education. We live in a knowledge economy. Manufacturing jobs are on the wane and pay inadequate wages to support the cost of living, especially the high costs that exist in areas like the metropolitan Washington region. Education is the pathway to better jobs, higher income, health insurance, and the resources to live in healthier and safe neighborhoods. Social mobility—the chances that a low-income child can earn more than his or her parents—is now lower in the United States than in other industrialized countries.[8] Workers with less education or training cannot compete for jobs that provide a livable wage. And children who cannot obtain a higher education are less likely to climb the economic ladder and escape the cycle of poverty. It is precisely in low-income neighborhoods, where property tax revenues are low, that school districts (which depend on this revenue) have inadequate funds for schools and teachers and cannot always deliver an educational experience that prepares young people for success.

### Economic and other household resources: why they matter

Income is necessary to live a healthy lifestyle—to afford fresh produce and other healthy foods, gym memberships, or programs to help quit smoking. The high cost of living in the metropolitan Washington region prices even the most basic needs for good health out of reach, especially among low- and middle-income families. For example, food security requires a stable income—to not worry about feeding one's family. A recent study found that a family of four in Virginia needs to earn at least $61,068 per year to cover basic expenses; the same family needs $100,004 to support and sustain an economically viable household.[9] People with limited incomes cannot afford to live in neighborhoods that are healthy, free of violent crime, and have other resources for good health. To have a stable economic future, people need not only income but also the means to build wealth (also called net worth) such as savings, retirement funds, and assets (e.g., a home) to serve as an economic cushion during hard times. All these factors shape health; families who have trouble making ends meet are forced to forego medical care, prescription medicines, and other costly resources needed for their health.

## Housing: why it matters

The notoriously high cost of housing in the metropolitan Washington region makes it difficult for people to purchase homes or afford rental properties. Median home values, even in the area's poorest neighborhoods, exceed median home values in typical American communities. This results in the accumulation of housing cost burdens, where 30% (*moderate*) or 50% (*severe*) of one's income is spent on housing—money that an individual cannot spend on health care or other basic needs. Unstable housing—when housing costs force people to relocate, move in with others in overcrowded conditions, or become homeless—affects all aspects of life, including mental health and physical well-being. Substandard housing conditions such as water leaks and poor ventilation can lead to increased mold and other allergens associated with poor health. Overcrowding or exposure to lead and other toxins can cause or exacerbate illnesses. People living in areas with poor housing are also more likely to be exposed to other unfavorable living conditions outside the home such as vehicle emissions from nearby highways and higher crime rates. Conversely, people living in areas with quality housing are more likely to have access to neighborhood amenities financed by higher property taxes, such as bicycle paths and green spaces for outdoor activity, and to have few safety concerns.

## Transportation: why it matters

Transportation is needed not only to access health care but also to reach jobs, child care, supermarkets that sell healthy foods, and other basic resources on which health and economic stability depend. This is especially true in commuting environments like the metropolitan Washington region where workers often travel long distances, frequently in heavy traffic, to reach their jobs. Families with limited incomes may not be able to own their own car or to afford public transit (e.g., Metro and commuter rail services) fares and highway tolls. Such families may lack convenient access to bus stops or Metrorail stations, and many must endure long trips that require multiple changes in bus or train routes to reach their destination. The accumulated hours of stress and sedentary inactivity from commuting are themselves harmful to health, even among people of higher socioeconomic status. But low-income commuters often lack the convenience (and health benefits) of being able to walk or cycle to work.

## Air and water: why they matter

Clean air is essential to good health, especially for children with asthma and adults with chronic respiratory ailments. As the recent incident in Flint, Michigan demonstrated, water pollution and the risk of lead poisoning remain challenges in many cities. Low-income communities often fall victim to environmental injustice, as when low-income neighborhoods—often populated by people of color—are selected as sites for building factories or highways. Such communities also face higher risks of soil pollution, runoff from toxic effluents, and flooding.

### The social environment: why it matters

Just as the physical environment affects health, so does our social environment. This includes not only the family dynamics in our households but also the social fabric of our communities. Research shows that health is influenced by shared values and norms among our networks of friends and family (*social capital*), the sense that our neighbors "have our back" (*social cohesion*), and by levels of social support within the community, including the support provided by faith-based organizations (e.g., churches, synagogues, mosques) and other places and events that bring the community together.[10] Conversely, our health is harmed by stresses incited by social division, trauma, violence, social isolation, and loneliness. When stress becomes chronic, it induces changes in body hormones that can damage the heart, kidneys, and immune system, and alter our genes— allowing the effects of trauma to be passed on to the next generation.[11] Among young children in particular, exposure to chronic stress and adverse childhood events (ACEs) affects growth and development, and alters the architecture of the developing brain with lasting lifelong consequences. ACEs are connected to adverse health outcomes later in life such as obesity, alcoholism, depression, and high blood pressure.[12,13]

The effects of chronic stress are intensified among people of color and other population groups that are victims of systemic discrimination (e.g., immigrants, religious faiths, the LGBT community, the disabled), both through the prejudices they experience in daily life and through the accumulated effects of historical trauma. The experience of racism, in particular, produces its own form of stress, resulting in a cascade of harmful social and biological effects.

## RACE, ETHNICITY, AND THEIR INFLUENCE ON OPPORTUNITY AND HEALTH

Throughout the United States, as in the metropolitan Washington region, health varies starkly by race and ethnicity.[14] *Race* refers to whether we are white/Caucasian, black/African American, Asian, Native American, or a combination of races. *Ethnicity* refers to whether we are Hispanic/ Latino or have other ethnic orientations. Skin color plays no biological significance in explaining differences in health or life outcomes. Race is a social construct—a concept created by society, not derived from biological or genetic research—but the lived experience and differences in health experienced by different racial and ethnic groups in America are very real.

Consider the stunning health disparities experienced by the black population in the United States. The life expectancy of African Americans is four years lower than that of whites, due largely to the large disparity in cardiovascular disease mortality.[15] Black infants are twice as likely to die before their first birthday as white infants.[16] Black mothers are 3–4 times as likely to die in childbirth compared to white mothers.[17] Older black adults (ages 45–64 years) have a stroke mortality rate more than triple

that of their white counterparts.[18] Black-white health disparities persist even after adjusting for other factors that affect health such as education, household resources, and housing.

These different lived experiences across racial and ethnic groups are the outcome of historical policies and practices that are still playing out today. Beginning in the 1600s, the transatlantic slave trade brought slavery to the Americas—an institution that lasted for nearly 300 years and upon which much of the southern plantation economy relied. The end of slavery was followed by decades of racist "Jim Crow" policies designed to disempower African Americans. Generations of blacks were traumatized by acts of ongoing and overt violence.[19] Segregation intensified through redlining practices to segregate residential communities, the segregation of schools, and policies to restrict access to public places (e.g., buses, hotels, restaurants, theaters).[20] Generations of black children were undereducated; black schools were chronically underfunded and rarely provided opportunities to learn on par with their white counterparts. Black workers were denied jobs in particular sectors or promotions to positions that paid higher wages.[20]

The historical trauma of slavery, Jim Crow policies, and multigenerational poverty have produced a cumulative effect on the health of today's black population. African Americans carry the damage "under their skin" and in their genes, and they face real-time threats to their health—from the psychological trauma of bigotry to the physical dangers of racially motivated violence. Racism affects the health of black Americans, not only because exclusionary policies—shaped by institutional racism—limit access to education and other social determinants of health, but also because the experience of discrimination is itself biologically harmful. Chronic stress due to frequent exposures to discrimination and poverty can accumulate, creating wear and tear on the body (known as allostatic load, a condition associated with poor health outcomes and mortality).[21]

Institutional racism not only directly affects to individual health, but also limits access to the social determinants of health along racial and ethnic lines. People of color (blacks, Hispanics, and others) continue to have less access to education: their children tend to have greater difficulty accessing early childhood education, their districts receive less funding for schools and teachers, and students face greater barriers to entering (and graduating from) college. People of color therefore are often less able to compete for jobs that pay a living wage or provide a future for a stable career; their families therefore have lower incomes, smaller net worths, and higher poverty rates. These individuals are more likely to be turned down for home loans[22,23] and are often targeted by predatory lending companies[24] (e.g., "pay-day" lending). They are more likely to live in racially and ethnically segregated neighborhoods that suffer from decades of disinvestment. As a result, neighborhoods of color often lack access to affordable high-quality housing, stores that sell healthy foods, green space, clean air, and clean water. These communities are often targets for fast food outlets, tobacco and alcohol marketing, and liquor stores.

These conditions affect not only the health, economic opportunity, and social mobility of people of color, but they also weaken the health and economy of the entire region. The consequences of limited opportunities and the damaging effects of racism extend well beyond communities of color. They affect economic growth and community cohesion. Studies show that cities with more inclusive policies attract new businesses, developers, and residents. They have more productive workforces, and incur fewer costs for social services and law enforcement.[25]

## THE ROLE OF PUBLIC POLICY: WORKING TOGETHER TO MAKE MEANINGFUL CHANGES

The social determinants of health are not controlled by doctors and hospitals, nor are they shaped exclusively by an individual's choices. Our living conditions are shaped by the choices we make as a community—as a nation, state, or locality. They reflect the priorities set by policymakers, whether elected officials in government, business leaders and financial institutions, or other change agents in the private and nonprofit sectors. The social determinants of health are interconnected: no single factor—neither education, housing, nor race—affects health in isolation. Workers need employable skills to earn a living wage and find jobs with health insurance benefits. Parents need stable housing and child care to keep a job or visit the doctor as well as transportation to get there. Children with uncontrolled asthma cannot succeed in school, and their asthma cannot be controlled if they live amid allergens in their apartment, air pollution in the streets, and high ozone levels in the atmosphere.

These interconnections mean that policy solutions must be holistic. Regional strategies to improve health and economic well-being in the community must embrace cross-sectoral solutions that improve schools, employment, the environment, and transportation. One benefit of a cross-sectoral philosophy is that it builds a stronger case for return on investment. For example, better education means not only better health outcomes and lower health care costs but also better jobs, higher wages, more tax revenue, and less crime. When unstable housing or poor transportation are common concerns among different stakeholders—doctors, school principals, employers, law enforcement, etc.—policies to address these challenges yield benefits across sectors and culminate in a bigger return on investment.

The Metropolitan Washington Council of Governments (COG) embraced this philosophy in its planning strategy, *Region Forward*, which COG launched in 2010 to "create a more prosperous, accessible, livable, and sustainable metropolitan Washington." COG takes a holistic approach to achieving these ends by working across nine domains: land use, transportation, climate and energy, the environment, public safety, education, housing, health and human services, and the economy. Committees devoted to each of these sectors work together to develop interlinked policy solutions for the region in an effort to achieve collective impact.

## STUDY OVERVIEW: DEVELOPING THE METROPOLITAN WASHINGTON HEALTHY PLACES INDEX

**P**rioritizing policies and investments in any one domain—whether health, transportation, or safety—requires a "deep dive" into the data to understand the greatest needs at the neighborhood level, which vary across a region like metropolitan Washington. To understand the health domain, the COG Health Officials Committee, composed of the region's public health officers, commissioned a study by Virginia Commonwealth University (VCU) to analyze the health of the region at the neighborhood level. The study summarized here, conducted by the VCU Center on Society and Health, measured differences in life expectancy across census tracts and the degree to which social determinants of health contribute to those differences. Researchers defined the metropolitan Washington region as the District of Columbia, four areas of suburban Maryland, and five areas of Northern Virginia (see Table 1).

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**TABLE 1. GEOGRAPHIC AREAS WITHIN THE METROPOLITAN WASHINGTON REGION**

**District of Columbia**

    All Wards (8)

**Maryland**

    Charles County

    Frederick County (plus the City of Frederick)

    Montgomery County (plus Gaithersburg, Rockville, and Takoma Park)

    Prince George's County (plus Bladensburg, Bowie, College Park, and Greenbelt)

**Virginia**

    Arlington County

    City of Alexandria

    Fairfax County (plus Fairfax City and Falls Church City)

    Loudoun County

    Prince William County (plus Manassas and Manassas Park cities)

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For each of these areas, life expectancy at birth at the census tract-level was determined using mortality data that was geocoded by the state health department responsible for recoding the deaths. Life expectancy for Northern Virginia by census tract was provided by the Virginia Department of Health (based on 2007–2013 death data). Tract-level life expectancy for Maryland and Washington, D.C. areas was computed by VCU using the most recently available 10 years of death data (MD: 2005–2014, DC: 2006–2015) provided by the District of Columbia Department of Health and the Maryland Department of Health. All life expectancy calculations were made using the adjusted Chiang II abridged life table method.[26]

Census tract-level data for each area were also collected on 48 indicators covering six broad policy action areas or "domains," as well as 16 additional indicators to assess the influence of race-ethnicity and immigrant status (see Table 2). These included data on the number of whites, blacks, Asians, and Hispanics in each census tract, as well as the number of immigrants and their continents of origin. Using these data and detailed statistical methods described in the Technical Appendix, the degree to which the six domains (and the indicators within them) contributed to life expectancy was computed and used to develop a new tool: The Metropolitan Washington Healthy Places Index (HPI).[c] The HPI provides a snapshot measure of the conditions in a census tract that are associated with increased (or decreased) life expectancy. Additional details about the indicators, life expectancy computations, and computation of the Healthy Places Index can be found in the Technical Appendix.

