

HIGH AND RISING MORTALITY RATES AMONG WORKING-AGE ADULTS

Statement of

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and

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Good morning, Chairman Sanders, Ranking Member Collins, and members of the Subcommittee. Thank you for the opportunity to testify today. My name is Kathleen Mullan Harris. I am the James E. Haar distinguished professor of sociology, adjunct professor of public policy, and faculty fellow at the Carolina Population Center at the University of North Carolina at Chapel Hill. I am speaking to you today in my capacity as chair of the Committee on Rising Midlife Mortality Rates and Socioeconomic Disparities of the National Academies of Sciences, Engineering, and Medicine (National Academies). The National Academy of Sciences was chartered by Congress in 1863 to advise the government on matters of science and technology and later expanded to include the National Academies of Engineering and Medicine. The National Academies do not advocate for a specific policy positions. Rather, they enlist the best available expertise across disciplines to examine the evidence, reach consensus, and identify a path forward. This study was sponsored by the National Institute on Aging and the Robert Wood Johnson Foundation.

The past century has witnessed remarkable advances in life expectancy in the United States and throughout the world. In 2010, however, progress in life expectancy in the United States began to stall, despite continuing to increase in other high-income countries (see Figure 1). Alarming, U.S. life expectancy fell between 2014 and 2015 and continued to decline through 2017, the longest sustained decline in life expectancy in a century (since the influenza pandemic of 1918–1919) (see Figure 2). The recent decline in U.S. life expectancy appears to have been the product of two trends:

(1) an increase in mortality among middle-age and younger adults, defined as those ages 25–64 years (i.e., “working age”), which began in the 1990s for several specific causes of death (e.g., drug- and alcohol-related causes and suicide); and

(2) a slowing of declines in working-age mortality due to other causes of death (mainly cardiovascular diseases) after 2010.

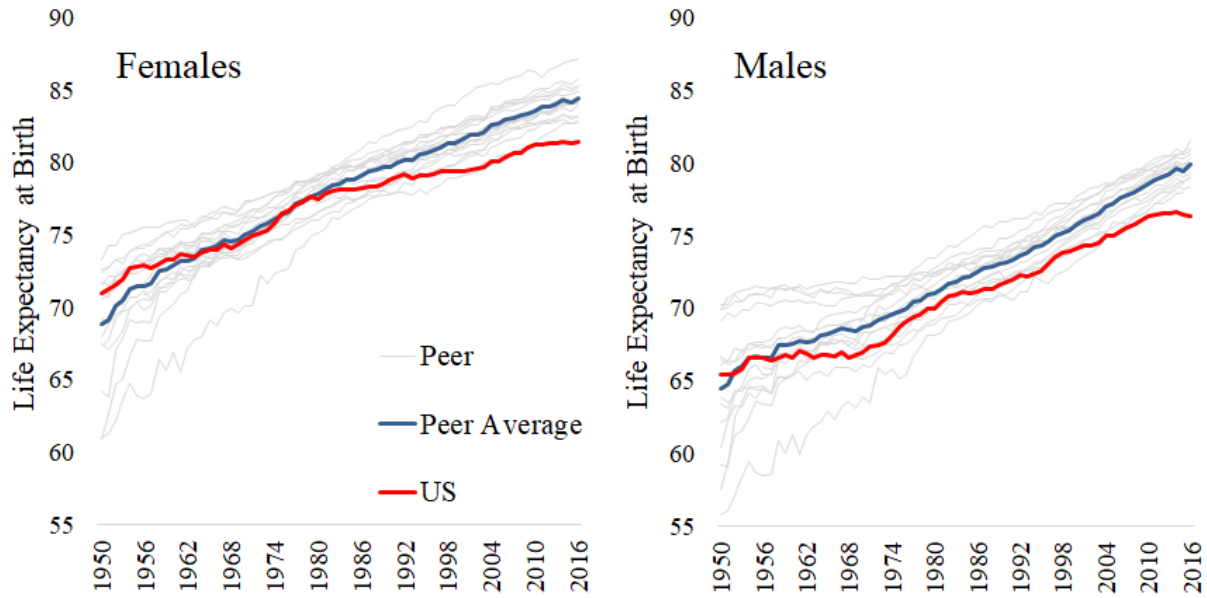


Figure 1. Life expectancy at birth by sex, United States vs peer countries, 1950-2016

Notes: Figure one shows trends in life expectancy at birth for the United States (red line), sixteen individual peer countries (gray lines), and the peer country average (blue line) for females (left panel) and males (right panel). The sixteen peer countries are: Australia, Austria, Canada, Denmark, Finland, France, Germany, Italy, Japan, Norway, Portugal, Spain, Sweden, Switzerland, the Netherlands, and the United Kingdom.

