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**Racially Disparate Effects of
Raising the Retirement Age**

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Racial disparities in health and longevity are growing, while average life expectancy, at birth and at age 65, is increasing. Racial differences in illness and incidence of injuries in old age are also growing. Black seniors die sooner and are sick for a longer period of time than white seniors. This means that any policy to cut Social Security benefits by raising the normal retirement age — the age at which covered workers can collect their full Social Security benefits — will have a disparate and negative impact on Blacks. Blacks will have fewer years of retirement before the end of their lives.

Advocates for raising the retirement age to 70 and beyond argue that since the “average” American is living longer, lifetime benefits are actually increasing. On that view, raising the retirement age only brings lifetime benefits back to their intended level.ⁱ This study examines the size and growth of racial gaps in mortality and morbidity, and shows that while some groups have experienced lifetime benefit increases, others have not.

Racial Differences in Mortality and Longevity

Racial gaps in education level, income, and behaviors (like smoking) explain some of the persistent racial gap in life expectancy. However, a large portion of the life span gap between Blacks and Whites remains even after taking into account differences in socioeconomic status and deaths attributable to smoking.

Life expectancy at birth for black men increased from 59.1 years in 1950 to 71.8 years in 2010, while life expectancy at birth for the average white male increased from 66.5 years to 76.5 years. Life expectancy at birth increased 12.7 years for black men and only 10 years for white men, although black men still lag behind their white counterparts in total life expectancy.

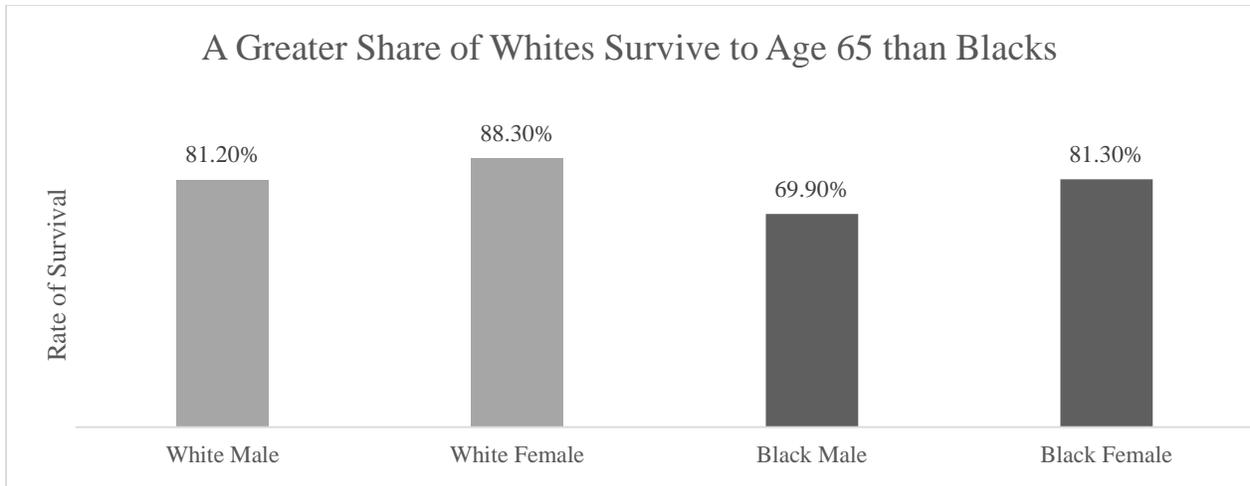
Racial disparities in life expectancy at birth follow a similar pattern among women. The life expectancy for black women at birth increased from 62.9 years in 1950 to 78.0 years in 2010, while life expectancy at birth for the average white female increased from 72.2 years to 81.3 years. Life expectancy at birth increased 15.1 years for black women, and only 9.1 years for white women. The large gains in longevity for Blacks reflect a reduction in the historically high mortality rates of black youth, rather than an improvement in the health status of older black men and women.ⁱⁱ

All Racial and Sex Groups Have Improved Life Expectancy at Birth Since 1950

Life Expectancy at Birth	White Male	Black Male	White Female	Black Female
1950	66.5	59.1	72.2	62.9
2010	76.5	71.8	81.3	78.0

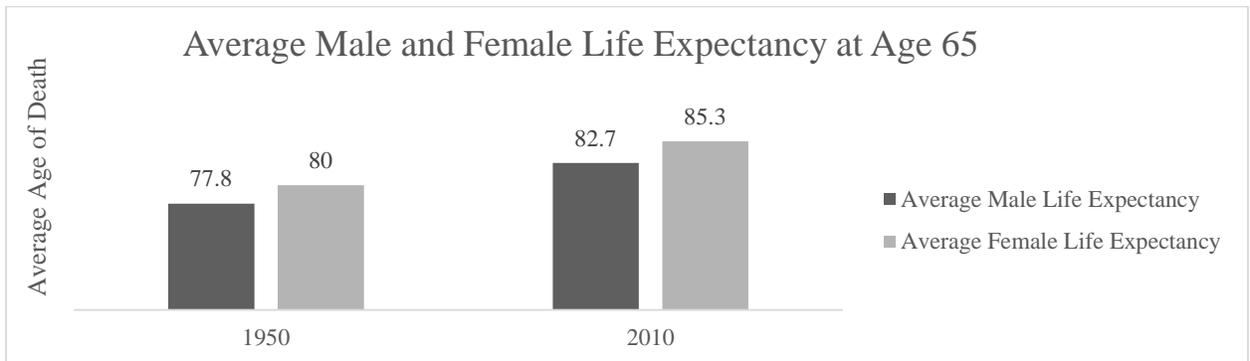
Source: National Center for Health Statistics. 2014. Health, United States, 2013: With Special Feature on Prescription Drugs. Table 18. Life Expectancy at Birth, Age 65, and at Age 75, by Race, Sex, and Hispanic Origin: United States, Selected Years 1900-2010. Hyattsville, MD.