## UNDERSTANDING THE HEALTHY PLACES INDEX: HOW LOCAL FACTORS INFLUENCE HEALTH

The impetus for developing the HPI was to help policymakers, providers, and residents explore local factors that contribute to the health of residents in the metropolitan Washington region. The HPI provides an overall score, ranging from zero (lowest opportunity for health) to 100 (most opportunity for health). This score is available for each census tract in the region. The overall HPI score is composed of six "domain" scores, each representing the independent contribution of one of the following policy action domains: Air Quality, Education, Economic/Other Household Resources, Health Care Access, Housing, and Transportation.

The HPI is useful to anyone interested in learning how local neighborhood conditions influence the health of communities. It was designed to be used by state and local governments, community organizations, health care providers and health systems, public health officials, businesses, and financial institutions. For example, the HPI can be used for:

- Prioritization of investments, resources, and programming in neighborhoods where health needs are the greatest

- Program planning and service delivery

- Community profiles and needs assessments

- Understanding community needs (in conjunction with resident experience)

- Research

- Providing data for grant applications

To create the HPI index, a set of 48 indicators was selected based on published research on their association with life expectancy, data quality, and availability at the census tract level. Based on research literature,

## TABLE 2. METROPOLITAN WASHINGTON HEALTHY PLACES INDEX INDICATORS BY DOMAIN

| Air Quality | |
|---|---|
| Cancer risk | Lifetime cancer risk from inhalation of air toxins, per million people |
| Environmental hazards | Exposure to toxins harmful to human health (0–100; higher values = less exposure to toxins) |
| Respiratory risk | Ratio of exposure concentration to health-based reference concentration (>1 = increased risk) |

| Economic/Other Household Resources | |
|---|---|
| Low food access (low income population) | % of low income population living >1/2 mile (urban) or >10 miles (rural) from the nearest supermarket, supercenter, or large grocery store |
| Income inequality | Gini Index; measures income distribution among the residents of a specified geography (0–1; higher values = more inequality) |
| Low food access (overall) | % of total population living >1/2 mile (urban) or >10 miles (rural) from the nearest supermarket, supercenter, or large grocery store |
| Marital status | % of population 15 years and older now married (excluding those who are separated) |
| Median household income | Median annual household income |
| Low income (adult) | % of population ages 18 to 64 years with household incomes at or below twice the poverty level (200%) |
| Poverty (adult) | % of population ages 18 to 64 years with household incomes below the poverty level (100%) |
| Poverty (child) | % of population under age 18 years living below the poverty level (100%) |
| Public assistance | % of households receiving public assistance income |
| Single-parent households | % of children living in households headed by a single parent |
| Unemployment rate | % of population ages 25 to 64 years who are unemployed |

| Education | |
|---|---|
| Preschool enrollment | % of 3- and 4-year-olds not enrolled in school |
| High school diploma/higher | % with a high school diploma or higher |
| Lack of English proficiency | % of households where no one age 14 and older speaks English only or speaks English "very well" |
| Some college/higher | % with some college education or higher |

| Health Care Access | |
|---|---|
| Primary care provider access | Ratio of population to primary care providers (internists, family physicians, physician's assistants, nurse practitioners) |
| Mental health provider access | Number of mental health providers (county level) divided by the total population per 100,000 |
| OB/GYN provider access | Ratio of population to obstetricians-gynecologists |
| Private insurance | % of civilian noninstitutionalized population with private insurance |
| Public Insurance | % of civilian noninstitutionalized population with public insurance |
| Uninsured adults | % of civilian noninstitutionalized population who are uninsured |
| Uninsured children | % of children who are uninsured |

| Housing | |
|---|---|
| Older age of housing | % of housing units built in 1950 or earlier |
| Overcrowding | % of households with more than one occupant per room |
| Housing vacancies | % of housing units that are vacant |
| Renter occupied | % of occupied housing units not occupied by property owners. |
| Median home value | Median home value of owner occupied units |
| Median rent | Median rent |
| Housing cost burdened (overall) | % of all households (renters and homeowners) paying more than 30% of income on housing |
| Renter housing cost burdened | % of renter households paying more than 30% of income on housing |
| Housing cost burdened (homeowners) | % of owner households paying more than 30% of income on housing |
| Extremely housing cost burdened (overall) | % of all households (renters and homeowners) paying more than 50% of income on housing |
| Extremely housing cost burdened (renters) | % of renter households paying more than 50% of income on housing |
| Extremely housing cost burdened (homeowners) | % of owner households paying more than 50% of income on housing |
| Poor housing conditions (renters) | % of rental properties with one or more poor housing conditions (e.g., no plumbing, no kitchen, overcrowded, cost burdened) |
| Poor housing conditions (homeowners) | % of homes with one or more poor housing conditions (e.g., no plumbing, no kitchen, overcrowded, cost burdened) |
| Housing stability | % of population in the same residence within the past 12 months |
| Housing moves | % of population who moved within the same county within the past 12 months |
| Housing opportunity index | Potential opportunity for Housing Choice Voucher holders seeking housing (higher values = higher opportunity) |

| Transportation | |
|---|---|
| Commute by motor vehicle | % of population who take a car, taxi, or motorcycle to work |
| Commute by public transit | % of population who take public transport (bus, train, subway) to work |
| Commute by walking/cycling | % of population who walk or bike to work |
| Travel time to work | Average travel time to work (min) |
| Transportation Cost | Low Transportation Cost Index (high value = lower cost) |
| No access to vehicle | % of households with no access to a vehicle |

See HPI Technical Appendix for complete definitions and data sources, as well as indicators for race-ethnicity and immigrant status.

## FIGURE 2. CORRELATION BETWEEN LIFE EXPECTANCY AND THE METROPOLITAN WASHINGTON HEALTHY PLACES INDEX

The Healthy Places Index (HPI) score and life expectancy for each census tract in the region are represented by the dots in this figure. The overall pattern shows that higher HPI scores were generally predictive of longer life expectancies (r=0.77; $R^2$=0.59).
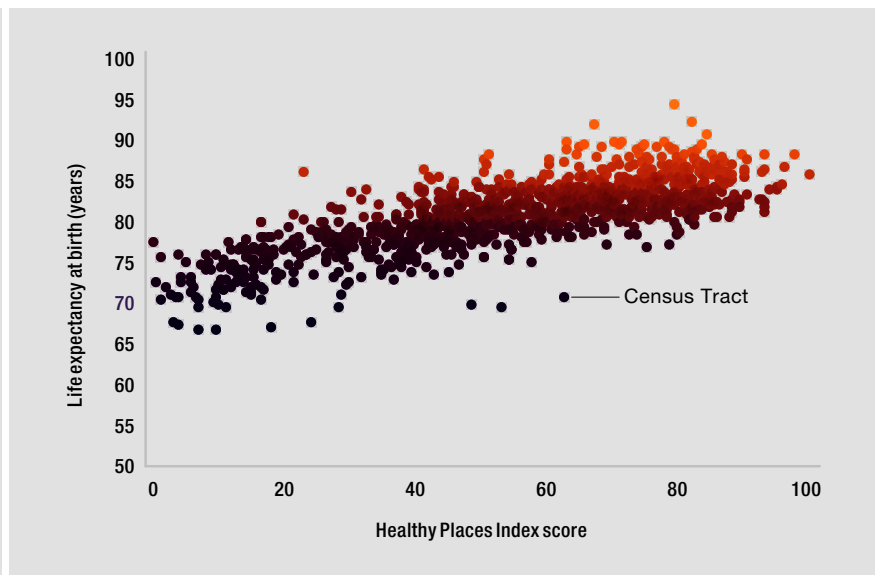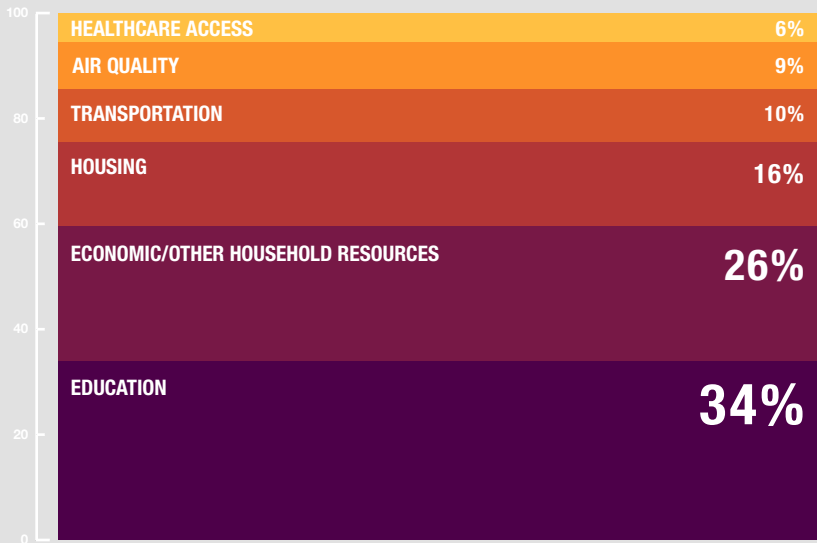


expert opinion, and consultation with the COG Health Officials Committee, the indicators were then grouped into six domains: Air Quality, Education, Economic/Other Household Resources, Health Care Access, Housing, and Transportation. Next, a new statistical method (grouped weighted quantile sum regression) was used to derive weights, which measure how strongly each indicator was associated with life expectancy in the COG region. The COG region weights were then applied to the data from each census tract to derive the six domain scores. The overall HPI score for each census tract is the sum of its six domain scores.

While the indicator list used in the computation of the HPI is comprehensive and evidence-based, data for many important indicators were unfortunately not available at the local level. For example, data about exposure to racism, crime rates, mental health status, drug use, and quality of health care were not available at the census tract level. As a result, the proportions of health that are accounted for by various domains in the model are to be interpreted with care—additional indicators or domains could alter the relative weights of those included in this study. Specifically, the proportions, or weights, can only measure the unique contribution to health among the factors included in the HPI model, not all of the potential factors that shape health. More details about the methods and limitations of this study are provided in the Technical Appendix.

By design, the HPI score characterizes places (e.g., neighborhoods), not individuals. That is, it describes the influence of neighborhood conditions irrespective of individual characteristics. Individual behaviors (e.g., smoking, diet, and exercise) and characteristics (e.g., income, education) are important contributors to health, but place matters to health in ways that transcend individual factors. Tools like the HPI provide metrics about place that can inform policies and actions at the community level, and that can improve health above and beyond the factors that individuals and families can control.

| | |
|---|---|
| HEALTHCARE ACCESS | 6% |
| AIR QUALITY | 9% |
| TRANSPORTATION | 10% |
| HOUSING | 16% |
| ECONOMIC/OTHER HOUSEHOLD RESOURCES | 26% |
| EDUCATION | 34% |

The HPI was highly positively correlated with life expectancy (see Figure 2), meaning that tracts with higher HPI scores typically experienced higher life expectancy and lower HPI scores were associated with lower life expectancy. Even though the HPI did not incorporate data on individual characteristics or neighborhood characteristics for which data were lacking, it explains 59% of the differences in life expectancy by census tract across the metropolitan Washington region. This level of prediction is considered scientifically strong. Although other factors not in the HPI model also shape health, the HPI serves as a useful starting place for understanding the health of communities and generating additional questions. Exploring additional data sources, such as local administrative data and vital statistics, and having conversations with stakeholders and residents can provide insight into other local conditions and specific health outcomes.

