Understanding the Intricate Linkages between Income, Health, and Wealth for African Americans

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Black Health and Black Wealth: Understanding the Intricate Linkages between Income, Health, and Wealth for African Americans

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There is a general understanding that health and income are related; and research on this relationship indicates that individuals with low levels of income have higher rates of chronic disease and are at an increased risk of premature death.\(^2\) It is easy to understand why income and health are correlated. The expectation is that individuals with higher incomes are able to devote more of their discretionary income to purchasing healthy, nutritious food, fitness center memberships, and personal fitness trainers. Furthermore, higher earning individuals generally have comprehensive health insurance plans that include provisions for preventative health screenings and wellness programs. However, while the relationship between health outcomes and income are well understood, the connection between health and wealth is less intuitive.

Income refers to the annual earnings of an individual (or family), while wealth is much broader and encompasses the accumulated assets of an individual (or family), and in addition to annual earnings, includes home ownership, investments, and retirement savings. Given that several factors contribute to one’s overall net worth and wealth accumulation, the correlation between an individual’s wealth and health, is not readily apparent. Similarly, the relationship between a family’s wealth and health is not obvious; and yet, infant mortality and children’s health are strongly linked, both to the family’s income, but also to the family’s wealth.\(^3\)

While research has evaluated the relationship between health equity and economic factors, the goal has been to

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provide general assessments, with more attention given to highlighting class disparities than that of racial disparities. Therefore, few studies have focused exclusively on the implications of the correlation between health and wealth for African Americans. This is problematic given that a recent Gallup Poll determined that African Americans suffer disproportionately from chronic health conditions.4 In addition, data from the U.S. Census Bureau reveal that the median household income for African American families is $37,000 compared to that of non-Hispanic whites, which is $63,000. Further, the median household net worth for African American families is 1.4 times lower than that of non-Hispanic whites, and only six percent of black households have investment holdings, such as stocks or mutual funds.5 Black families are also less likely to own their homes, or have extensive home equity lines of credit, which translates to lower net worth, fewer assets, and lower wealth accumulation compared to their white counterparts. Consequently, given the indication that health and wealth are linked, it would make sense to study the African American population in order to achieve a better understanding of this connection.

This research examines the relationship between income, wealth, and health among African Americans across several indicators, which include the negative impact food deserts have on health, the African American risk for chronic disease, how poor mental health impedes wealth accumulation, and how the epigenetic transmission of poor health across generations also serves as a wealth building obstacle. The primary goal of this study is to better understand how the factors of income, wealth and health function together, and the implications of this relationship for the black community in the United States. Thus far, existing research outlines how income affects health, and it suggests how it is possible that wealth influences health, but what it doesn’t expand upon, is also how poor health contributes to a loss of income, and that over time poor health can negatively impact the accumulation of wealth.

Another area where research is lagging is in the policy arena. Existing studies primarily focus on policies such as Women, Infants, and Children (WIC6), Supplemental Nutrition Assistance Program (SNAP7), and the Affordable Care Act (ACA8) as mechanisms to promote African American health and wealth, concurrently. However, the aforementioned policies, and others like them, are anti-poverty policies, which are specifically targeted initiatives to help lessen the ill effects of poverty. As they are currently designed, anti-poverty policies are not viable strategies to increase African American wealth, despite that they have been instrumental in improving health access and supporting low-income families. Consequently, this report

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6 Special Supplemental Nutrition Program for Women, Infants, and Children (WIC)
7 Supplemental Nutrition Assistance Program (SNAP)
8 Affordable Care Act (ACA). Also referred to as Obamacare
moves away from a discussion of anti-poverty policies and instead concludes with a general assessment of the current policy initiative to promote diversity in the healthcare workforce as a means to close racial disparities in health, which is garnering more national support given the increasing workforce shortages in the healthcare industry.