Source: U.S. mortality data are drawn from National Vital Statistics Reports. Mortality data for the 16 peer countries are drawn from the Human Mortality Database (https://www.mortality.org/cgi-bin/hmd/hmd_download.php).

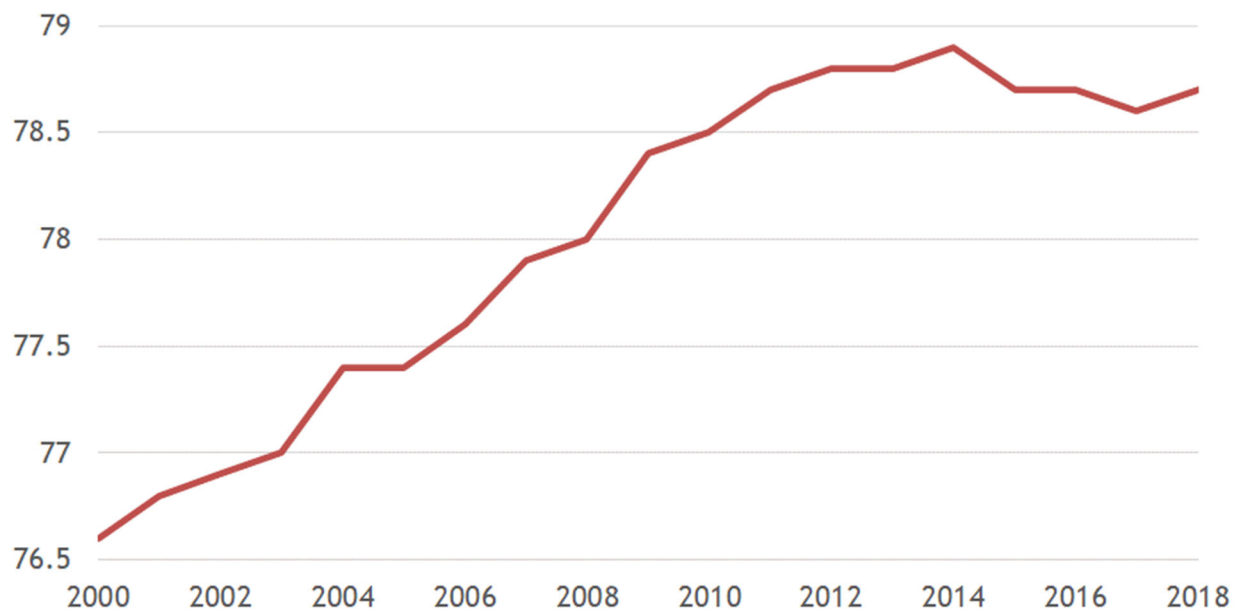


Figure 2. Life expectancy at birth in the United States, 2000-2018

Source: National Vital Statistics Reports.

Explaining why mortality has been rising among working-age adults is not straightforward. Mortality is the final result of both acute events and cumulative, long-term processes involving the interaction of social, behavioral, economic, environmental, and biological factors that develop and unfold over the life course. A full understanding of the rise in working-age mortality requires focusing beyond the factors that are most proximate to specific causes of death (e.g., behavior, psychological factors, health care utilization). One must also look upstream to the macrostructural factors (e.g., public policies, macroeconomic trends, social and economic inequality, technology) that may affect the health of Americans in multiple ways and through multiple pathways that flow through local community contexts and intersect with individuals' lives. Establishing the complex relationships among these explanatory factors poses methodological challenges that are complicated by issues of data availability and quality, as well as measurement.

The study committee's report, *High and Rising Mortality Rates Among Working-Age Adults* (2021), was based on data from 1990–2017 collected before COVID-19 and identified three categories of causes of death as the predominant drivers of trends in working-age (ages 25–64) mortality: 1) drug poisonings and alcohol-induced causes; 2) suicide; and 3) cardiometabolic diseases. The committee conducted a comprehensive review of the existing research literature to uncover explanations for the trends and disparities in these three causes of death in order to inform research and policy priorities. The report made recommendations for future research and data collection and offers policy conclusions and recommendations to reduce the rates of and disparities in mortality at working ages. Importantly, the committee concluded that immediate action is needed to address what has become a national population health crisis, a crisis that is being exacerbated by COVID-19.