White Americans are more likely than their black counterparts to survive until age 65. 81.2 percent of white men and 88.3 percent of white women born in 1946 survived to age 65, while only 69.9 percent of black men and 81.3 percent of black women survived.



Source: CDC/NCHS, National Vital Statistics System. Table B. Number of survivors out of 100,000 born alive, by age, sex, race, and Hispanic origin: United States, 2009

Americans who survive to age 65 also have improved life expectancies thereafter. In 1950, the average male could expect to live 12.8 more years after age 65, for a life expectancy of 77.8 years. By 2010 the average male could expect to live an additional 17.7 years after turning 65, a gain of 4.9 years. Older women gained 5.3 years. Women aged 65 in 1950 could expect to live 15 years. By 2010 they could expect to live 20.3 years. Average life expectancy for women who survived to age 65 was 80 years in 1950, and 85.3 years in 2010.

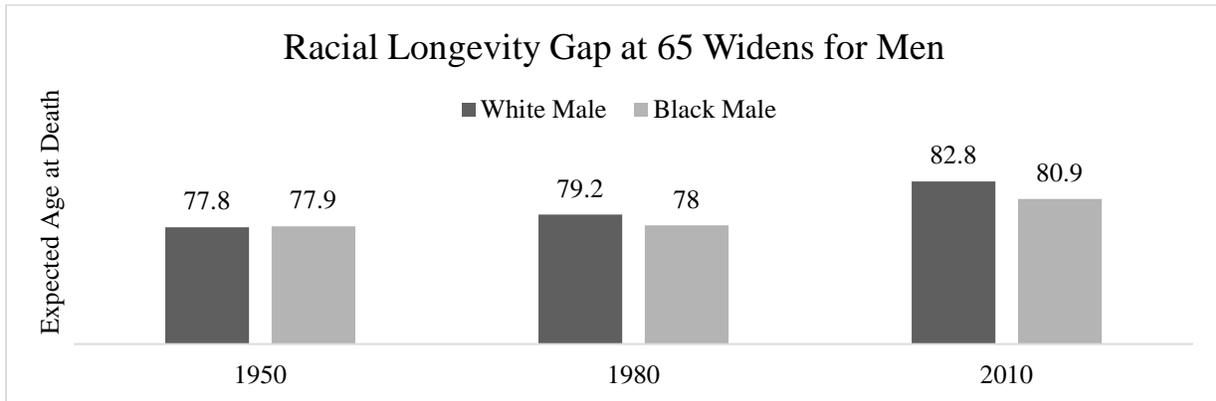


Source: National Center for Health Statistics. 2014. Health, United States, 2013: With Special Feature on Prescription Drugs. Table 18. Life Expectancy at Birth, Age 65, and at Age 75, by Race, Sex, and Hispanic Origin: United States, Selected Years 1900-2010. Hyattsville, MD.

Average statistics can hide differences between races. In 1950, black and white men had the same life expectancy at age 65: white men could expect to live 12.8 more years and black men 12.9 more years. In 1980, there was a gap of 1.2 years, with white men living 14.2 years compared to black men's 13 years, or about 8 percent longer. By 2010, the gap had grown to 17.8 years of life expectancy for white men and 15.9 years for black men, a gap of 12 percent.

Longevity gains were unequally distributed in the second half of the 20th century. White men captured the lion's share of the gains, whereas 60 years ago, older black men had a slight

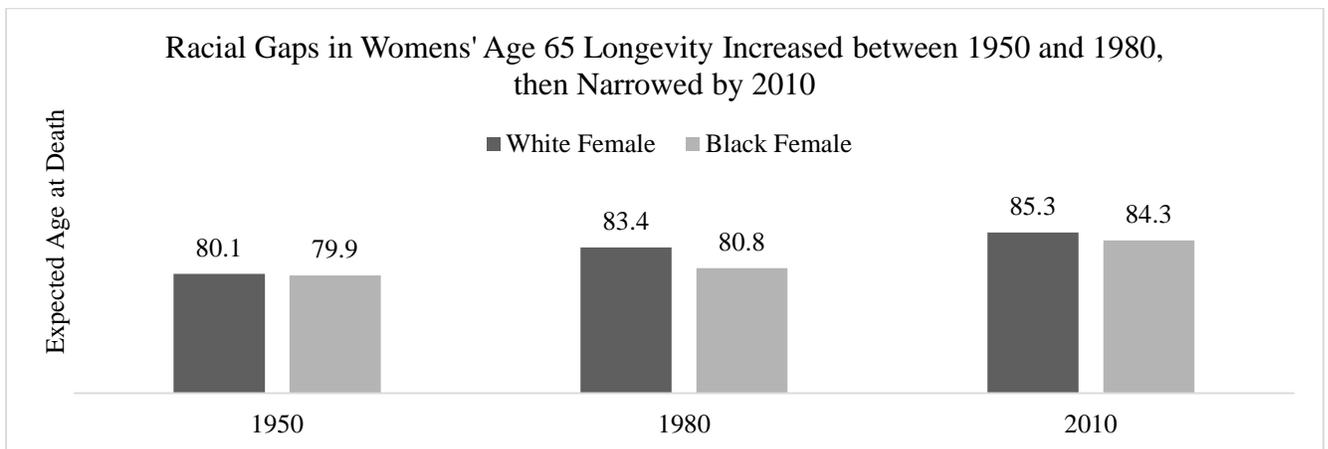
advantage in life span relative to white menⁱⁱⁱ. Given long-standing racial inequality in American life, it is surprising there once was no disparity in life span at older ages.