Diversifying the healthcare workforce represents a comprehensive strategy to improve health outcomes for African Americans while simultaneously supporting African American employment in high paying professionalized health careers. Although, a high income is not the sole contributor, it does help foster wealth building. In addition, providing African American patients with culturally competent healthcare providers has been linked to improvements in health benchmarks. This is significant given that poor health is a barrier to consistent employment, income earnings and wealth accumulation. Consequently, efforts to diversify the healthcare workforce have been encouraged as a mechanism to improve the socioeconomic status of African Americans.

At the conclusion of this study, the overall effectiveness of the initiative to promote diversity in the healthcare workforce, and its potential impact on black health and wealth, will be debated.
Food Deserts

Income and wealth affect health outcomes in a variety of ways; the most obvious being the material benefit that income and wealth provide. Individuals with greater material resources are able to financially invest in activities that promote health and wellbeing. For example, families with high earnings and greater wealth assets are able to more easily afford nutrient dense meals than families with low earnings and fewer wealth resources. As a result, people with low incomes face higher rates of food insecurity and are the most likely to live in an area characterized as a ‘food desert’.

Food deserts are areas with predominantly low-income residents where access to affordable nutrient dense food is limited. In measurable terms, a neighborhood that is located more than one mile from a supermarket is considered a food desert. Similarly, a food desert can also be defined according to “the ratio of the distance to a grocery store relative to the distance to a fast food restaurant”. So in communities where fast food restaurants are predominant, while food options may be plentiful, the poor quality of the food options and lack of healthy food sources creates a food desert because residents are less likely to make healthy food decisions.

In contrast, a food oasis is an area where there is a high ratio of supermarkets and businesses that sell nutrient dense food (i.e. farmers markets, health food stores, etc.) to the number of residents. Also, in an area characterized as a food oasis, there is considerable diversity in the types of food sources and options available. For example, food oases often have several ethnic food markets and shops located within their geographic boundaries.

Approximately 24 million Americans currently live in low-income communities that are defined as food deserts; and racial disparities are evident between food desert and food oasis communities. African American neighborhoods have 52 percent as many chain supermarkets compared to non-Hispanic white neighborhoods, while the situation for Hispanic neighborhoods is even worse. Hispanic communities have only 32 percent as many chain supermarkets in comparison to non-Hispanic white neighborhoods. Chain supermarkets and grocery stores are less prevalent in low-income and minority communities. As a result, these communities are more likely to be serviced by non-chain supermarkets, which

are smaller. Also, because smaller grocery stores do not belong to a chain or a franchise, their prices are higher and there is less variety in their food product offerings.

The short-term implications of food deserts for African Americans and other minorities who live in low-income areas is that they have fewer options, must travel farther, and pay higher prices for food than residents who live in food oases. However, in the long-term, the diets of residents living in a food desert reflect their limited choices. Their diets are nutrient poor, and are comprised primarily of processed food, which results in individuals consuming substantially more than the recommended daily intake of fat, salt, and sugar. Nutrient poor diets put African Americans at a higher risk for obesity, diabetes, hypertension, and heart disease. Poor diet has also been linked to impaired cognitive development of adolescents and can have a negative impact on educational outcomes. Lastly, a poor diet increases adolescent vulnerability to illness because poor nutrition contributes to a weakened immune system.

The main takeaway here is that the discussion surrounding health, especially with respect to chronic disease, oftentimes attributes poor health to poor decisions regarding food choices and lifestyle factors. However, what is missing from this discourse is the absence of choice that living in a food desert creates. Food deserts are at the root of poor health outcomes for African Americans. They increase the risk for chronic health conditions, which can then contribute to greater financial barriers to affordable healthcare.

Health Risk Factors and Chronic Disease

According to the Centers for Disease Control and Prevention (CDC), African Americans are living longer than they have, historically. In the last two decades, the African American death rate has declined by approximately 25 percent, and the greatest improvements in health outcomes are most evident among African Americans ages 65 and older. Despite these advancements, the health outcomes for younger African Americans have trended in the opposite direction. African Americans, ages 18-49, are currently afflicted by chronic health conditions that are typically observed in white Americans, ages 65 and older. For example, African Americans, ages 18-49 are two times more likely to have high blood pressure, and subsequently die from heart disease compared to their white American age-group counterparts. African Americans are suffering from chronic health conditions at a younger age, which can then lead to earlier rates of death. Therefore, understanding the harmful health effects explained by income, wealth, and resource-poor neighborhoods are critical in order to effectively combat the disproportionately high rate of African American youth experiencing chronic disease.