Although recently identified, increasing mortality among U.S. working-age adults is not new. The committee identified a long-term trend of stagnation and reversal of declining mortality rates that initially was limited to younger White women and men (ages 25–44) living outside of large central

metropolitan areas but subsequently spread to encompass most racial/ethnic groups and most geographic areas of the country. Between 2012–2017, mortality rates were either flat or increasing among most working-age populations. Although rising mortality began among Whites, Blacks consistently experienced much higher mortality regardless of educational attainment or geography. Moreover, disparities by socioeconomic status have widened substantially among working-age Whites, particularly women, since the 1990s. Over the 1990–2017 period, disparities in mortality between large central metropolitan and less-populated areas widened (to the detriment of the latter), and geographic disparities became more pronounced. Mortality rates increased across several regions and states, particularly among younger working-age adults, and most glaringly in central Appalachia, New England, the central United States, and parts of the Southwest and Mountain West.

Drug and Alcohol-Related Deaths among Working-Age Adults

Drugs and alcohol were responsible for more than 1.3 million deaths—approximately 8 percent—among the working-age population between 1990 and 2017. These substance-related deaths were major contributors to the increase in working-age mortality, and they continue to rise. Drug poisoning deaths have been increasing for over three decades and represent the single largest contributor to the rise in mortality rates among U.S. working-age adults, with the exception of older Hispanic adults ages 45–64. The largest increases occurred among Whites (particularly males) and older Black males. Alcohol-induced deaths also increased among Whites from 1990–2017, declined among Blacks and Hispanics until 2009, before beginning to increase in the 2010s. While drug-related mortality rates increased in every state, the increases were most pronounced in Appalachia, New England, and the industrial Midwest.

Supply-and-demand factors underlie trends in drug- and alcohol-related mortality. The country's drug overdose crisis represents a “perfect storm” resulting from the flooding of the market with highly

addictive yet deadly prescription and illicit drugs and the underlying and growing demand for and vulnerability to substances that might possibly bring relief, albeit temporary, from physical and/or mental pain. On the supply side, weak governmental oversight combined with actions in the 1990s and 2000s by the pharmaceutical industry (manufacturers, distributors, pharmacies), pain control advocacy groups (often funded by pharmaceutical companies), and physicians fueled a massive increase in opioid prescribing—followed by a rise in prescription opioid misuse, addiction, and overdose. On the demand side, increasing prevalence of physical pain, deteriorating psychological health, and long-term macroeconomic trends seem to underlie substance use mortality trends for certain population subgroups and geographic areas. The decline in economic opportunities among adults with less than a college education has been especially devastating and may have contributed to the rise in drug poisoning and alcohol-related deaths in this population. Explanations centered on “despair” (which signifies hopelessness but is not itself a formal mental health diagnosis) are also consistent with long-term economic, family, and social changes that have weakened support systems that provide people with purpose and meaning.

Death by Suicide among Working-Age Adults

Suicide accounted for 569,099 deaths in the working-age population between 1990 and 2017 when suicide rates increased primarily among Whites, especially White men, and in less populated, rural areas. For example, suicide rates are higher in Western states, especially those with large rural populations. Research on suicide trends tend to focus on a range of contributing factors, such as the economy; social engagement, religious participation, and social support; access to lethal means; and mental and physical health. Periods of economic downturn, wage stagnation, weak safety nets, and increasing foreclosure rates are associated with rising suicide mortality in national and state-level studies. Social support from embeddedness in religious institutions, community organizations, or stable interpersonal relationships that buffer the risks of self-harm has also declined in recent decades, and this

decline has been more prominent among less-educated Whites. Although suicide mortality by firearms rose over the study period, its contribution to the rise in overall suicide mortality declined as suicides by other means (e.g., hanging, suffocation) increased more rapidly. Those with a history of mental illness also have a much higher risk of suicide; Whites tend to report more history with mental illness relative to other racial/ethnic groups.

Cardiometabolic-Related Deaths among Working-Age Adults

The committee examined deaths due to cardiometabolic diseases, including endocrine, nutritional, and metabolic (ENM) diseases (e.g., diabetes, hyperlipidemia, obesity); hypertensive heart disease; and ischemic heart disease and other diseases of the circulatory system (e.g., coronary heart disease, stroke, and other cardiovascular conditions). Cardiometabolic diseases were responsible for more than 4.8 million deaths among the working-age population between 1990 and 2017 with ischemic heart disease and other diseases of the circulatory system the largest share (3.8 million deaths). The contribution of cardiometabolic mortality to the recent rise in working-age mortality involves several countervailing trends. Death rates due to ENM diseases and hypertensive heart disease generally increased during 1990–2017, especially in the 2010s; and while there have been significant long-term reductions in mortality from ischemic heart disease and other circulatory diseases since 1970, progress had stalled by 2010. The combination of these trends increased all-cause mortality after 2010 because the slowdown in mortality declines from ischemic and other circulatory diseases no longer offset the rise in mortality from ENM and hypertensive heart disease.