Source: National Center for Health Statistics. 2014. Health, United States, 2013: With Special Feature on Prescription Drugs. Table 18. Life Expectancy at Birth, Age 65, and at Age 75, by Race, Sex, and Hispanic Origin: United States, Selected Years 1900-2010. Hyattsville, MD.

For women, the racial life expectancy gap at age 65 rises sharply from 1950 to 1980 and then drops nearly as sharply between 1980 and 2010. In 1950, white women could expect to live 15.1 years after turning 65, while black women could expect to live 14.9 additional years. By 1980, white women lived 2.6 years longer than black women, 18.4 years compared to 16.8 years. By 2010, the gap closed considerably. On average, the life span for older white women was only one year longer than that for black women: 20.3 years compared to 19.3 years. In 1950, white women lived just 1 percent longer than black women, by 1980 16 percent longer, and by 2010 just 5 percent longer.

While women still experience a racial longevity gap, it is smaller than it is for men and seems to be decreasing. The narrowing of the life expectancy gap between black and white women between 1980 and 2010 is a promising trend and warrants further research. Results could potentially reverse the growth of the gap between black and white men. That said, the data presented here confirms there are significant differences in mortality and longevity between older Blacks and Whites of both sexes in the U.S.



Source: National Center for Health Statistics. 2014. Health, United States, 2013: With Special Feature on Prescription Drugs. Table 18. Life Expectancy at Birth, Age 65, and at Age 75, by Race, Sex, and Hispanic Origin: United States, Selected Years 1900-2010. Hyattsville, MD.

Review of Literature on Mortality and Longevity Racial Gaps

Epidemiologists and economists have done considerable work on the racial life span gap. Many find that race is an independent factor explaining life span. We review the studies below.

Using the Health and Retirement Study and pension records from the Union Army, Sloan et al (2010) conclude there has been little change throughout the 20th century in the racial life expectancy gap at birth. At birth, life spans for Whites were 18 percent longer than Blacks in the early 1900s and 17 percent longer at the end of the 20th century. This is true when controlling for Blacks' average lower educational attainment, higher rates of unemployment, lower marriage rates, and lower incomes. Sloan et al suggests racial discrimination, manifested as continuing differences in access to health care, as a cause of the longevity gap.

Economist Michael Geruso's (2012) decomposition model parses out how much of the longevity gap between black and white Americans is explained by socioeconomic status. The method is similar to that used by Blinder and Oaxaca (1973), which makes it possible to determine the statistical effect of "Blackness" on socioeconomic variables (income, education, etc.). They find lower incomes are the most important reason why Blacks die sooner, explaining 52 percent of the gap among men and 59 percent among women. An additional 48 percent for men and 41 percent for women are thus unrelated to income level. Up to 24 percent of the overall life expectancy gap between black and white Americans can be explained by race alone.

The disparities in life expectancy at birth between the highest educated Whites and lowest educated Blacks are stark, according to Olshansky et al (2012). From 1990 to 2008, the highest educated white men lived 14.2 years longer than the lowest educated black men, and the highest educated white women lived 10.3 years longer than the lowest educated black women. Gains in longevity were concentrated among the most highly educated. Only Hispanic women, some of the longest lived members of the population, did not live longer with education beyond high school. The differences in life expectancy between the most and least educated white men and women in 2008 were 12.9 and 10.4 years, respectively; between the most and least educated black men and women, the differences were 9.7 and 6.5 years, respectively.

Kreiger et al (2012) argue against the assumption that increasing racial and socioeconomic inequality in US mortality is inevitable due to the disparities in smoking rates and the development of expensive healthcare procedures. If the increasing gaps in mortality rates among Blacks and Whites and rich and poor come down to behavioral choices and access to exceedingly expensive healthcare, then it makes more sense to focus on the absolute decreases in mortality rates experienced across all groups. Kreiger et al consider deaths unrelated to smoking and preventable by 1960s standards of medical care. They find that between 1960 and 2000, Blacks were consistently more subject to causes of death that were unrelated to smoking and that were preventable using older, cheaper, 1960s standards of medical care. This means

that disparities in smoking rates and the development of expensive healthcare procedures are not the cause of increasing racial gaps in mortality.

Sociologists Robert Hummer and Juanita Chinn (2011) also identified independent racial differences in life spans between black and whites at age 65 using the National Health Interview Survey 1997-2006. They find a 14 percent higher mortality risk for older black women compared to white women, and a 22 percent higher mortality risk for older black men compared to older white men. This means that, spread out over their remaining years of life, older black men and women have a 22 percent and 14 percent higher risk of dying than their white counterparts. The gap in mortality is much larger when controlling for age and sex differences, with Blacks experiencing a 36 percent higher adult mortality risk than Whites overall.