Approximately 24 million Americans currently live in low income communities that are defined as food deserts.”

Obesity
The rate of chronic disease among African Americans is significant. Forty-eight percent of African American adults currently suffer from a chronic illness, compared to 39 percent of the overall U.S. population. One of the reasons the incidence of chronic health conditions is so high among African Americans is because it is linked to the high rates of obesity and incidence of being overweight within the African American community. Obesity is a key risk factor for other debilitating and chronic health conditions; African Americans are reported to have the highest rates of obesity of the population. Seven out of 10 African Americans, ages 18 to 64 are obese or overweight, and African Americans are 15 percent more likely to suffer from obesity than non-Hispanic whites. The implication of the high obesity rate among African Americans is that it impedes work productivity and work performance, which negatively impacts earnings and the potential for wealth accumulation. Therefore, it is not surprising that studies have found that the prevalence of obesity is highest among the lowest income earners.

Heart Disease
The leading cause of death for all Americans is heart disease. The risk of developing heart disease is highest among African Americans because African Americans have high rates of hypertension or what is commonly known as high blood pressure. The prevalence of hypertension in African Americans is the highest in the world and high blood pressure increases the risk of heart disease and stroke. Also, African Americans are more likely to die from heart disease than non-Hispanic whites, and the disease develops at a younger age for African Americans than for other ethnic groups. Research suggests that African Americans may be genetically predisposed to develop hypertension because they carry a gene that makes them more sensitive to salt, thereby increasing the risk of developing high blood pressure. As a result of this genetic predisposition, almost half of all African American women (48 percent) and approximately 44 percent of African American men suffer from some variation of heart disease.

The high incidence of hypertension among African Americans is crucial to not only health outcomes, but economic outcomes as well. Researchers have found that low-income Americans are more likely to be diagnosed with cardiovascular disease when compared to high-income Americans. Additionally, between 2011 and 2014, approximately 16.5 percent of individuals at or below the federal poverty level had a 20 percent or greater risk of developing cardiovascular disease than high-income individuals. Although, the causal relationship between heart disease and economic factors is not explicit, there is evidence indicating that the two factors are highly correlated. Consequently, it is critically important to begin addressing the high prevalence rates of cardiovascular disease in the African American community to not only promote overall health and wellbeing, but also to improve African American economic security.

Cancer
Research has long established a strong association between cancer incidence and economic status; however,
what is most critical for African Americans is that recent studies are beginning to establish that economic status and cancer death rates are also strongly correlated. In a 2018 study by the National Cancer Institute, researchers established a clear link between an increased risk for cancer death and food insecurity\(^\text{11}\). Therefore, given the high incidence of food deserts in African American communities, it is significant that African Americans are also more likely to develop and die from cancer than any other racial or ethnic group. African American men are 50 percent more likely than non-Hispanic white men to develop prostate cancer, and African American men are more likely than any other racial or ethnic group to suffer from colorectal cancer. Also, while African American women and non-Hispanic white women develop breast cancer at about the same rate (Figure 1), the breast cancer death rate for African American women is 40 percent higher than the rate of death for non-Hispanic white women.

Of all the chronic illnesses discussed in this report, cancer is one of the costliest and most physically
debilitating. Furthermore, research finds that access to high quality healthcare and treatment—which is a function of high economic status—is directly related to higher cancer survival rates. All evidence points to the assertion that with respect to cancer development and survivability, economic security is a protective health factor. Consequently, the disproportionate impact cancer has on African Americans clearly demonstrates it is critically important to achieve a better understanding of the relationship between economic factors and health outcomes in order to address the cancer mortality crisis in the black community.