## WHAT THE HEALTHY PLACES INDEX TEACHES US: HEALTH IS ABOUT MORE THAN HEALTH CARE

What the HPI shows is that life expectancy in the metropolitan Washington region is shaped less by health care than by the social determinants of health. As noted earlier, everyone needs health care—both to prevent disease and manage chronic illnesses—but simply having access to health care does not guarantee good health. Access to health care comprised only 6% of the HPI score, accounting for very little of the 27-year difference in life expectancy that exists across the region's census tracts. Education was the most important HPI domain (34% of the HPI score), followed by economic and other household resources (26% of the HPI score). Education and economic well-being, which are closely interrelated, together accounted for 60% of the HPI score. The other domains include housing (16%) and transportation (10%) (see Figure 3).

*"Education and economic well-being together accounted for 60% of the HPI score"*

Importantly, additional analyses found that nearly half (47%) of the HPI variation across census tracts in the region could be explained by race-ethnicity and immigrant status. Among the reasons is that people of color and immigrants are more likely to live in neighborhoods with fewer resources that lacked the conditions for good health (reflected in low HPI scores). For example, in the census tracts with the highest scores (top quartile), 64% of the population was white; the proportion of black and Hispanic[d] residents in these regions was 6% and 10% respectively. In contrast, in the tracts with the lowest HPI scores (bottom quartile), 63% of residents were black, 13% were Hispanic, and only 19% were white. These residential racial segregation patterns did not occur by chance; they are the result of historic policies like Jim Crow laws and redlining practices that concentrated minorities in neighborhoods and perpetuated decades of disinvestment, leaving today's residents with few resources and opportunities for healthy living. Considering the deleterious experience of discrimination and racism, it is evident how unequal opportunity leads to inequities in life expectancy across racial and ethnic groups.

The map shows that opportunities for good health at the census tract level vary greatly across the region. Colors depict how the Healthy Places Index (HPI) varies across the metropolitan Washington region: yellow reflects high opportunity for health and well-being, dark blue depicts low opportunity. See Figure 4-A in the appendix for a full-size map.
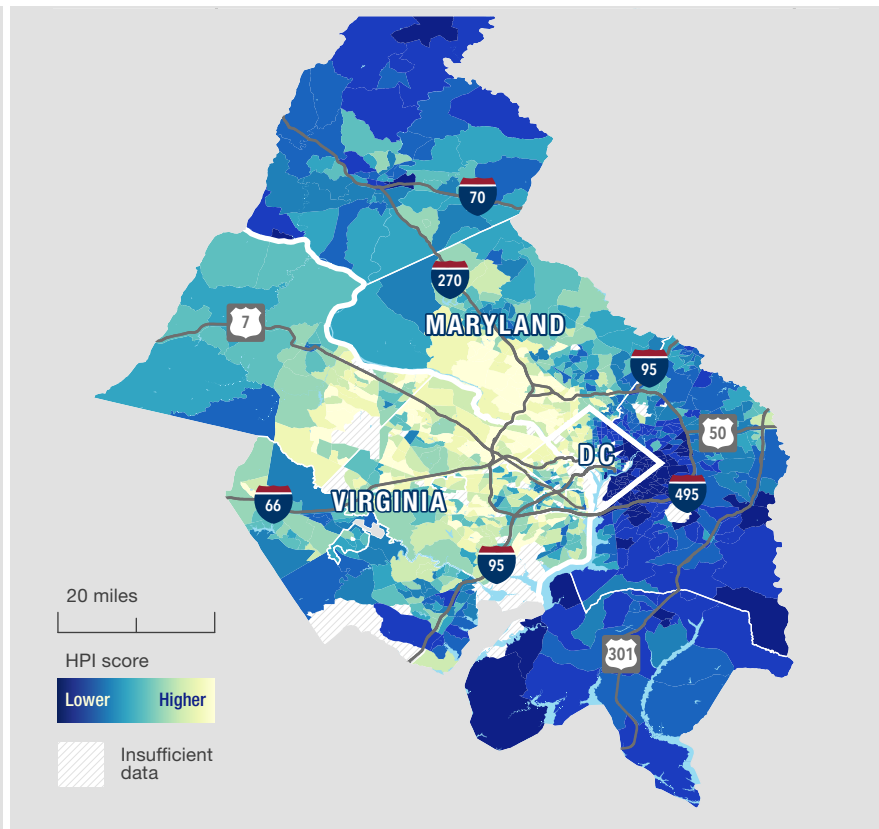


## A CLOSER LOOK AT THE REGION

Maps displaying the HPI scores by census tract show that the conditions for good health vary significantly across the metropolitan Washington region (Figure 4). Lighter colors depict areas with high (healthy) scores on a scale of 0–100, whereas darker colors depict lower HPI scores (less healthy neighborhoods). The highest HPI scores were in the northwest wards of the District of Columbia, affluent Maryland suburbs (such as Potomac), and much of Fairfax County. The lowest HPI scores were in the eastern wards of the District of Columbia. As shown in Figure 4, Frederick County and Frederick City in the northern edge of the region, Charles County in the south, and areas of Prince William County in the southwest also had low HPI scores.

But larger regional maps hide big differences within jurisdictions, especially at the neighborhood level. A closer look reveals that conditions for health are segregated in every jurisdiction: areas of affluence are short distances away from areas of concentrated disadvantage, and people of color and immigrants are disproportionately exposed to the most adverse living conditions. We show this below in examples from the District of Columbia, suburban Maryland, and Northern Virginia.

## The District of Columbia

For many years, Washington, D.C. has ranked among the most racially segregated cities in the United States. Mapping the HPI scores in the District (Figure 5) reveals the sharp east-west divide between healthy conditions in the affluent Northwest wards and the more challenging conditions east of 16th Street, especially in Southeast D.C. Although some of the highest HPI scores were in Georgetown and other areas of Northwest D.C., contrasts are dramatic—and poignant—in the immediate radius of the U.S. Capitol building. Some of the city's highest HPI scores are on Capitol Hill and in the Penn Quarter area between the Congress and the White House, where many of the nation's leaders and powerful lobbyists live. But some of the lowest HPI scores in the region are a bus stop away, to the immediate east of Capitol Hill just across the Anacostia River.

| TABLE 3. SELECTED CHARACTERISTICS OF WARD 3 AND WARD 8, DISTRICT OF COLUMBIA. | | |
|---|---|---|
| | Ward 3 | Ward 8 |
| High school graduation | 97% | 82% |
| Some college education | 94% | 41% |
| Single-parent households | 15% | 84% |
| Median household income | $109,909 | $31,642 |
| Unemployment | 4% | 25% |
| Child poverty | 3% | 50% |
| Adult poverty | 13% | 33% |
| Income below 200% FPL | 14% | 59% |
| Public assistance | 2% | 41% |
| Private insurance | 92% | 39% |
| Public insurance | 17% | 62% |
| Vacant housing | 8% | 17% |
| Median home value | $ 788,800 | $ 232,100 |
| No vehicle | 23% | 47% |

See Table 2 for full definitions.

The contrasts across the city, in both health and the conditions that shape health, are considerable. For example, the average life expectancy of the population in Ward 3 (located in Northwest D.C., west of 16th Street) is 87 years, compared to 72 years in Ward 8 in Southeast, south of I-295. The average HPI for the tracts in these two wards also differs greatly (76 vs. 9 respectively), reflecting sharp differences in the domains that influence life expectancy (Table 3). For example, whereas 94% of adults in Ward 3 have attended college, the same is true of only 41% in Ward 8. The median household income also differs greatly ($109,909 vs. $31,642, respectively) as do child poverty rates (3% vs. 50%).

These averages, which aggregate data from multiple census tracts in a ward, mask more extreme differences that exist when individual census tracts are compared (Figure 5). Some tracts have striking degrees of disadvantage.
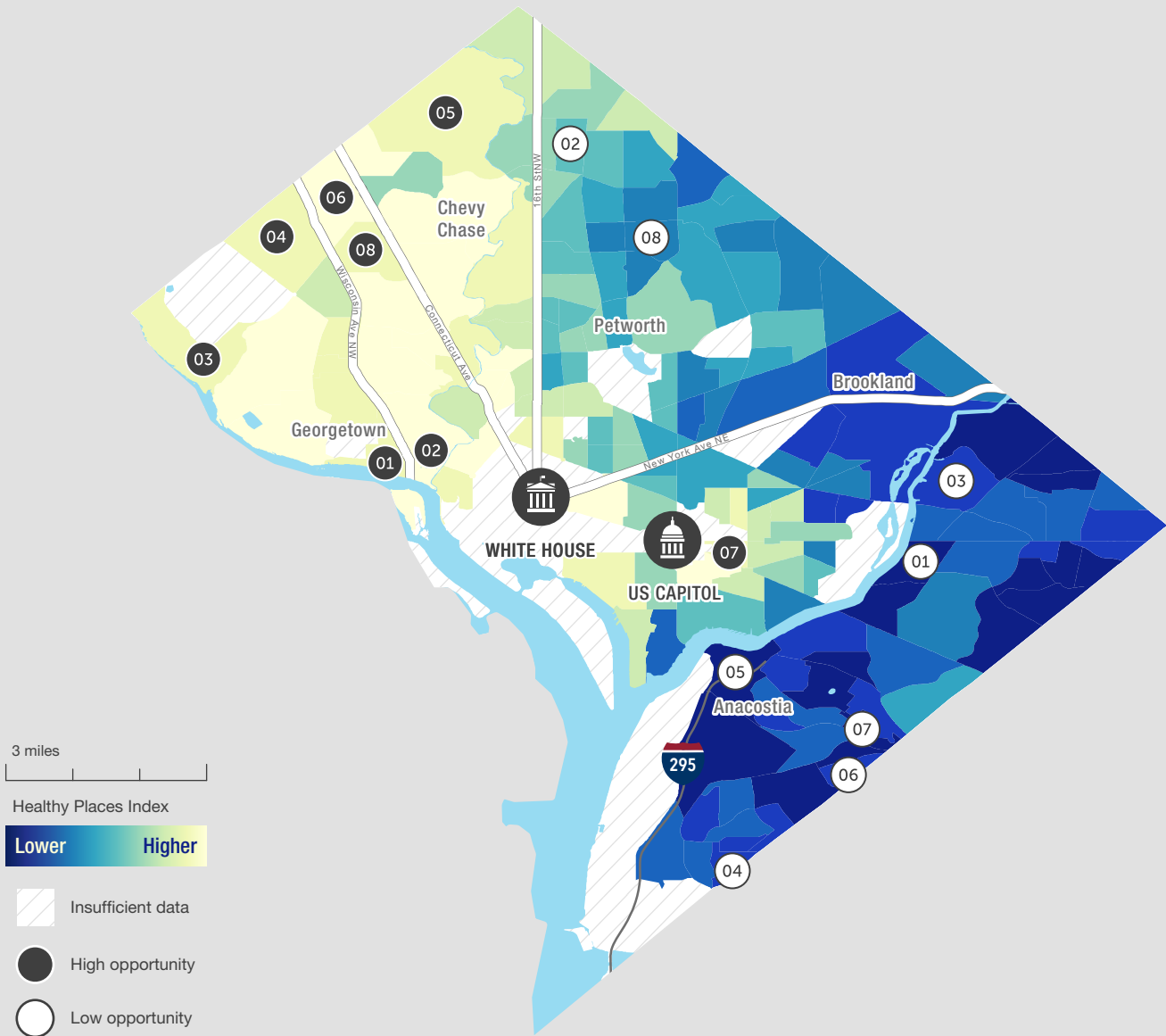
## FIGURE 5. EXTREMES IN OPPORTUNITY: THE DISTRICT OF COLUMBIA

Health is about more than health care. Our environment matters: neighborhood conditions affect not only our health but also economic opportunities and social mobility. Statistics that take the average for an entire city mask how conditions vary by neighborhood. This map contrasts living conditions in northwest D.C. and the eastern wards.