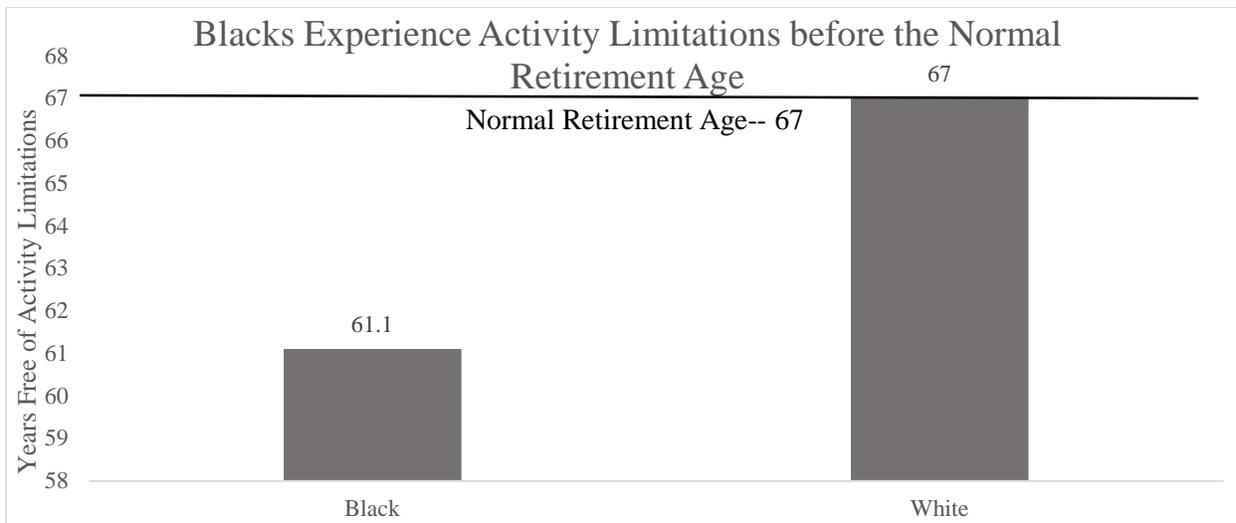
This review of the recent literature across a number of different studies and spanning multiple academic disciplines make clear that racial disparities in longevity and mortality are persistent in the United States.

Racial Differences in Morbidity

The 2013 CDC Health Disparities and Inequalities Report concludes that racial gaps in morbidity—the onset of disease and health-related physical impairment—are significant and growing in the U.S.

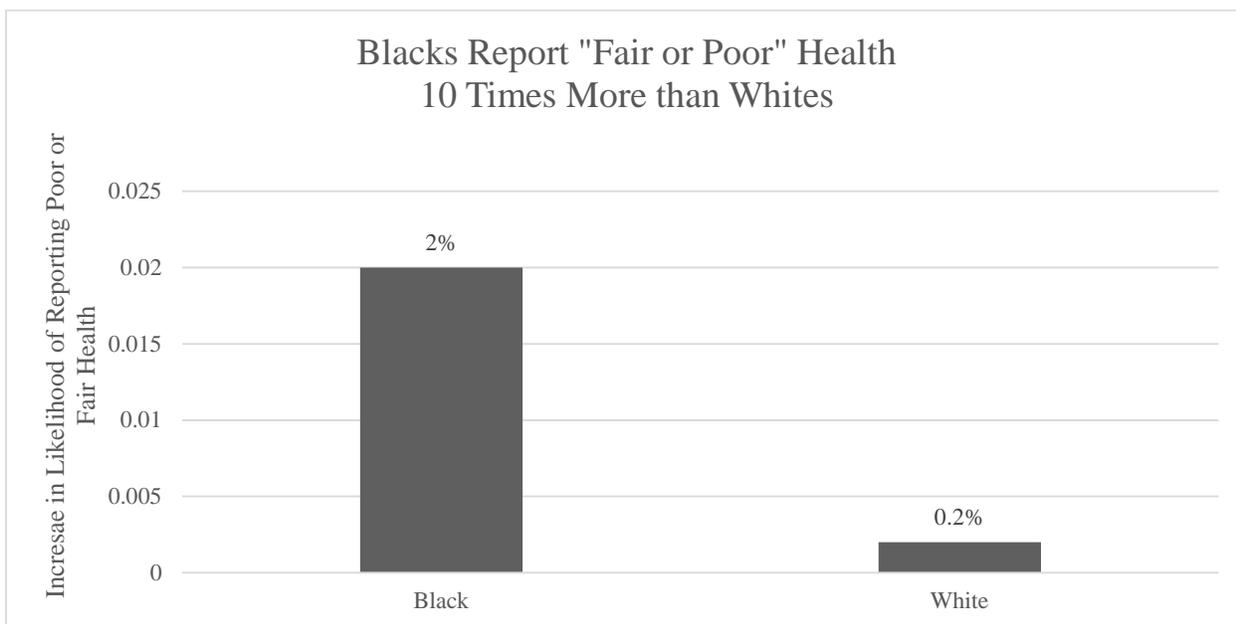
Activity limitations, a standard measure of morbidity, are limits on a person's ability to perform the activities normally expected of someone their age. These activities include bathing/showering, using the telephone, attending work or school, and more. Under the current normal retirement age standard, neither Whites nor Blacks are able to spend any of their retirement years free from activity limitations caused by chronic conditions.

Blacks face activity limitations well before the age of 67—the age at which those born in 1960 or later will be able to claim their normal Social Security benefits. In addition to having shorter lives on average, Blacks can expect to spend 5.9 years at the end of their working careers with some form of activity limitation. The average black American can expect to live only 61.1 years free of activity limitations, while the average white American can expect 67 years in their lifetime— just meeting the current normal retirement age. Black Americans therefore spend more years than their white counterparts sick or otherwise infirm.