Diabetes
It is projected that by 2050, nearly one in three adult Americans will develop diabetes. Currently, an estimated 26 million people in the United States suffer from either Type I or Type II diabetes; however nearly 79 million American children and adults are pre-diabetic which increases their risk of developing Type II diabetes and diabetic complications. Like heart disease, diabetes is considered an epidemic in the African American community (Figure 2). Approximately, 4.9 million adult age African Americans have been diagnosed with diabetes; and African-Americans are 77 percent more likely to develop diabetes than non-Hispanic whites. African Americans are also more likely to develop serious complications from diabetes and are twice as likely to die from diabetic complications as non-Hispanic whites. Despite the prevalence of diabetes among African Americans and that low income is strongly associated with a high incidence of diabetes and diabetes related complications, the one positive is that economic factors do not appear to affect diabetic health care. What this means is that income disparities do not impact the quality of diabetic health care for patients. At the same time; however, diabetes has been linked to diminished work performance and work productivity, and contributes to employee absenteeism. Therefore, when compared to non-diabetics, it is more likely that the income earnings and wealth potential for individuals with diabetes will be negatively impacted as a result of their illness.

Mental Health
In the United States, an estimated 18 percent of the adult population suffers from a diagnosable mental health disorder each year, and approximately 4 percent of the adult population suffers from a serious mental illness. The seriousness of the mental health crisis in the United States is most evident when considering that less than half (43 percent) of those individuals diagnosed with a

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mental health disorder receive treatment or counseling, and this is not accounting for the individuals suffering from an undiagnosed mental health condition. This situation speaks largely to mental health disorder awareness and access to treatment.

There is a clear relationship between measures of poverty and physical health indicators. This direct correlation is also salient for mental health status. According to the Centers for Disease Control, African Americans that live below the poverty level are more than ten times as likely to report mental health and psychological distress when compared to African Americans that live at the highest income level (Table 2). Also, the figures in Table 2 are consistent with what has been presented in this study, thus far, that increasing levels of economic security are correlated with increasing levels of health and wellbeing.

Table 2. Serious Psychological Distress Among African American Adults by Percent of Poverty Level, 2014

<table>
<thead>
<tr>
<th>Poverty Level</th>
<th>African American</th>
</tr>
</thead>
<tbody>
<tr>
<td>Below 100%</td>
<td>7.4%</td>
</tr>
<tr>
<td>100% - less than 199%</td>
<td>3.5%</td>
</tr>
<tr>
<td>200% - 399%</td>
<td>2.3%</td>
</tr>
<tr>
<td>400% or more</td>
<td>0.7%</td>
</tr>
</tbody>
</table>


Due primarily to targeted health education, and expanded insurance coverage, there have been measurable improvements in the health outcomes for African Americans as a collective. At the same time; however, the majority of African Americans continue to suffer from debilitating and chronic health conditions, which can largely be attributed to income and wealth disparities. In fact, when comparisons are made between higher income earning African Americans and lower income earning African Americans, the disparity in health outcomes becomes glaringly evident.

In a multivariate logistical regression analysis of healthy behaviors and health status by race/ethnicity and income, the findings revealed that high income earning African Americans reported “better health, engaged in healthier behaviors, received more timely screenings for cancer and other health conditions and made greater use of general health and dental services” than low income earning African Americans (Dubay and Lebrun, 2012, p. 621). Consequently, as income and wealth accumulation increase over the lifespan, health outcomes tend to improve, accordingly. For aging African Americans, and an African American populace that is beginning to pass on generational wealth, this is a promising sign.

At the same time, a substantial proportion of the black population is being left behind, and as a result, inequities in health and wealth persist for low income and younger African Americans.

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Mental Health and Lost Wages and Productivity

The relationship between mental health and wealth is a nuanced one when examining the connection between psychological distress and low levels of income and wealth. Financial insecurity is a well-studied stress factor and contributor to depression. Consequently, it has been determined that poverty and poor mental health are directly correlated. At the same time; however, a lesser-studied relationship is the impact mental health has on economic factors. Poor mental health contributes significantly to financial insecurity; and this section explores this relationship in a deeper context.