Colors depict the Healthy Places Index in the District of Columbia: yellow reflects high opportunity for health and well-being, dark blue depicts low opportunity. The table contrasts specific living conditions, such as education and housing. Numbered circles in the table refer to census tracts on the map and show how greatly conditions vary across the city. For example, the adult poverty rate in a high-opportunity tract in upper Chevy Chase (05 in a darkly shaded circle) was 4%, whereas the adult poverty rate in an Anacostia tract (05 in lightly shaded circle) was 51%.

| | High Opportunity | | Low Opportunity | |
|---|---|---|---|---|
| SOME COLLEGE EDUCATION | 01 | 97% | 01 | 20% |
| HIGH SCHOOL EDUCATION | 02 | 100% | 02 | 70% |
| MEDIAN HOUSEHOLD INCOME | 03 | $191,607 | 03 | $22,949 |
| UNEMPLOYMENT | 04 | 1% | 04 | 39% |
| ADULT POVERTY RATE | 05 | 4% | 05 | 51% |
| PUBLIC ASSISTANCE | 06 | 0% | 06 | 55% |
| MODERATE HOUSING COST BURDEN | 07 | 19% | 07 | 63% |
| UNINSURED ADULTS | 08 | 1% | 08 | 29% |

See Table 2 for full definitions

The District of Columbia remains highly segregated: wards 2 and 3, northwest of the White House and U.S. Capitol, have a largely white population, while the population to the southeast (wards 7 and 8) is largely black. Other wards are more diverse and include a large Hispanic and immigrant population. Each dot represents 100 persons.



FIGURE 6. POPULATION DISTRIBUTION BY RACE AND ETHNICITY IN THE METROPOLITAN WASHINGTON REGION, 2010–2014
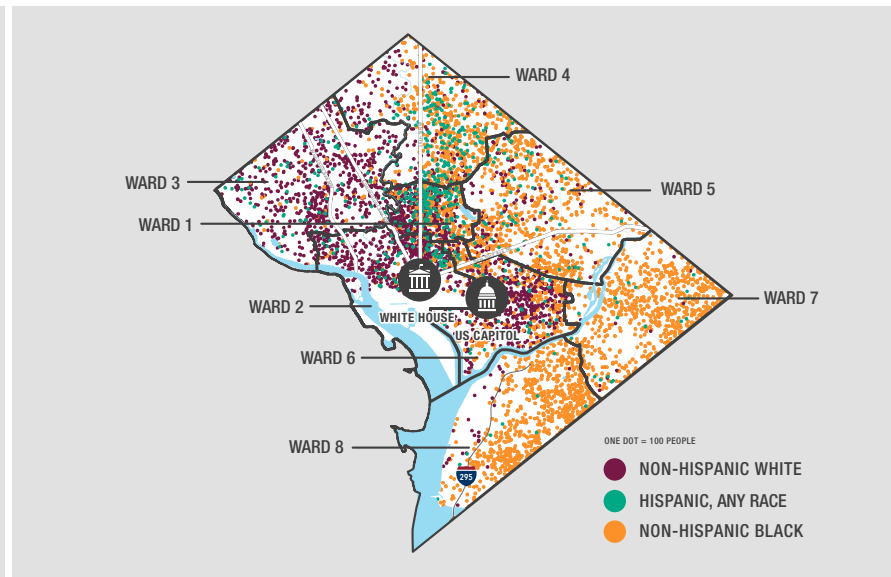
For example:

- In tract 74.01 (05) in Anacostia (discussed further below), the median household income was only $14,813 and the poverty rate was 87% (74% for children).

- Almost one out of three (29%) adults in a Fort Totten neighborhood (tract 22.02 (08)) lacked health insurance.

- Only 20% of the adults in Greenway (tract 77.08 (01)) had at least some college education.

- The unemployment rate in a Washington Highlands neighborhood (tract 98.11 (04)) was 39%. In contrast, only nine miles away in Northwest, median household income was as high as $191,607 in Potomac Heights (tract 9.02 (03)). The affluent residents of Capitol Hill spend a smaller proportion of their incomes on housing than do the poor residents living only blocks away.

The racial-ethnic groups exposed to distressed neighborhoods also vary dramatically, reflecting longstanding patterns of segregation established early in the city's history (Figure 6). For example, as of 2014, 75% of the population in Ward 3 were non-Hispanic whites, whereas only 6% and 9% were black or Hispanic, respectively. Nearly one-fifth (19%) of the population was foreign born. Conversely, in Ward 8, the proportions of residents that were white, black, and Hispanic were 4%, 93%, and 1%, respectively—and 3% of the population was foreign born. Put simply, people of color are exposed disproportionately to unhealthy living conditions.

The city's past provides the backdrop for current disparities. There is no better example than census tract 74.01, an area of Anacostia (Southeast D.C.) that ranks among the poorest in the city. The history of this area illustrates how past policies shaped present-day disparities (see *History Makes the Difference: Anacostia* callout box).

*"Put simply, people of color are disproportionately exposed to unhealthy living conditions."*

## History Makes the Difference:
# ANACOSTIA

Anacostia has long experienced heavy concentrated poverty and racial segregation. Once used as tobacco farmland, Anacostia became one of Washington, D.C.'s first suburbs after George Washington established the Washington Navy Yard in 1799. The area, then known as Uniontown, catered to whites, barring famed abolitionist Frederick Douglass from owning a home until after the Civil War. Congressional Acts freeing Washington's slaves and giving black men the right to vote gave Washington, D.C. a progressive reputation that attracted blacks to the city during Reformation. The Freedman's Bureau opened nearby Barry Farms for emancipated blacks, further attracting African Americans to Uniontown and dissuading many whites from buying property. With the Great Migration and the passing of *Brown v. Board of Education* in 1954, even more blacks immigrated to the city.

As white residents moved out of Anacostia, they extracted much of the community infrastructure and wealth. The wetlands and waterfront became polluted with runoff from factories and city wastewater. Massive public housing structures were built east of the river. The construction of I-295 (the Anacostia Freeway, which cuts through census tract 74.01) further isolated Anacostia residents. The stagnant economy fueled concentrated poverty and crime.

In recent years, developers and new investments have begun to transform the area. Tourists now visit the home of Frederick Douglass, and enjoy the Anacostia riverfront and nearby aquatic gardens. Yet, census tract 74.01 continues to bear the marks of its difficult history.

Barry Farms Housing Development, 1944.



### FIGURE 7. A COMPARISON OF CENSUS TRACTS IN GEORGETOWN AND ANACOSTIA
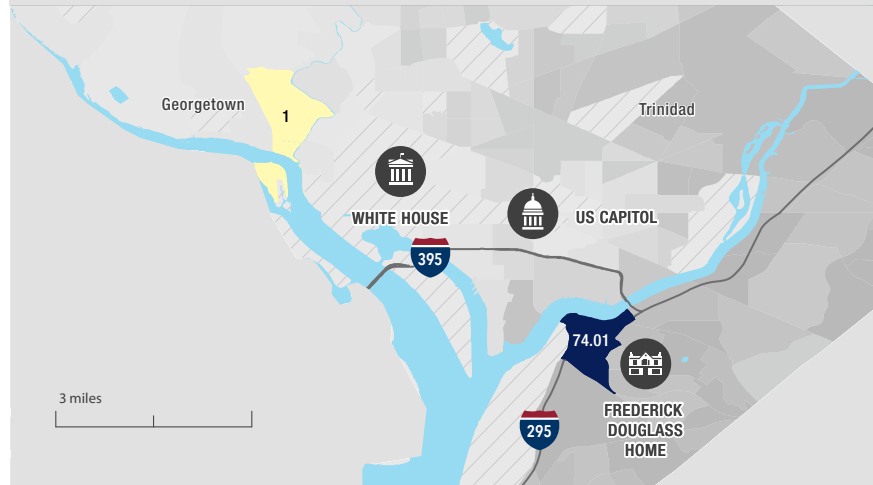


|  | TRACT 1 Georgetown | TRACT 74.01 Anacostia |
|---|---|---|
| Healthy Places Index | 76 | 3 |
| Life expectancy | 86 years | 67 years |
| High school graduation | 100% | 67% |
| Some college education | 95% | 21% |
| Median household income | $170,338 | $14,813 |
| Unemployment | 5% | 25% |
| Adult poverty | 4% | 51% |
| Child poverty | 0% | 74% |
| Public assistance | 1% | 76% |
| Children in single-parent households | 6% | 95% |
| Private health insurance | 96% | 16% |
| Median home value | $945,600 | $287,500 |
| Median monthly rent | $1,974 | $460 |
| Severe housing cost burden | 8% | 25% |
| Poor rental conditions | 22% | 45% |
| Commuting to work |  |  |
| by motor vehicle | 39% | 30% |
| by public transit | 25% | 67% |
| by walking or cycling | 33% | 3% |
| Mean travel time to work | 25 minutes | 43 minutes |

Graphic shows how living conditions in a census tract where Frederick Douglass once lived (tract 74.01) vary from those in a Georgetown neighborhood (tract 1) not far from the White House. See Table 2 for full definitions.

The statistics in Anacostia's census tract 74.01 reflect this history. Of all census tracts in Washington, D.C., this tract had the lowest proportion of adults with a high school education (67%), the lowest median household income ($14,813), the highest adult (51%) and child (74%) poverty rates, and the largest proportion of the population receiving public assistance (76%). This tract also had the lowest proportion with private health insurance (16%), and the largest proportion covered by public insurance such as Medicaid (87%). The population in tract 74.01 was 98% black. Conditions could not be more diverse less than five miles to the west, in tract 1 in Georgetown (Figure 7).
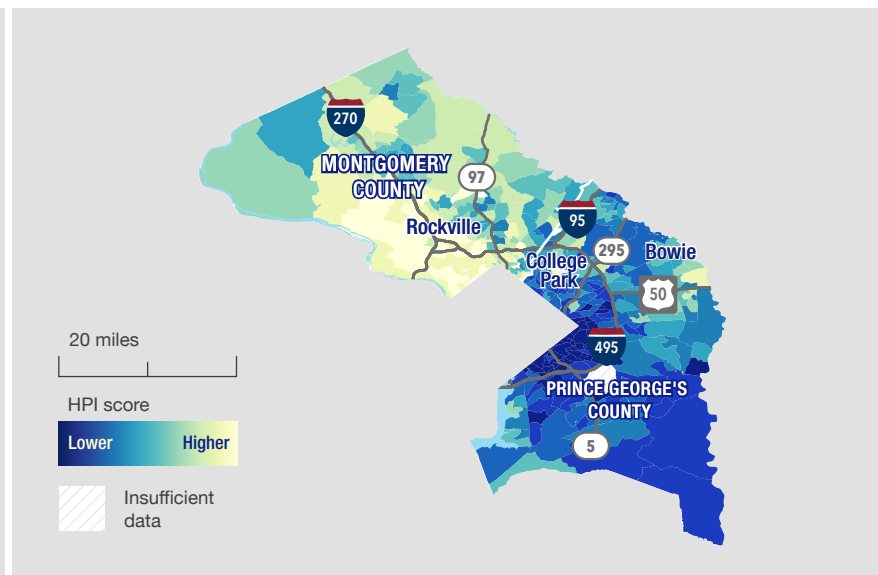
## Suburban Maryland

The disparities described above are not restricted to the District of Columbia and have, for many years, extended to the suburbs. The varied histories of the Maryland suburbs of D.C.—Frederick County, Montgomery County, Prince George's County, and Charles County— illustrate the impact that slavery and the Civil War had on the region. For example, adjacent Prince George's County and Montgomery County experienced different economic trajectories. Prince George's County, an area settled by 17th century tobacco farmers and once home to a thriving slave industry, has struggled for generations to recover from economic trauma and persistent poverty. A different dynamic shaped the evolution of Montgomery County, where 18th century immigrants from the Mid-Atlantic profoundly influenced farming practices and worked to abolish slavery in the county. Montgomery County and Prince George's County's northern and southern influences, respectively, had major impacts on their economies, policies, and citizens for decades.

The HPI scores in these counties mirror the social and economic divide that has historically separated the two counties (Figure 8). HPI scores tended to be higher in Montgomery County than in Prince George's County, although Prince George's County did include areas of relative affluence. Higher HPI scores (above 60) characterized neighborhoods near the University of Maryland-College Park and in outlying suburbs such as Beltsville, Bowie, and Greenbelt. More adverse conditions, however, were found inside the Capital Beltway (I-495). Some census tracts in Capitol Heights, Seat Pleasant, District Heights, Forestville, and Hillcrest Height had HPI scores below 10. Areas of disadvantage also existed in the southern, more rural, tracts near Charles County.

Although Montgomery County had relatively high HPI scores as a whole, granular analysis revealed stark contrasts in conditions for health and opportunity across the county. The county is home to great wealth, ranking among the top 10 in the United States in median household income.[27] In areas of Potomac, Rockville, and Bethesda, median household income exceeded $200,000 per year. HPI scores in some of these areas exceeded 85. But not far away, median household income in Montgomery County was below $50,000 per year, such as in areas of Gaithersburg (e.g., tracts

e.   Communities with large Hispanic or immigrant
     populations may have higher HPI scores because
     of the so-called "Hispanic paradox," which refers
     to the tendency of recent immigrants (those
     having lived in the country for less than 10 years)
     to have higher life expectancy than people born
     in the United States.