Source: Centers for Disease Control and Prevention. Molla, Michael T. *Expected Years of Life Free of Chronic Condition-Induced Activity Limitations — United States, 1999–2008*. MMWR 2013; 62 (Suppl 3): 87- 92.

Self-reported health status is another standard measure of morbidity. In the Behavioral Risk Factor Surveillance, a telephone survey, health can be reported as either excellent, very good, good, fair, or poor. The percentage of Whites who rated their health as either fair or poor increased from 13.1 percent to 13.3 percent between 2006 and 2010, a statistically insignificant change of 0.2 percent. The percentage of Blacks who rated their health as either poor or fair increased by 2 percent, from 21.3 percent to 23.3 percent. Blacks' self-reported health declined at 10 times the rate of Whites' over this period.



Source: Centers for Disease Control and Prevention. Zack, Matthew M. *Health-Related Quality of Life—United States, 2006 and 2010*. MMWR 2013;62(Suppl 3): 105-111

Review of Literature on Morbidity and Quality of Life Racial Gaps

Significant differences in quality-adjusted years of life expectancy exist among black and white Americans (Crimmins and Beltran-Sanchez 2010). Quality-adjusted years of life expectancy is an index that combines life expectancy measures from the CDC with a survey that classifies self-reported health status across five dimensions (mobility, self-care, daily activities, pain, and anxiety/depression). Blacks suffering from both diabetes and visual impairment live 3.5 fewer quality-adjusted life years than similarly afflicted white counterparts. Blacks with neither diabetes nor visual impairment lived 3.4 fewer quality-adjusted years than their counterparts, while white survey respondents had relatively better health in all categories.

Brown and Hargrove (2013) use a multidimensional approach to find significant disparities between Whites and minority groups in factors that predict health, specifically in the incidence of functional limitations. Since women of color are significantly poorer and have other social and economic disadvantages, being a woman and non-white significantly worsens morbidity.

Differences in older workers' physical capabilities should be accounted for in the retirement age debate. There are significant differences in lung functioning, grip strength, and gait speed among older Americans due to differences in socioeconomic status, race, and ethnicity, according to Haas, Krueger, and Rohlfen (2012). Their measure of socioeconomic status is years of schooling, income level, and occupational status. These differences are partially mediated when adjusting for childhood and current adult health. However, Blacks remained worse off on all health measures even after adjusting for factors predicting health at older ages.

The extent to which socioeconomic status and health are linked is known as the socioeconomic status "gradient" in health. Socioeconomic status predicts most aspects of health within the white population better than other racial groups, according to a survey conducted by Crimmins, Hayward, and Seeman (2004). Black and Hispanic health outcomes are less correlated with socioeconomic status. For all racial groups, there are stronger links between socioeconomic status and morbidity than between socioeconomic status and mortality, meaning that socioeconomic status is a better predictor of whether a person will become disabled than of when they will die.

Differences in morbidity have direct implications for the debate on raising the retirement age. If average life expectancy statistics are going to be used to support policy changes affecting disparate groups, then differences in morbidity and quality of life between those groups need to be used to contextualize those statistics.

Policy Recommendations

Retirement—the period at the end of one's life free from the toil of work—has become an essential part of the American social contract. Raising the eligibility age to receive Social Security benefits would diminish this period for all Americans. This study shows cutting benefits for workers collecting Social Security at earlier ages would disproportionately reduce retirement years for black Americans. The persistent racial gaps in life expectancy at age 65 invalidate using the "average" American life span to justify cutting benefits. The burden of cuts would disproportionately fall on black Americans.

Legislators considering changes to retirement policy should first address the racial gaps in longevity, mortality, and morbidity. While these disparate health outcomes stem from more than income alone, the research presented here suggests that efforts to close income gaps between elderly Blacks and Whites is a step in the right direction. Guaranteed Retirement Accounts (GRAs)—a tier of assets added to Social Security funded by workers, employers, and rearranged retirement subsidies—would work in this capacity by giving all workers a claim on adequate income in retirement, regardless of race. SCEPA proposes GRAs to ensure all Americans have a choice to retire or work after age 65.

Legislators are also encouraged to explore alternative measures to address the long-term fundability of Social Security, including raising the cap on SSA taxable earnings from its current level of \$118,500.

Addressing the implications of America's shifting age demographics should be a primary concern of both present and future-minded policy. However, we must take care that our fear of impending crises does not cause us to neglect the social contract that America has fought to establish with its citizens: that all Americans, regardless of race, will have the choice to retire with health and dignity after a lifetime spent at work.

Appendix

This paper focuses on gaps between Blacks and Whites. Below is a review of the literature on Hispanic mortality and morbidity and on gaps in mortality and morbidity between lower and higher income people.

Hispanic American Mortality and Morbidity

Policy analysis of racial disparities in the U.S. is often centered on differences between black and white Americans. However, the Black/White dichotomy is more suited to studying American demographics in the 20th century. In the 21st century, it limits analysis of other important racial groups in the United States.

In this brief, we aim to establish how improvements in health and overall longevity have been distributed differently across racial groups since 1950. Unfortunately, reliable and comparable data on the Hispanic American population is not available prior to 1980. The lack of significant longevity data for the Hispanic American population reaching back to 1950 limited this analysis to black and white Americans.