Mental health disorders are among the top three most costly health conditions (alongside cancer and trauma-related disorders) for adults (18 to 64), and they are one of the leading causes of disability, accounting for 13.6 percent of all years of life lost due to disability and premature death. Depression-related absenteeism and presenteeism (when employees are present for work but less productive due to their illness) cost businesses approximately 225 billion dollars per year. That’s because mental health disorders negatively impact a worker’s focus and time management, as well as their ability to perform their work duties. Similarly, when mental health disorders become unmanageable, employees take sick days, or they are chronically absent, which inevitably results in the employee being terminated. Consequently, mental health disorders have a negative impact on earnings and income, they contribute to lost productivity and wages, and as a result they negatively affect an individual’s ability to accumulate wealth.

Despite the negative impact poor mental health can have on economic security, when treated, mental health outcomes improve significantly, and the negative implications diminish. The early detection, proper diagnosis and effective treatment of mental health conditions can lead to quicker recovery, which allows individuals to gain access to employment, develop healthy relationships, and lead more productive and meaningful lives.

However, for African Americans, early identification, and the diagnosis and treatment of mental health disorders is a significant challenge.

Although, the incident rate of mental disorder for African Americans is comparable to that of the general population, there are disparities in access and the quality of mental health care received by African Americans.
Mental disorders in African Americans are often misdiagnosed, or there are significant delays in diagnosis, because they either lack access to culturally competent health care, or the care they receive is of a lesser quality. For example, only one-in-three African Americans who require mental health treatment actually receive it. Also, due to the lack of culturally competent health care providers, African Americans with the same symptoms as non-Hispanic whites are more frequently diagnosed with schizophrenia, and less frequently diagnosed with mood disorders because the health care provider is untrained in how to recognize differences in the expression of symptoms indicating emotional distress. Also, in comparison to the general population, African Americans are less likely to be offered evidence-based medication therapy or psychotherapy for the treatment of their mental health symptoms.

The overall implications for African Americans suffering from a mental health disorder is that they have the highest likelihood of any other racial or ethnic group to go undiagnosed, and even after diagnosis, they are more likely than any other group to go untreated. As a consequence, African Americans are at a higher risk for lost productivity and wages, job absenteeism, and chronic unemployment, which has a negative impact on income and earnings, and ultimately one’s ability to accumulate wealth.

Health and Wealth are Generational

One of the cited reasons in support of targeted affirmative action policies for African Americans, as well as reparations for African American descendants of slaves, has been the understanding that wealth is generational. Due to slavery and its legacy of discrimination and disenfranchisement, African Americans were long denied the ability to acquire and accumulate wealth. To illustrate, in 1963, the median family wealth for African Americans was $0, compared to that of non-Hispanic whites, which was $47,655 (Figure 3). As of 2016, the median family wealth for African Americans was $17,409, compared to that of non-Hispanic whites, which was $171,000 (Figure 3). What Figure 3 demonstrates is that the denial of wealth for African Americans has had a multi-generational impact. As time has passed, African Americans have been able to accumulate some wealth, which can then be passed on to their children and descendants. However, they fall significantly behind that of non-Hispanic whites in the amount of wealth they are able to pass on to the next generation. What is becoming more evident; however, is that just as wealth is transferred to subsequent generations, so too is health.

Health is transmitted across generations through material and psychosocial benefits that correspond with wealth (Figure 4). Financial hardship and economic disadvantage can have adverse epigenetic effects. Epigenetic effects refer to the interaction between genes and the physical or social environment of an individual. In response to extreme situational conditions, any given gene may be expressed or suppressed; and these genes can then be passed down to subsequent generations. Thus, responses to stress, predisposition for illness, and deeply ingrained learned behaviors surrounding health can be transmitted across generations.