7007.24 and 7007.13) and Aspen Hill (7032.13). Areas of low opportunity
with low HPI scores were documented throughout the county in western
tracts in Poolesville, central tracts in Germantown and Gaithersburg, and
eastern tracts in White Oak, Hillandale, and Kemp Mill (Figure 8).

Areas of high and low opportunity in the Maryland suburbs were often
short distances apart. For example, Bethesda—home to the National
Institutes of Health—included a largely white population. In some tracts,
97% of adults attended college, the unemployment rate was below 1%,
or no household lived in poverty. Eight miles away, Langley Park had
some of suburban Maryland's most adverse conditions. In census tract
8056.02, only 30% of adults graduated from high school, 11% attended
college, 85% of adults lacked health insurance, and 38% of households
lived in overcrowded conditions. The challenges in Langley Park, which
are well documented,[28] affected a population that was predominately
people of color, including many immigrants. Eighty-nine percent of the
population was Hispanic, and more than half (53%) of households spoke
limited English. Three quarters of the population was foreign born, with
73% having immigrated in 2000–2009.[e]

People of color and immigrants were disproportionately exposed to low
opportunity conditions across suburban Maryland. Impacted areas of
Prince George's County, from Glenarden southward, had populations that
were more than 85% black; whites typically accounted for less than 2%
of the population. Many of the Prince George's County tracts featured
in Figure 8 included a larger representation of Hispanic and foreign-
born residents. Census tract 8048.02 in Mount Rainier—where 61% of
households had incomes below 200% of the Federal poverty level—was
majority (54%) Hispanic and half (50%) the residents were foreign-born.
Almost two thirds (61%) of the population in Chillum (tract 8059.07) were
foreign-born, with 59% and 35% having immigrated from Latin America
and Africa, respectively.

Impacted areas of Montgomery County also featured large populations of color. Many impacted census tracts in the eastern county were largely black. Other affected areas were more diverse. For example, in census tract 7007.24 in Gaithersburg—where one in three children lived in poverty—38% of the population was Hispanic, 25% was Asian, and 64% was foreign-born. Conversely, in the Glen Echo tract (7057.02) where the median home value was $991,200, the population was 87% white, 10% Hispanic, 2% Asian, and 12% foreign-born.

Examples of the social and economic divide in suburban Maryland are more conspicuous when examined at the census tract level (see Figure 9). As in the District, examples of disadvantage are stark:

- In tract 8048.02 (07) in Mount Rainier, 59% of adults did not have health insurance.

- In a tract across from the University of Maryland-College Park campus (tract 8070 (03)), 39% of adults lived in poverty.

- Whereas the median home value in Glen Echo (tract 7057.02 (05)) was nearly $1 million, the median home value in one Chillum neighborhood (tract 8059.07 (05)) was $67,200.

- The median household income in one Bethesda tract (7047 (02)) was $245,208 per year, more than six times the median income ($36,386 per year) in a Bladensburg tract (8040.01 (02)).

- In one Landover neighborhood (tract 8035.09 (04)), 37% of the population received public assistance.
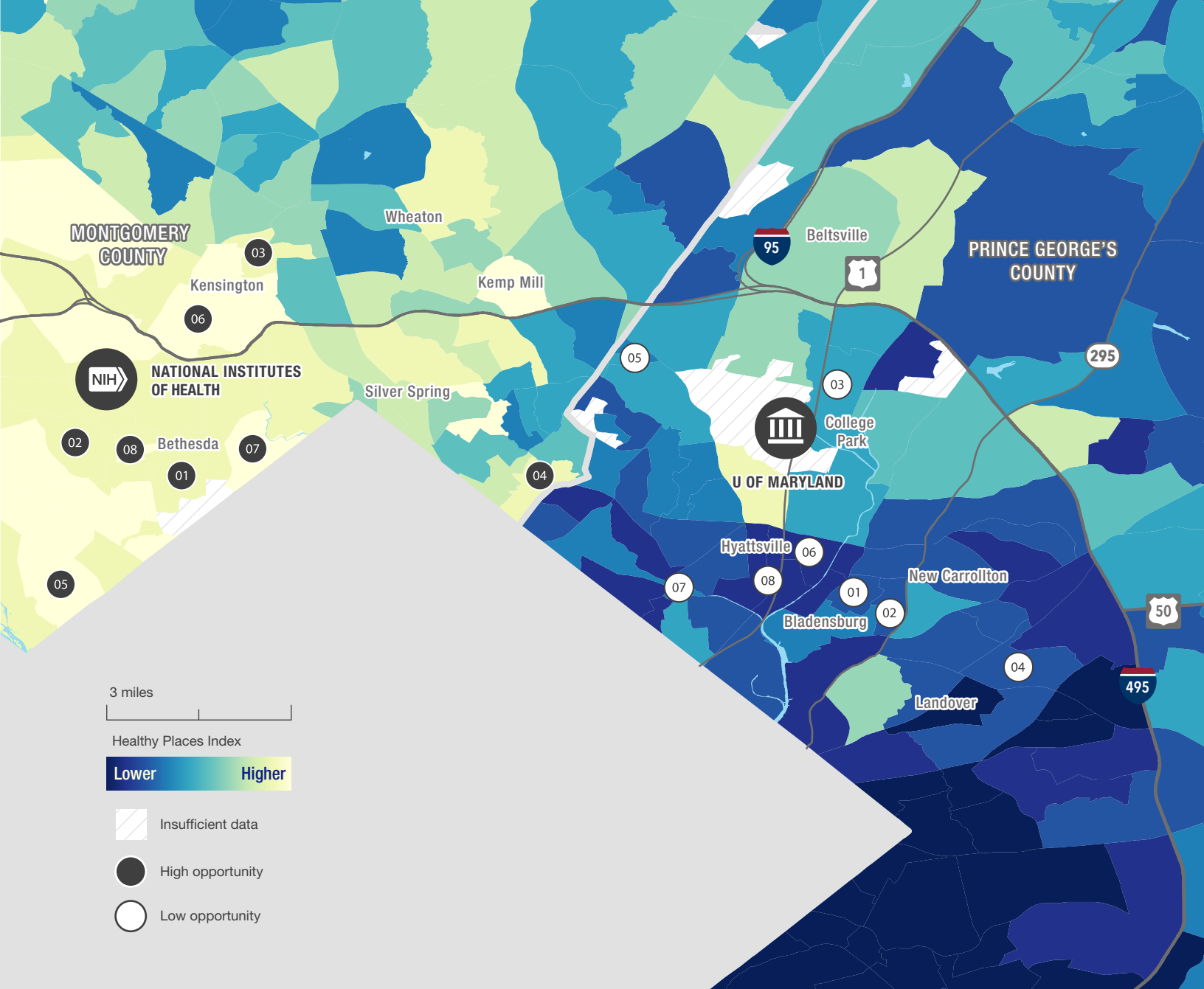
**FIGURE 9. EXTREMES IN OPPORTUNITY: MONTGOMERY COUNTY, MD AND PRINCE GEORGE'S COUNTY, MD**

Health is about more than health care. Our environment matters: neighborhood conditions affect not only our health but also economic opportunities and social mobility. Statistics that take the average for an entire county mask how conditions vary by neighborhood.

This map contrasts living conditions in nearby neighborhoods of Montgomery County and Prince George's County. Colors depict the Healthy Places Index: yellow reflects high opportunity for health and well-being, dark blue depicts low opportunity. The table contrasts specific living conditions, such as education and housing. Numbered circles in the table refer to census tracts on the map and show how greatly conditions vary across suburban Maryland. For example, the percent of adults with some college was 97% in a high-opportunity tract in Bethesda (01 in darkly shaded circle), whereas the percent in a Bladensburg tract (01 in lightly shaded circle) was 21%.

|  | | High Opportunity | | Low Opportunity |
|---|---|---|---|---|
| SOME COLLEGE | 01 | 97% | 01 | 21% |
| MEDIAN HOUSEHOLD INCOME | 02 | $245,208 | 02 | $36,386 |
| ADULT POVERTY | 03 | 0% | 03 | 39% |
| PUBLIC ASSISTANCE | 04 | <1% | 04 | 37% |
| MEDIAN HOME VALUE | 05 | $991,200 | 05 | $67,200 |
| OVERCROWDED | 06 | 0% | 06 | 21% |
| UNINSURED ADULTS | 07 | <1% | 07 | 59% |
| LIFE EXPECTANCY | 08 | 92 years | 08 | 73 years |

See Table 2 for full definitions

**FIGURE 10. HEALTHY PLACES INDEX SCORES IN NORTHERN VIRGINIA**

HPI = Healthy Places Index. The map shows that opportunities for good health at the census tract level vary greatly across Northern Virginia. Areas in yellow have more healthful conditions (high HPI), whereas dark blue census tracts have less favorable conditions (low HPI). Map colors reflect the range of the HPI observed in Northern Virginia. HPI scores in Northern Virginia ranged from 26 to 98. See Figure 10-A in the appendix for a full-size map.
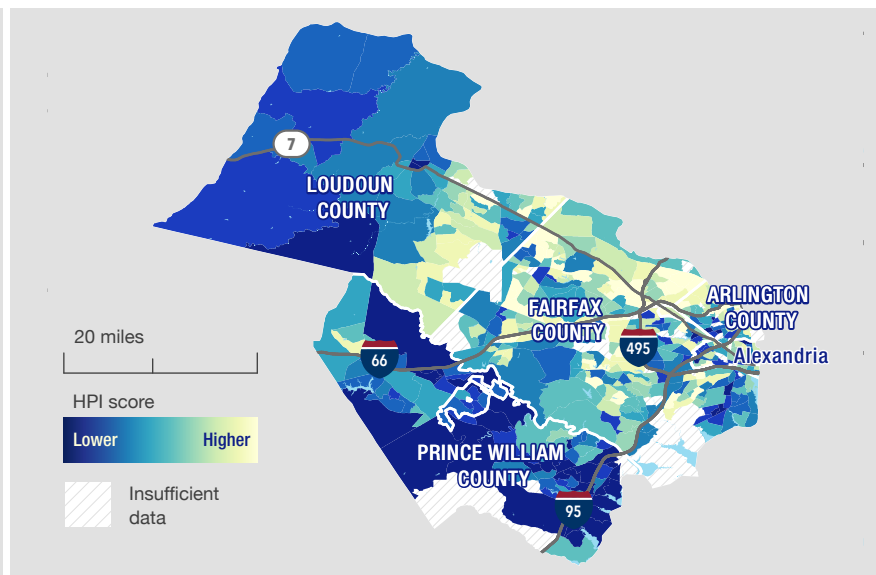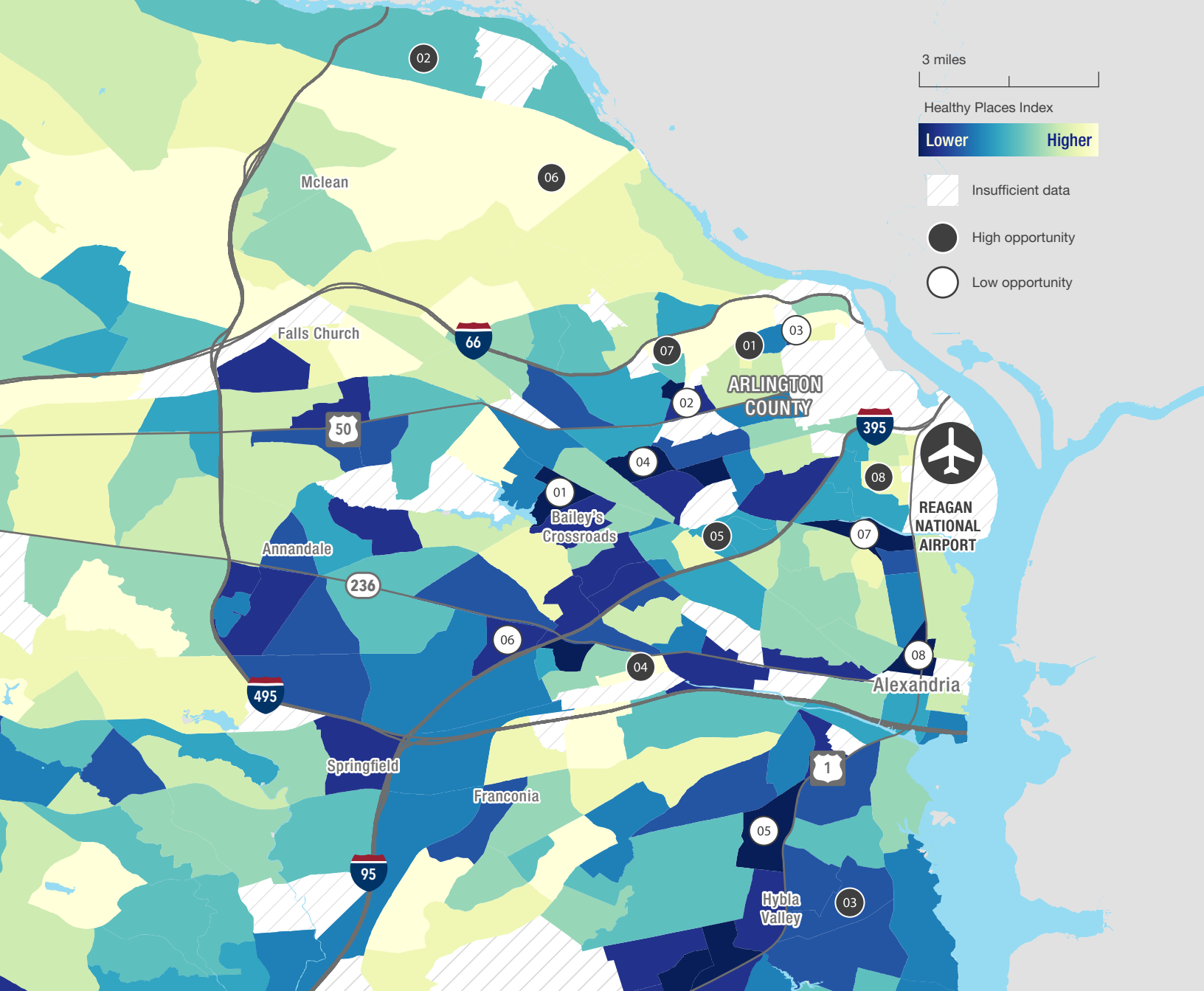
## Northern Virginia