We recognize the importance of studying how the Hispanic American population's health outcomes differ from those of black or white Americans. The recent literature on Hispanic longevity and morbidity reveals a complex picture of Hispanic health outcomes in the U.S., one that is inadequately described by a simple observation of the "Hispanic paradox" in mortality. Low socioeconomic status (a combined measure of income, education, and occupation) translates into lower longevity, or shorter life spans, for most groups in the U.S.^{iv} However, Hispanic-Americans have proven to be an exception to this rule. In what is known as the Hispanic health paradox,^v Hispanic-Americans live longer lives than Whites, despite lower socioeconomic status.^{vi}

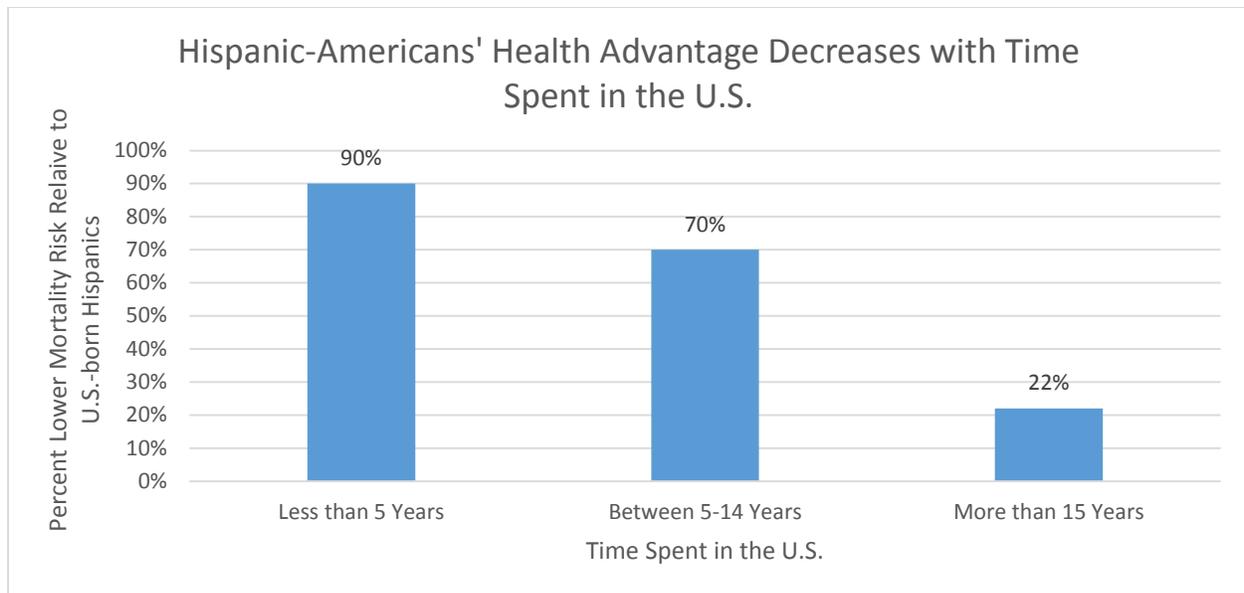
Hispanics do indeed live longer than others with similar low socioeconomic status, according to Ruiz, Steffen, and Smith's (2013) meta-analysis of 58 independent studies from January 1990 to July 2010. The Hispanic population has a 17.5 percent lower risk of mortality, averaged over the life course, compared to non-Hispanic Blacks and Whites. This difference in mortality risk between Hispanics and non-Hispanic Blacks and Whites increases with age, meaning as people age, older Hispanics live increasingly longer than older Blacks and Whites.

The Hispanic paradox in mortality does not extend to disability and morbidity, and it does not uniformly affect the entire Hispanic population. Cantu et al (2013) find significant differences in levels of chronic morbidity among foreign and U.S.-born Hispanics similar to those between white and black non-Hispanic Americans. When comparing people who never smoked, it becomes clear that U.S.-born Hispanics have health outcomes reflecting their minority status; at age 50 they have fewer years left before the onset of health problems and fewer years left to live.

Hayward et al (2014) use data from both the National Health Interview Survey and the Health and Retirement Study to provide support for the idea that the paradox is limited to mortality. The additional 3.2 years of expected life attributed to foreign-born Hispanic men compared to non-Hispanic white Americans are hampered by disability. This corroborates Brown and Hargrove's (2013) research on the morbidity of black and Hispanic women, which suggests that women of color are consistently the most disabled members of the American population. Even where mortality rates converge (as they do between U.S.-born Hispanic American men and non-Hispanic white American men) there are differences in health-related quality of life. On average, white men live 2.3 more years than Hispanic men without disability before they die.

The health advantage experienced by Hispanic-Americans as a group breaks down when they are disaggregated according to time spent in the U.S. Foreign-born Hispanics have lower mortality than their U.S.-born counterparts. A 2014 study by Riosmena et al establishes a clear link between duration of stay in the U.S. and Hispanic mortality. Immigrants with 15 years or more in the country had a 38% higher chance of dying between 1998 and 2004 than immigrants with less than five years in the country, and a 13% higher chance than those who had spent between five and 14 years in the country. U.S.-born Hispanics had a 37% higher chance of dying between the period of the study than immigrants who had spent 15 years or more in the U.S.

When U.S.-born Hispanics are used as the reference group, the gradient in health becomes more distinct. Immigrants with less than five years in the country were 90% less likely to die between 1998 and 2004 than U.S.-born Hispanics. Immigrants who had spent between five and 14 years in the country were 70% less likely to die, while those who had spent more than 15 years were only 22% less likely to die.



Source: Author's calculations using mortality risk data gathered by Riosmena et al (2014). Mortality risk normalized to U.S.-born Hispanic risk relative to immigrants with 15+ years spent in U.S.