To some extent, this phenomenon helps explain why even after controlling for differences in income level, high income earning and low income earning African Americans have comparable rates of obesity and treatment for mental health disorders. The implications of this are consistent with the assertions presented at the beginning of this study—that while the relationship between income and health is more obvious, it is still a complex one, and the connection between wealth and health is inherently nuanced.

High income earning African Americans still face barriers to wealth accumulation, and some of the main reasons given point to the lack of generational wealth and poor financial literacy. Another lesser-understood factor may be the intergenerational transmission of poor health conditions, including a predisposition for illness, a lack of adaptive response to stress, and the lack of learned behaviors that promote optimal health, longevity and wellness. Consequently, if the assumption is that various elements of poor health are transmitted across African American generations, then it helps us better ascertain why higher income earning African Americans still have relatively poor health outcomes, and only marginal wealth accumulation.

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Closing the Wealth Gap

A number of initiatives have been proposed and/or implemented to help narrow the black-white wealth gap. Some of these initiatives include the issuance of baby bonds that correspond with family wealth levels, living wage ordinances, microfinance loans to support economically disadvantaged entrepreneurs and business owners, and matching dollar incentives for individuals who put some or all of their tax refund into a savings account. There are many more plans and programs that have been recommended based upon the assumption that building wealth will translate into a corresponding reduction in other inequities, such as those involving health and education. This study advances a tangential argument that addressing health inequities is essential to narrowing the wealth gap and should be considered in conjunction with any plan that proposes to address economic inequalities.

Increasing Diversity in the Healthcare Workforce

One of the areas where inequities in health and wealth, and even education, can be addressed concomitantly is with regard to increasing the diversity of the healthcare workforce. Traditionally, the lack of diversity in the U.S. healthcare workforce has not been considered an obstacle to positive health outcomes and quality healthcare, but overlooking the diversity of the medical workforce has been a mistake. Studies based upon patient surveys have determined that when patients feel understood by their healthcare practitioner, there is a higher likelihood the patient will trust, and subsequently follow the recommendations of their practitioner, which has been shown to improve the health outcomes of the patient.19

Also, when a patient’s healthcare practitioner demonstrates a familiarity with a patient’s culture,20 that patient is more likely to consider their practitioner relatable and that he/she understands them.21 Cultural competency encourages trust between the patient and the practitioner, and thus, has a positive effect on patient health outcomes.

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When a health practitioner is familiar with a patient’s typical diet, their predisposition for disease based upon their race/ethnicity, their traditions surrounding health and wellness, as well as their cultural beliefs regarding medical treatment and the healthcare system, the practitioner is better prepared to address the individual needs of their patient.

One mechanism for ensuring a culturally competent medical workforce is to recruit a culturally diverse workforce. Currently, however, across every healthcare occupation, African Americans are underrepresented, especially in the professions with a high incidence of direct patient contact. For example, African Americans comprise 13.6 percent of the U.S. working age population, but only 5.3 percent of the healthcare workforce is comprised of African American physicians, while only 3.3 percent are dentists (Figure 3). Similarly, only 5.2 percent of the healthcare workforce is comprised of African American advanced practice registered nurses (APRNs), and only 6.7 percent of paramedics and emergency medical technicians are African American (Figure 3). Furthermore, with the exception of APRNs, the aforementioned health professions (i.e. physician, dentist, EMT), are dominated

![Figure 3. Median Family Wealth for African Americans and Non-Hispanic Whites, 1963-2016](chart.png)

Developing a diverse and culturally responsive medical workforce is a key component in the complex relationship between income, health, and wealth, and improving the outcomes for African Americans across these three factors.

by non-Hispanic white males. Therefore, African Americans and other racial and ethnic minorities are at a disadvantage when it comes to receiving healthcare from culturally representative medical providers best positioned to be aware of and address information, cultural, and behavioral gaps when assessing a patient from an underrepresented background.

Going forward, an important area for research that would help address both health and wealth inequalities simultaneously is to identify mechanisms to increase the diversity of the healthcare workforce. The first step towards increasing diversity in the health profession is to remove existing educational barriers and develop a diverse healthcare education pipeline.