The residents of the Virginia suburbs of Washington, D.C. are among the most affluent in the United States.[27] Yet, closer examination reveals clusters of census tracts where residents live in more difficult conditions. Two prior studies by the VCU Center on Society and Health, supported by the Northern Virginia Health Foundation, have documented in detail Northern Virginia's "uneven opportunity landscape."[29, 30] A 2017 report identified 15 "islands of disadvantage," clusters of census tracts with adverse living conditions. These included tracts in (1) Leesburg, (2) Sterling Park, (3) Herndon-Reston, (4) Centreville-Chantilly, (5) Fair Oaks-Oakton, (6) Springfield-Annandale-Landmark, (7) Seven Corners-Bailey's Crossroads-Alexandria West, (8) Columbia Pike-Douglas Park, (9) Buckingham-Fort Myer, (10) Arlandria, (11) Old Town Alexandria-Huntington, (12) Route 1 Corridor-Fort Belvoir, (13) Bull Run-Manassas, (14) Dale City-Woodbridge, and (15) Dumfries.

This study yielded similar results. As seen in Figure 10, some of the lowest HPI scores in Northern Virginia were in the distant suburbs, such as census tracts in Leesburg (Loudoun County) and areas of Woodbridge and Dumfries (Prince William County), where life expectancy was as low as 75–79 years. Many tracts with low HPI scores were situated in pockets of Fairfax County such as Herndon, Springfield, Annandale, and Columbia Pike. Some of Northern Virginia's lowest HPI scores were in such areas as Columbia Heights in Arlington County, the Arlandria neighborhood of Alexandria, and along the Route 1 corridor in Fairfax County. These areas were surrounded by affluent areas with very high HPI scores including Ashburn, Tyson's Corner, Great Falls, McLean, Franklin Farm, Fair Oaks, and Oakton.

As in Montgomery County, the researchers found stark contrasts in socioeconomic and environmental conditions in Northern Virginia, often

## FIGURE 11. EXTREMES IN OPPORTUNITY: NORTHERN VIRGINIA

Health is about more than health care. Our environment matters: neighborhood conditions affect not only our health but also economic opportunities and social mobility. Statistics that take the average for an entire county mask how conditions vary by neighborhood.

This map contrasts living conditions in areas of Northern Virginia in close proximity. Colors depict the Healthy Places Index: yellow reflects high opportunity for health and well-being, dark blue depicts low opportunity. The table contrasts specific living conditions, such as education and housing. Numbered circles in the table refer to census tracts on the map and show how greatly conditions vary across nearby neighborhoods. For example, the percent of adults with some college was 100% in a high-opportunity tract in Clarendon (01 in darkly shaded circle), whereas the percent in Bailey's Crossroads (01 in lightly shaded circle) was 24%. HPI scores in Northern Virginia ranged from 26 to 98.

| | High Opportunity | | Low Opportunity | |
|---|---|---|---|---|
| SOME COLLEGE | 01 | 100% | 01 | 24% |
| MEDIAN HOUSEHOLD INCOME | 02 | $244,013 | 02 | $38,125 |
| CHILD POVERTY | 03 | 0% | 03 | 66% |
| ADULT POVERTY | 04 | 0% | 04 | 23% |
| PRIVATE HEALTH INSURANCE | 05 | 99% | 05 | 39% |
| UNINSURED ADULTS | 06 | <1% | 06 | 54% |
| MODERATE HOUSING COST BURDEN | 07 | 12% | 07 | 58% |
| LIFE EXPECTANCY | 08 | 88 years | 08 | 78 years |

See Table 2 for full definitions

between neighborhoods separated by only a few miles or blocks (Figure 11). Some of the most affluent census tracts in the United States, such as tract 4701 ⓞ2 in Great Falls—where median household income was $244,013—were only a short drive from tract 1017.01 ⓞ3 near Fort Myer where 66% of children lived in poverty.

**FIGURE 12. A COMPARISON OF CENSUS TRACTS IN MCLEAN AND COLUMBIA HEIGHTS**
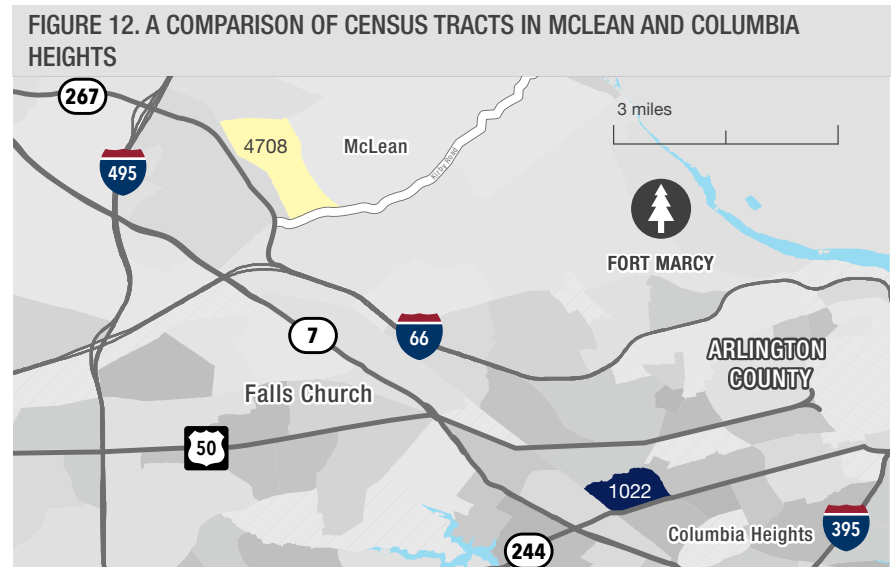


|  | TRACT 4708<br>McLean | TRACT 1022<br>Columbia Heights |
|---|---|---|
| Healthy Places Index | 96 | 41 |
| High school education | 97% | 79% |
| Some college education | 94% | 55% |
| Limited English | 3% | 13% |
| Children in single-parent households | 10% | 51% |
| Median household income | $139,773 | $42,571 |
| Unemployment | 1% | 11% |
| Child poverty | 0% | 49% |
| Adult poverty | 1% | 23% |
| Income below 200% FPL | 3% | 49% |
| Public assistance | 2% | 14% |
| Adults without health insurance | 3% | 45% |
| Vacant housing | 2% | 11% |
| Moderate housing cost burden | 24% | 56% |
| Overcrowding | 0% | 11% |
| No vehicle | 2% | 21% |

Graphic shows how living conditions vary in an affluent, largely white neighborhood (tract 4708) in McLean and a low-income neighborhood (tract 1022) in Columbia Heights with a large Hispanic and immigrant population. FPL= Federal poverty level. See Table 2 for full definitions.

As was observed elsewhere in the region, people of color were disproportionately exposed to adverse living conditions. Figure 12 poses the contrast between one McLean census tract (4708), where the HPI score was 96, and a tract in Arlington's Columbia Heights (1022), where the HPI score was 41. Whereas the population in the McLean tract was predominately white (70%) and Asian (19%), the population in Columbia Heights was largely Hispanic (51%) and black (19%). More than half was foreign-born, and most immigrated during 2000–2009.

## POLICY IMPLICATIONS: WHERE DO WE GO FROM HERE?

This study documents the uneven access to opportunity—and to good health—that characterizes the metropolitan Washington region. The area is home to very healthy communities with high life expectancy, and to socioeconomic and environmental conditions that promote wellness and social mobility. But many neighborhoods—ranging from the "islands of disadvantage" in Northern Virginia to large historically segregated regions such as Southeast D.C. and Prince George's County—continue to struggle with poverty and poor environmental conditions resulting from past social and economic challenges.

Health care is a necessary but insufficient solution to addressing these health inequities. Health is about more than health care. Doctors cannot solve the socioeconomic challenges or improve neighborhood conditions. Impacted areas have large populations that lack health insurance and localized areas have an inadequate number of primary care physicians, mental health professionals, and other clinical services. Policies to improve access to care are vital, and encouraging residents to avoid unhealthy behaviors (e.g., smoking, inactivity) are important. At the same time, creating healthy communities and closing the region's 27-year gap in life expectancy require more fundamental social and economic solutions beyond the world of health care.

The good news is that the solutions to improving public health (Table 4) are also vital to improving the economy and growth of the region. Programs and policies to improve educational opportunities, from preschool to college, will promote the economic mobility of families while also strengthening the competitiveness of the region's workforce. Investments that help alleviate economic stresses on families and create opportunities for social mobility can help reduce demand for social services, discourage crime, and alleviate pressure on law enforcement, courts, and jails. Improving the built environment, expanding green space, and strengthening community services can help attract new businesses to the region, stimulate tourism, and bring other benefits to the public.

In an area that is home to some of the most educated and affluent people in the United States, it is essential that policies, services, and investments be targeted to communities in need. High schools in the region with

well-landscaped campuses and outfitted with the latest technological tools need less assistance than schools with crumbling infrastructure, low-paid teachers, and outdated teaching materials. Tools such as the Healthy Places Index—and similar resources that help pinpoint communities in need—can help identify "hot spots" for targeting efforts at community and economic development. Real solutions require targeted investments in marginalized neighborhoods to improve access to affordable, healthy housing as well as affordable transportation, child care, and health care (e.g., primary care, dental care, behavioral health services). Capital investments in the community, often originating in the private sector, are necessary to create an attractive environment that provides resources (e.g., green space) for physical activity and healthy eating while limiting exposure to harmful pollutants.

As discussed earlier, transformational change in areas that have suffered multi-generational disinvestment requires cross-sectoral partnerships, in which stakeholders from different sectors join hands to make a collective impact. Given the history of the area, it is essential for efforts to be sensitive to the vestiges of institutional racism and to work closely with communities of color and immigrant organizations to pursue trauma-informed policies. Many such efforts are underway in the metropolitan Washington region, including some that have served as models for other U.S. cities. The Metropolitan Washington Council of Governments has embraced a multisector approach in both its *Region Forward* strategic planning and its implementation.

Public health departments can play a major role in coordinating these efforts, beginning with the assessment of community health needs, investigating health effects or hazards, ensuring access to clinical services among at-risk populations, and using data to inform intervention efforts aimed at prevention or control. Increasingly, state and local health departments are helping to conduct health impact assessments (HIAs)[31]—structured processes to forecast the health implications of proposed policies, programs, and projects. HIAs are typically commissioned to examine policies in sectors that have not historically been viewed as health-related (e.g., education, transportation, housing, tax policy, zoning, law enforcement). Beyond this, public health agencies—through their close relationships with other government agencies and with community, business, academic, and philanthropic partners—can serve as backbone organizations for collective impact initiatives, in which stakeholders spanning multiple sectors embrace initiatives to improve the conditions for better health and economic opportunity.