This suggests that time spent in the U.S is significant in determining life chances and health status for Hispanics. The health advantage ascribed to Hispanics as a group reflects the relative health of foreign-born Hispanics and has limited applicability to those born in the U.S. As successive generations of Hispanic-Americans are born in the U.S., this health advantage will likely disappear.

Abraido-Lanza, Chao, and Florez (2005) explain the source of the Hispanic paradox using an “acculturation” hypothesis (though with mixed results). Acculturation is the process by which new entrants to a culture begin to take on the traits and behaviors of the dominant group. In this context, it refers to Hispanics adopting more American health behaviors over time and through generations of living in the US. Acculturation was found to have both negative and positive effects on health behaviors, with higher acculturation associated with higher alcohol intake, levels of smoking, and body mass index, but also more exercise. Mortality risk for the Hispanic population is concentrated among U.S.-born Hispanics and those who have spent considerable time in the US.

In a follow-up paper, Abraido-Lanza, Armbrister, Florez, and Aguirre (2006) further discuss the complexities of using acculturation to explain the Hispanic health paradox, and note the danger in assuming a direct relationship between adopting U.S. “culture” and deteriorating health outcomes. Acculturation hypotheses are employed with reference to some idea of “mainstream” U.S. culture, which tends to translate into middle class white American cultural norms. This becomes a problem if Hispanic Americans do not always use white American culture as a reference point. For example, black American cultural norms may be more relevant in many cases. The concept of “culture” itself is complex, and difficult to make clear and distinct. An ill-defined culture variable could cause researchers to put too much focus on individual behaviors, to the exclusion of important structural sources of poor health outcomes.

Riosmena, Everett, Rogers, Dennis (2014) take issue with the overuse of negative acculturation as the source of the Hispanic health paradox. They look to cumulative disadvantage as a complementary method of understanding the deteriorating health outcomes of U.S.-born Hispanics and Hispanic immigrants who have spent considerable time in the U.S. Cumulative disadvantage refers to the compound effects of socioeconomic disadvantage and discrimination throughout life, and implies the importance of structural rather than behavioral sources for explaining negative health outcomes.

Additionally, Riosmena et al find that certain acquired skills or traits actually protect Hispanics in the U.S. from a diminished life span. These “protective effects” include speaking English, which increases survival for Hispanics of both sexes, and citizenship, which is shown to do the same for immigrant women. This effect did not decrease when controlling for common behavioral aspects of acculturation, including BMI, smoking, and alcohol consumption. Their findings support the existence of the health paradox, with mortality risk increasing with time spent in the U.S. This suggests that acculturation may not be as important of a factor as is commonly assumed, and should encourage researchers to investigate structural causes of deteriorating health outcomes.

Forward-looking retirement policy must anticipate Hispanic-Americans’ decreasing longevity relative to Blacks and Whites as successive generations are born in the U.S. Specifically, policymakers should reconsider proposals to raise the retirement age, which rely on the assumption that longevity will increase for all Americans. In fact, all Americans will not experience the same increases in life span or improvements in health and cannot be assumed to be able to work longer. Rather, raising the retirement age would disproportionately affect low socioeconomic status groups, like Hispanic-Americans, in the long-run.

Role of Class in Determining Mortality and Longevity

Class, as defined by socioeconomic status and education level, is responsible for a major portion of the health differences between elders of different groups. As such, it must be addressed in any assessment of policy changes in which mortality and morbidity differences play a role, as in proposals to raise the retirement age. The concentration of life expectancy gains in the top half of the income distribution mimics the concentration of life expectancy in the white population relative to the black population.

The share of improvements in mortality are shifting towards the top half of the average earnings distribution, according to Waldron’s (2007) study of male workers born in 1912 and 1941 and covered by Social Security. While men born in 1912 at the top half of the earnings distribution who survived to age 60 could expect to live 1.2 years longer than those in the bottom half, those born in 1941 who survived to age 60 could expect to live 5.8 years longer than those at the bottom half.

Bosworth and Burke (2014) find that the different rates of mortality between different socioeconomic groups works to shift the distribution of lifetime retirement benefits more heavily towards those at the higher end of the earnings distribution, despite Social Security’s progressive design. Men in the top 10 percent of the earnings distribution gained 5.7 benefit

years between the 1920 and 1940 birth cohorts; by contrast, men in the bottom 10 percent only gained 1.6 benefit years. Women’s life expectancy is growing at a slower rate than men’s. Given that women live longer, total changes in the distribution of benefits are relatively small.

The gap in benefit years and life expectancy between the top and bottom 10 percent of earners is significant among both men and women in Bosworth and Burke’s study. Men in the bottom 10 percent of earnings can expect to live 24.2 more years after age 55 and receive 18 years of benefits, while men in the top 10 percent of earnings can expect to live 34.3 years after age 55 and receive 25 years of benefits. Women in the bottom 10 percent of earnings can expect to live 28.9 years after age 55 and receive 22.3 years of benefits, while women in the top 10 percent of earnings can expect to live 34.3 years after age 55 and receive 26.8 years of benefits. Significantly, men and women at the top of the earnings distribution have the same age-55 life expectancy. This suggests that the traditional gap in life expectancy between men and women has an income component that becomes insignificant for the highest earners. The gendered differences in health at different income levels provide an area for further research.

Life expectancy gains have disproportionately gone to those at the top of the earnings distribution. As such, policies justified by increases in average life expectancy will favor those with higher socioeconomic status at the relative expense of those with lower socioeconomic status. Thus, consideration of proposals to raise the retirement age must consider the role of class in determining access to retirement benefits.