There are currently a number of initiatives working to do this by establishing partnerships between primary schools and health profession schools to build a career pipeline of minorities into the health sector. Some examples include, the Doctors Academies developed between the Fresno Unified School District and the University of California, San Francisco (UCSF)-Fresno Latino Center for Medical Education and Research; the Gateway to Higher Education programs developed between the New York City Department of Education, the City University of New York (CUNY), and the Mount Sinai Medical School;
and the University of Cincinnati Academic Health Center Equity and Inclusion Leadership program.

To achieve cultural competency across the healthcare occupations, the continued training of existing health professionals is undoubtedly important, but so too is drawing upon the demographic diversity of the nation and recruiting a culturally representative healthcare workforce. A profession’s educational pipeline drives the diversity of their workforce; therefore, educational programs at every level (primary, secondary and tertiary) must prepare minorities underrepresented in the healthcare industry for careers in these fields.

Developing a diverse and culturally responsive medical workforce is a key component in the complex relationship between income, health, and wealth, and improving the outcomes for African Americans across these three factors.

Table 3. Percent of Healthcare Workforce by Race, Ethnicity and Gender, 2010-2012

<table>
<thead>
<tr>
<th>Race</th>
<th>Ethnicity</th>
<th>Sex</th>
</tr>
</thead>
<tbody>
<tr>
<td>U.S. Working-Age Population*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>White (Non-Hispanic) (%)</td>
<td>African American (Non-Hispanic) (%)</td>
<td>Hispanic or Latino (%)</td>
</tr>
<tr>
<td>77.6</td>
<td>13.6</td>
<td>6.0</td>
</tr>
<tr>
<td>Advanced Practice Registered Nurses (APRNs)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>89.5</td>
<td>5.2</td>
<td>4.0</td>
</tr>
<tr>
<td>Registered Nurses</td>
<td></td>
<td></td>
</tr>
<tr>
<td>78.6</td>
<td>10.7</td>
<td>8.8</td>
</tr>
<tr>
<td>Licensed Practical/Vocational Nurses</td>
<td></td>
<td></td>
</tr>
<tr>
<td>68.2</td>
<td>25.0</td>
<td>4.1</td>
</tr>
<tr>
<td>Nursing, Psychiatric, and Home Health Aides</td>
<td></td>
<td></td>
</tr>
<tr>
<td>54.0</td>
<td>37.5</td>
<td>5.1</td>
</tr>
<tr>
<td>Dental Assistants</td>
<td></td>
<td></td>
</tr>
<tr>
<td>81.1</td>
<td>8.8</td>
<td>6.9</td>
</tr>
<tr>
<td>Dental Hygienists</td>
<td></td>
<td></td>
</tr>
<tr>
<td>91.6</td>
<td>2.9</td>
<td>3.6</td>
</tr>
<tr>
<td>Dentists</td>
<td></td>
<td></td>
</tr>
<tr>
<td>80.5</td>
<td>3.3</td>
<td>14.5</td>
</tr>
<tr>
<td>Diagnostic-Related Technologists and Technicians</td>
<td></td>
<td></td>
</tr>
<tr>
<td>84.8</td>
<td>8.1</td>
<td>5.0</td>
</tr>
<tr>
<td>Dietitians and Nutritionists</td>
<td></td>
<td></td>
</tr>
<tr>
<td>76.0</td>
<td>15.4</td>
<td>6.6</td>
</tr>
<tr>
<td>Emergency Medical Technicians and Paramedics</td>
<td></td>
<td></td>
</tr>
<tr>
<td>89.3</td>
<td>6.7</td>
<td>1.3</td>
</tr>
<tr>
<td>Medical and Clinical Laboratory Technologists and Technicians</td>
<td></td>
<td></td>
</tr>
<tr>
<td>68.5</td>
<td>14.9</td>
<td>13.3</td>
</tr>
<tr>
<td>Medical Assistants and Other Health Support Occupations</td>
<td></td>
<td></td>
</tr>
<tr>
<td>72.6</td>
<td>18.4</td>
<td>5.3</td>
</tr>
<tr>
<td>Pharmacists</td>
<td></td>
<td></td>
</tr>
<tr>
<td>73.7</td>
<td>5.9</td>
<td>18.0</td>
</tr>
<tr>
<td>Physicians</td>
<td></td>
<td></td>
</tr>
<tr>
<td>72.2</td>
<td>5.3</td>
<td>20.0</td>
</tr>
</tbody>
</table>