Everyone benefits from this approach, not only the residents in low-income neighborhoods and communities of color, but also the entire regional economy. Economic and racial inequity saps the strength of the economy. Everyone pays a price for inaction: persistent poverty and social isolation fuel discontent, unhealthy behaviors (e.g., drug addiction), crime, and violence.

**TABLE 4. STRATEGIES TO REDUCE GEOGRAPHIC DISPARITIES IN HEALTH AND OPPORTUNITY.**

**Address root causes by improving economic and social conditions for populations in need**

- Policy action by government and the private sector to improve job opportunities, increase wages, reduce poverty, and promote economic mobility

- Reforms and investments to improve the quality of education—from preschool through high school—and to improve the affordability of college, vocational training, and professional education

- Cross-racial alliance building to understand and address common causes of health threats facing different racial and ethnic groups, including racism and discrimination

**Strengthen the public health system**

- Investments in public health agencies to support core functions

- Health needs and health impact assessments to factor in the health implications of policies, programs and projects in all sectors, including education, transportation, housing, and crime

**Invest in communities**

- Economic development by business, investors, and philanthropy, and the promotion of new industry in marginalized communities

- Civic engagement and cross-sector partnerships to leverage and target resources and expand opportunities to break the cycle of poverty

**Ensure access to quality health care services**

- Improved access to affordable health insurance and attention to provider shortage areas

- Protecting the quality and cultural competence of health care services

Efforts to promote health and opportunity can produce real-time benefits in the short term for today's families, but our children are perhaps the most important beneficiaries. Improving the living conditions of the region's children, their educational opportunities, and their health care will shape their future health trajectory into adulthood. And conversely, not protecting young people from the chronic stress of adverse childhood conditions will plant the seeds for lasting harm, substance abuse, economic struggles, and adult disease and disability. Today's children will be tomorrow's leaders. They will be the next generation of teachers, doctors, and chief executives. Making our region a place where children in every neighborhood can thrive is perhaps the best guarantee for a bright future.

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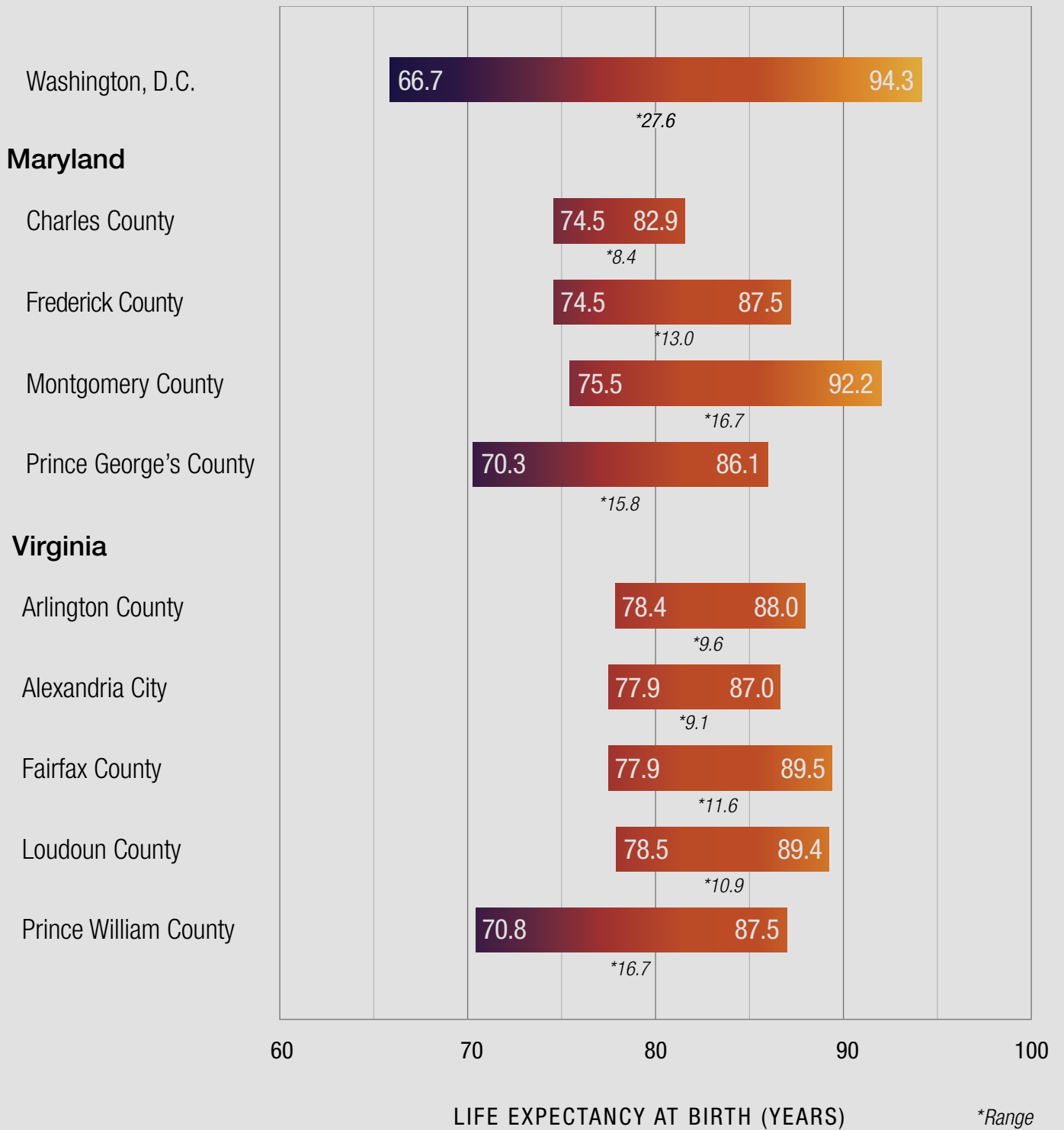
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# APPENDIX

Washington, D.C.    66.7    94.3
*27.6

**Maryland**

Charles County    74.5    82.9
*8.4

Frederick County    74.5    87.5
*13.0

Montgomery County    75.5    92.2
*16.7

Prince George's County    70.3    86.1
*15.8

**Virginia**

Arlington County    78.4    88.0
*9.6

Alexandria City    77.9    87.0
*9.1

Fairfax County    77.9    89.5
*11.6

Loudoun County    78.5    89.4
*10.9

Prince William County    70.8    87.5
*16.7

60    70    80    90    100

LIFE EXPECTANCY AT BIRTH (YEARS)    *Range
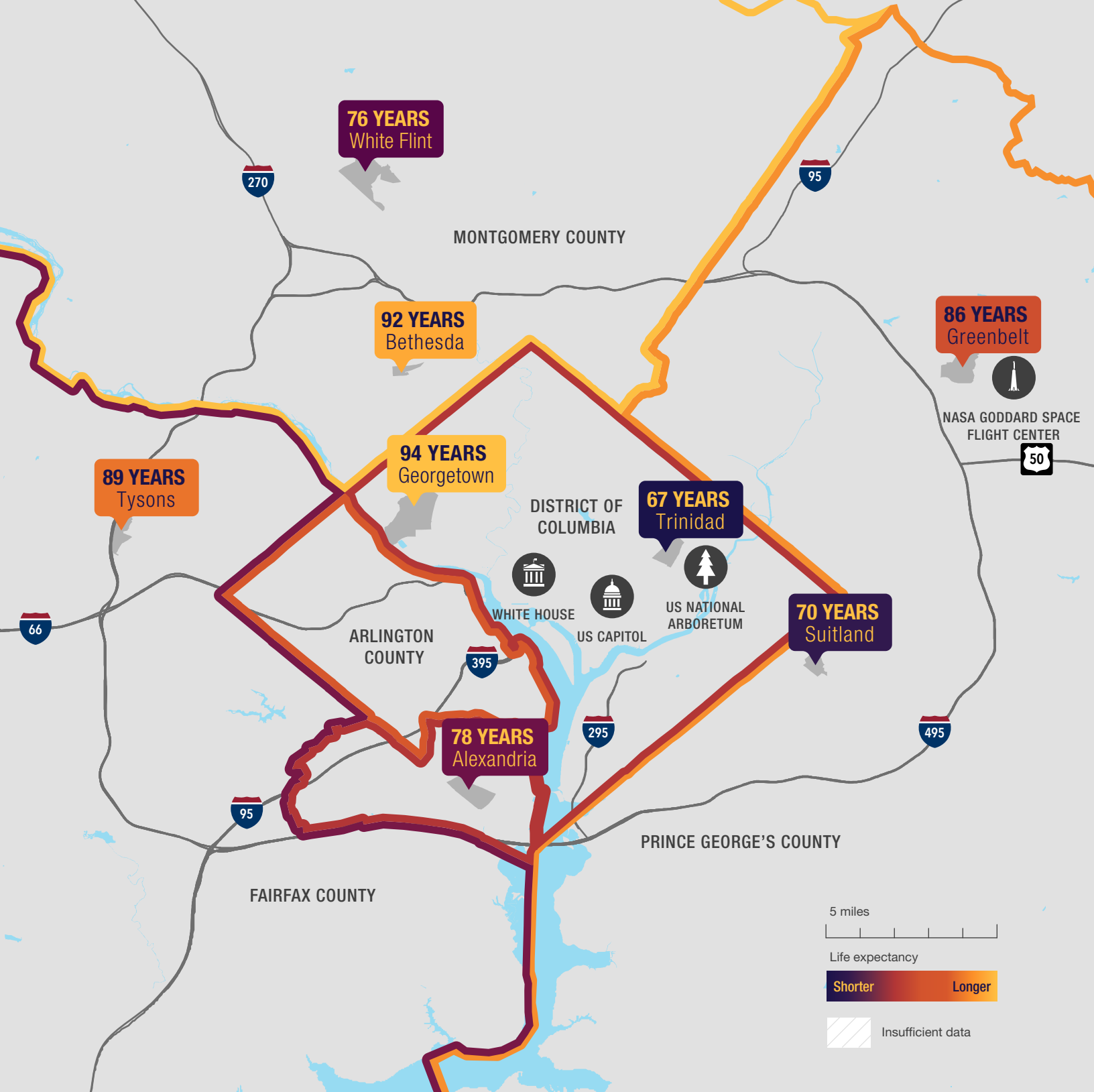
**TABLE 1-A. LIFE EXPECTANCY (AT BIRTH) RANGES IN THE METROPOLITAN WASHINGTON REGION**

Data for Fairfax County includes Fairfax City and Falls Church, and data for Prince William County includes the cities of Manassas and Manassas Park. Data for Prince George's County includes Bladensburg, Bowie, College Park, and Greenbelt. Data for Frederick County includes the city of Frederick.