Below is a tabular summary of the major studies on race and class gaps in health and life span.

Surveys of Racial and Class-based Mortality and Morbidity Disparities

Source	Analyzing what population...	Varying...	What are the effects on...?	Disparity	Conclusion
Geruso (2012)	Non-institutionalized U.S. men and women in 1983	Earnings, Race	Life Expectancy	Lower incomes explain 52% of the gap in life expectancy between black and white men, 59% of the gap between black and white women. Up to 24% of the gap in life expectancy can be explained by race alone.	Low earnings and non-whiteness reduce life expectancy

Olshansky et al (2012)	Men and women between 1990 and 2008	Education, Race	Life Expectancy	Life expectancy gap in between most and least educated: white (most) and black (least) men, 14.2 years; white (most) and black (least) women, 10.3 years; white men, 12.9 years; white women, 10.4 years; black men, 9.7 years; black women, 6.5 years	Low education and non-whiteness reduce life expectancy. Low education reduces life expectancy more so for Whites than for Blacks.
Sloan et al (2010)	Civil War Veterans from 1900 to 1914; Men from 1992 to 2006	Race	Life Expectancy	White men lived 18% longer than black men in the early 1900s, 17% longer at the end of the 20th century	Racial gaps in life expectancy at birth have persisted throughout the 20th century
Waldron (2007)	Male 1912 and 1941 birth cohorts	Earnings	Mortality	In 1912, men at the top half of the earnings distribution lived 1.2 years longer than those at the bottom half; in 1941, 5.8 years longer	Gap in life expectancy between bottom and top half of earners is growing.
Kreiger et al (2012)	Men and women between 1960 and 2000	Earnings, Race	Mortality	Mortality unrelated to smoking: 9.2% for the white population, 19.5% for populations of color. Mortality preventable by 1960s medical care: 7.1% for the white population, 34.5% for populations of color.	Being poor and non-white increases mortality unrelated to smoking and preventable by 1960s standards of medical care.
Montez et al (2011)	Men and women ages 45 to 84 between 1986 and 2006	Education, Gender, Age, Race	Mortality	For black and white men, mortality risk decreased overall, though it decreased faster with education. Black and white women's mortality decreased for those with college degrees, and increased for those	High education decreases mortality risk, low education increases mortality risk for women.

				without high school diplomas.	
Hummer and Chinn (2011)	Men and women aged 25+ between 1997 and 2006	Race	Mortality	Black men have a 22% higher mortality risk than white men; black women have a 14% higher mortality risk than white women	Non-whiteness increases mortality risk for both men and women.
Bosworth and Burke (2014)	Male and female 1920 and 1940 birth cohorts	Earnings	Mortality, Life Expectancy	Men in the bottom 10% of earnings can expect to live 24.2 more years after age 55, and to receive 18 years of benefits. Men in the top 10% of earnings can expect to live 34.3 years after age 55, and to receive 25 years of benefits. Women in the bottom 10% of earnings can expect to live 28.9 years after age 55, and to receive 22.3 years of benefits. Women in the top 10% of earnings can expect to live 34.3 years after age 55, and to receive 26.8 years of benefits.	Poverty reduces the number of expected years of Social Security benefits received relative to affluence.
Brown and Hargrove (2013)	Men and women ages 51-61 between 1994 and 2010	Earnings, Gender, Race	Morbidity	Controlling for socioeconomic status completely mediates levels of functional limitations among black and Mexican American men relative to white men. It reduces limitations among	Differences in morbidity among men are due to differences in socioeconomic status. For women, differences in morbidity remain that can be attributed to gender.

				white, black, and Mexican American women by 20%, 30%, and 52% respectively.	
Haas, Krueger, Rohlfen (2012)	Men and women ages 51-81, between 2004 and 2008	Education, Earnings, Occupational Status Race	Morbidity	Blacks remained worse off in lung functioning, grip strength, and gait speed, even after adjusting for factors that normally predict health in old age	Blacks fare worse in morbidity than whites, with some of the disparity attributable to disadvantages in early life and adulthood.
McCollister et al (2012)	Men and women between 2000 and 2003	Race	Morbidity	Blacks with diabetes and visual impairment live 3.5 fewer quality-adjusted life years than Whites with diabetes and visual impairment. Blacks with neither impairment live 3.4 fewer years than Whites with neither impairment.	Blacks, both with and without disease, live fewer years of quality life than Whites.

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ⁱ In 2013, the Chief Operating Officers of the largest American corporations called on Congress to raise the Medicare and full Social Security eligibility age to 70. Republican House leader John Boehner and top economists, including University of Pennsylvania Olivia Mitchell, want to raise the retirement age to age 70. Mitchell said, "As Americans live longer and fewer young workers are around to tax so the government can pay retiree benefits, the system is becoming increasingly unaffordable." <http://www.marketwatch.com/story/fix-social-security-by-hiking-retirement-age-2010-07-02>

ⁱⁱ See Chay and Greenstone (2000) for evidence on the convergence of black and white infant mortality

ⁱⁱⁱ Elo and Preston (1994) posit that this may be partially due to census reporting error. They note serious difficulties in estimating African-American mortality levels and discrepancies between census records and death certificates for the period 1930-1990 that are consistent with both under-registration of deaths and greater age overstatement in censuses.

^{iv} Adler, N. E., and K. Newman. (2002)

^v Markiedes, Kyriakos S., and J. Coreil. (1986)

^{vi} U.S. Census Bureau, Survey of Income and Program Participation, 2008 Panel, Wave 13