* U.S. working-age population is defined as the population 16 years of age or older from the American Community Survey (ACS) Public Use Microdata Sample, 2010-2012.
Conclusion

This study highlights the relationship between income and health and works to further elucidate the linkages between health and wealth. There is a clear connection between income and health outcomes. Individuals and families with greater disposable income are able to purchase nutrient dense food, despite the higher costs of nutritious foods. They are also able to afford to reside in neighborhoods that promote healthier lives and overall wellbeing, which are often characterized as food oases.

The relationship between health and wealth is often obscured by the intervening influence of income; and while income does play a role, overall wealth accumulation is distinct. Wealth accumulation contributes to intergenerational financial and economic security, and children born into economically secure households have greater educational and social opportunities that correspond with positive health outcomes. Furthermore, just as there is the intergenerational transmission of wealth, we are now recognizing that health can also be transmitted across generations. Early childhood exposure to poor health conditions tends to affect an individual across their lifespan and is negatively associated with wealth accumulation. In addition, socioeconomic disadvantage may produce adverse epigenetic effects, which are then passed down to each successive generation. Thus, while future generations may experience economic mobility, they are still at risk for poor health given the influence of epigenetic factors. This dynamic may help explain why high income earning African Americans still suffer from certain chronic health conditions, and face challenges with respect to accumulating wealth. Consequently, the findings of this study indicate that more research is needed to help parse out the intricacies of the connection between black health and wealth.

Future research is also necessary in order to identify the most optimal strategies to increase the diversity of the healthcare workforce and educational pipeline in order to develop a highly professionalized, culturally representative and competent medical workforce. A key component to addressing African American health disparities while simultaneously promoting African American economic advancement begins with establishing a diverse healthcare workforce.
Appendix

Appendix A. Obesity Rates Among African American Adults by Percent of Poverty Level, 2014

<table>
<thead>
<tr>
<th>Poverty Level</th>
<th>African American</th>
</tr>
</thead>
<tbody>
<tr>
<td>Below 130%</td>
<td>46.6%</td>
</tr>
<tr>
<td>130% - 350%</td>
<td>48.8%</td>
</tr>
<tr>
<td>350% or more</td>
<td>49.3%</td>
</tr>
</tbody>
</table>


Appendix B. Cancer Rates Among African American Adults by Percent of Poverty Level, 2014

<table>
<thead>
<tr>
<th>Poverty Level</th>
<th>African American</th>
</tr>
</thead>
<tbody>
<tr>
<td>Below 100%</td>
<td>3.8%</td>
</tr>
<tr>
<td>100% - less than 199%</td>
<td>5.0%</td>
</tr>
<tr>
<td>200% - 399%</td>
<td>5.2%</td>
</tr>
<tr>
<td>400% or more</td>
<td>3.8%</td>
</tr>
</tbody>
</table>

### Appendix C. Heart Disease Among African American Adults by Percent of Poverty Level, 2014

<table>
<thead>
<tr>
<th>Poverty Level</th>
<th>African American</th>
</tr>
</thead>
<tbody>
<tr>
<td>Below 100%</td>
<td>13.2%</td>
</tr>
<tr>
<td>100% - less than 199%</td>
<td>11.2%</td>
</tr>
<tr>
<td>200% - 399%</td>
<td>9.7%</td>
</tr>
<tr>
<td>400% or more</td>
<td>7.0%</td>
</tr>
</tbody>
</table>