**76 YEARS**
White Flint

**MONTGOMERY COUNTY**

**92 YEARS**
Bethesda

**86 YEARS**
Greenbelt

NASA GODDARD SPACE
FLIGHT CENTER

**89 YEARS**
Tysons

**94 YEARS**
Georgetown

**DISTRICT OF
COLUMBIA**

**67 YEARS**
Trinidad

WHITE HOUSE

US CAPITOL

US NATIONAL
ARBORETUM

**70 YEARS**
Suitland

**ARLINGTON
COUNTY**

**78 YEARS**
Alexandria

**PRINCE GEORGE'S COUNTY**

**FAIRFAX COUNTY**

5 miles

Life expectancy

Shorter ——— Longer

Insufficient data

**FIGURE 1-A. LIFE EXPECTANCY
AT BIRTH IN THE METROPOLITAN
WASHINGTON REGION**

Life expectancy, how long a newborn can expect to live, varies 27 years across the census tracts of the metropolitan Washington region. Darkly shaded tracts, reflecting lower life expectancy, exist in every jurisdiction—not just the District of Columbia and nearby neighborhoods but also suburban Maryland (Charles County, Frederick County, Montgomery County, Prince George's County) and Virginia (Alexandria, Arlington County, Fairfax County, Loudoun County, and Prince William County). See appendix Table 1-A for life expectancy ranges for individual jurisdictions.
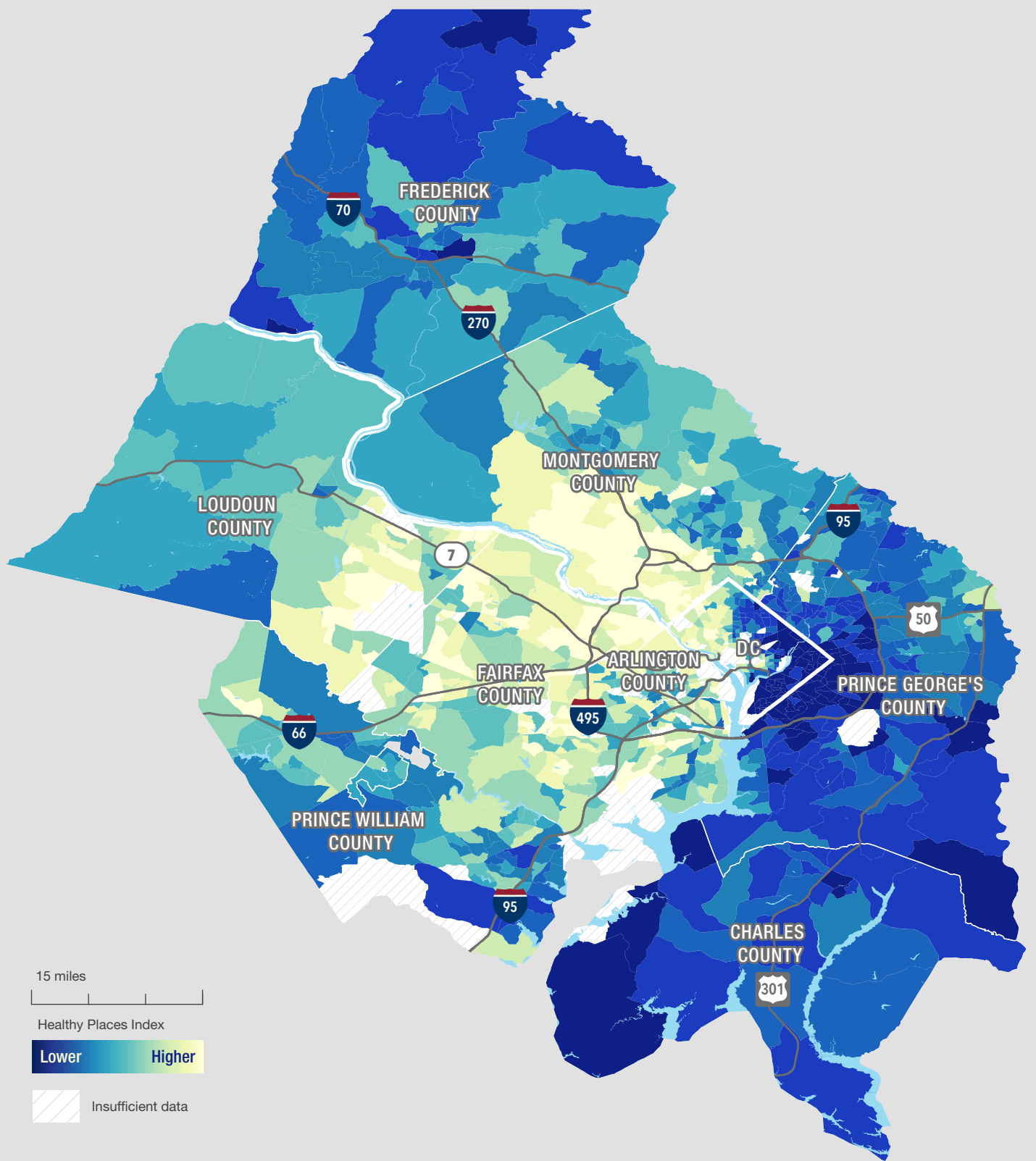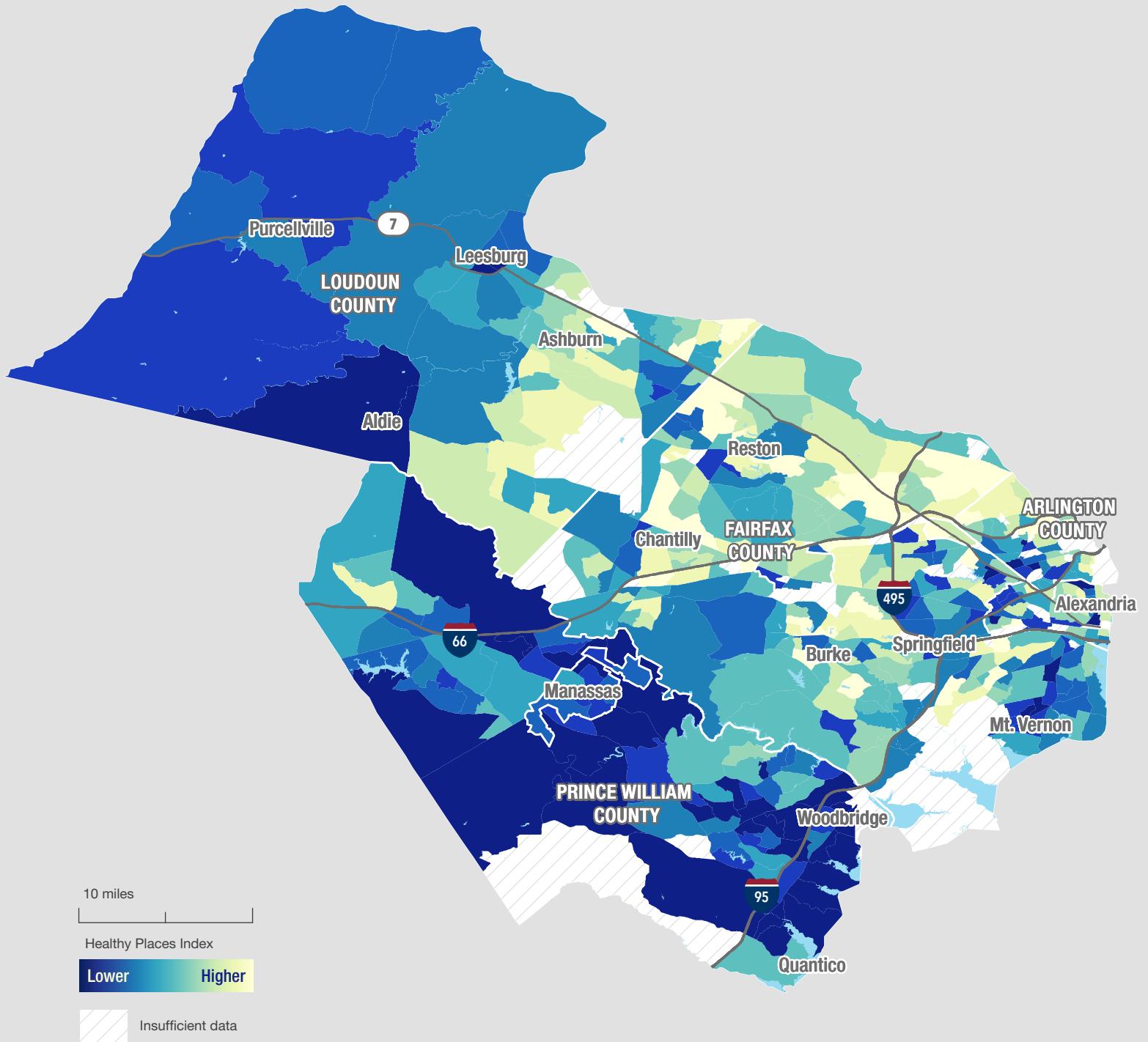
**FIGURE 4-A. HEALTHY PLACES INDEX SCORES IN THE METROPOLITAN WASHINGTON REGION**

The map shows that opportunities for good health at the census tract level vary greatly across the region. Colors depict how the Healthy Places Index (HPI) varies across the metropolitan Washington region: yellow reflects high opportunity for health and well-being, dark blue depicts low opportunity.

**Healthy Places Index**

Lower — Higher

Insufficient data
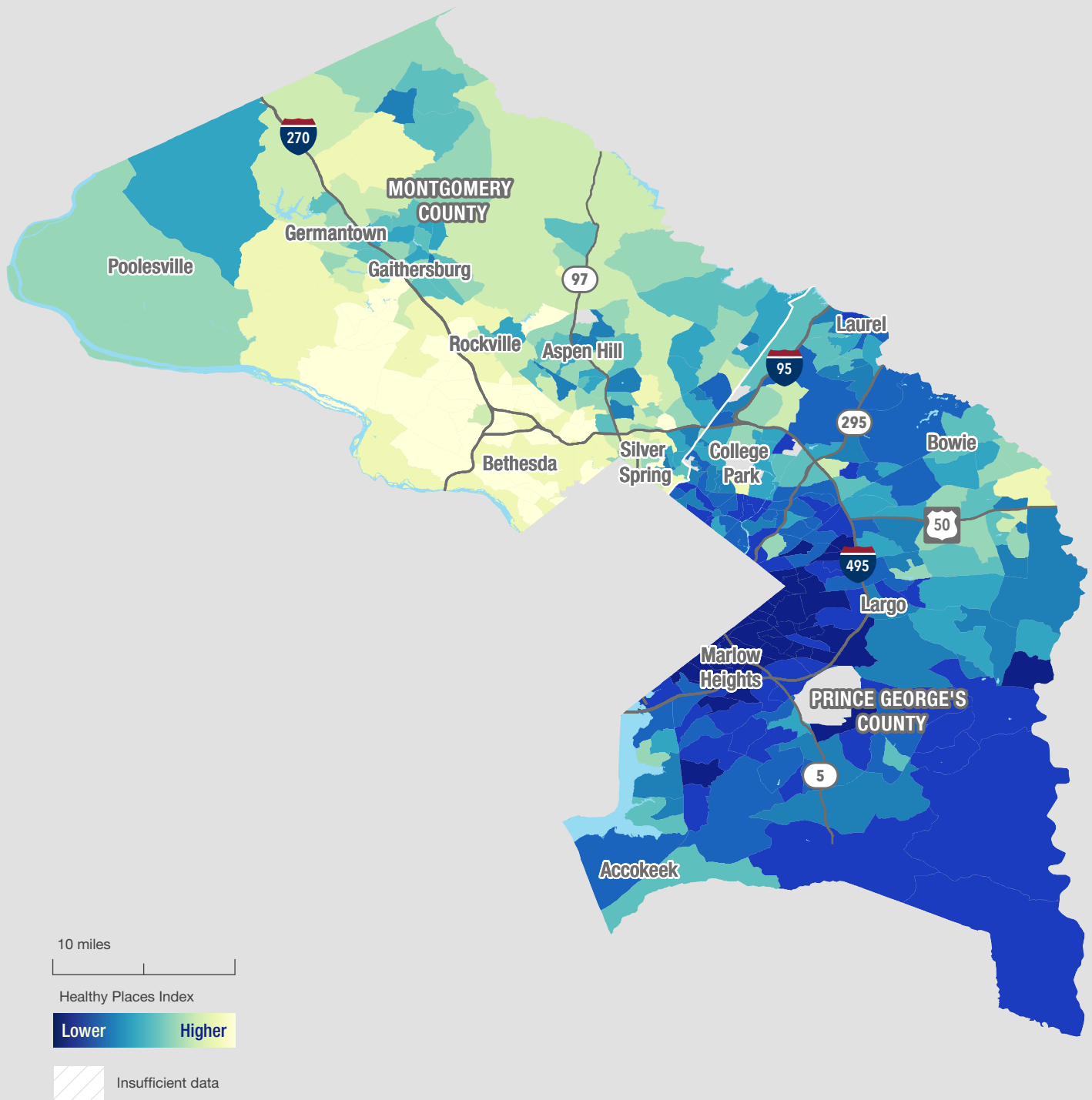
**FIGURE 8-A. HEALTHY PLACES INDEX SCORES IN MONTGOMERY COUNTY, MD AND PRINCE GEORGE'S COUNTY, MD**

The map shows that opportunities for good health at the census tract level vary greatly across Montgomery County and Prince George's County in Maryland. Colors depict the Healthy Places Index: yellow reflects high opportunity for health and well-being, dark blue depicts low opportunity.

**FIGURE 10-A. HEALTHY PLACES INDEX SCORES IN NORTHERN VIRGINIA**

The map shows that opportunities for good health for good health vary greatly across census tracts. Colors depict the Healthy Places Index in Northern Virginia: yellow reflects high opportunity for health and well-being, dark blue depicts low opportunity. HPI scores in Northern Virginia ranged from 26 to 98.