Within the working-age population, younger adults (ages 25–44) of all racial/ethnic groups, White men and women, Black men (in the recent decade), and those living in rural areas experienced greater relative increases in mortality due to cardiometabolic diseases. The committee identified three potential explanations for the trends in cardiometabolic mortality—the obesity epidemic; diminishing returns of medical advances; and social, economic, and cultural changes. The increased prevalence of

obesity and its lagged cardiometabolic consequences are the most important. Substantial evidence shows that obesity increases the risks of hypertension, diabetes, stroke, and coronary heart disease, driving up rates of mortality due to cardiometabolic diseases. Obesity rates began to rise in the early 1980s and remain high today as a period-based phenomenon that affects children and adults of all ages. But its cardiometabolic consequences have occurred in a cohort fashion such that more recent cohorts—those born in the 1970s, 1980s, and 1990s—have been exposed to obesogenic environments their entire lives and have been more affected because of their earlier life exposure and longer durations at risk than prior cohorts who were exposed to the period-based changes at older ages.

Second, the substantial progress from the 1970s onward achieved by cardiovascular disease prevention (e.g., reduced cigarette smoking) and more advanced treatments may now be losing momentum. The benefits of medical advances may be offset by the cardiometabolic consequences of rising obesity rates. In addition, those most at risk to cardiovascular disease often face barriers in accessing and adherence to treatments for chronic disease, reinforcing disparities in cardiometabolic health. Third, social, economic, and cultural changes that have undermined economic security, inter-generational mobility, and social support networks also damage cardiometabolic health through stress-mediated biological pathways and reduced access to care.

The Role of Racial/Ethnic, Socioeconomic, and Geographic Disparities in Working-Age Mortality

A review of research identified significant, and in some cases, widening racial/ethnic, socioeconomic and geographic disparities in working-age mortality. While the explanations for these disparities are often specific to certain causes of death, the committee identified three common themes that affected population subgroups at different time periods or in different contexts.

The first is the role of adverse economic trends (e.g., stagnant wages, collapse of job sectors, unemployment) that affected certain geographic areas and population subgroups more so than others.

For example, the loss of manufacturing and mining jobs in the industrial Midwest and Appalachia in the 1970s led to a long-term economic decline, often concentrated among the largely White families and communities in these areas. Declining economic conditions tend to weaken societal institutions, community resources, family bonds, social networks, and access to health care—all of which could explain working-age mortality disparities according to geography, socioeconomic status, and race and ethnicity.

A second theme is socioeconomic inequality, which could explain the pace and timing of rising 21st century working-age mortality, as well as the longstanding racial/ethnic disparities in mortality that have persisted throughout U.S. history. Due to the legacy and persistence of structural racism in the United States, Blacks and other minority groups have experienced longstanding socioeconomic inequalities that have compromised their health and produced much higher mortality rates than among Whites. With the growing importance of education within U.S. society and need for academic credentials to obtain well-paying technical and professional jobs, socioeconomic inequality has also deepened among Whites, widening socioeconomic disparities in White mortality.

A third theme includes vulnerability, which mediates the degree to which adverse economic conditions and socioeconomic inequality make particular groups more susceptible to morbidity and mortality risks. For example, due to educational, job, and housing discrimination, Blacks tend to work and live in segregated and often disadvantaged neighborhoods, increasing their exposure to obesogenic, unsafe, and low resource environments that limit access to healthy foods and green space for physical activity and medical and behavioral health services, which in turn, increase mortality risks.

Lessons from the COVID-19 Pandemic

For many people, the pandemic changed people's lives in ways that potentially exacerbated underlying mortality trends, such as increasing unemployment and economic insecurity; reducing access to health care, fresh and healthy foods, and other resources; and increasing social isolation by reducing opportunities for social interaction and support. Although the mortality trends the committee examined

ended in 2017, before the COVID-19 pandemic began, the report commented on preliminary reports of mortality rates and racial-ethnic disparities in mortality as the pandemic spread during 2020. The main conclusion the report drew was that COVID-19 has reinforced and exacerbated existing mortality disparities within the United States. It has underscored the importance of key themes that were articulated throughout this report by highlighting the ways in which economic conditions and socioeconomic inequalities make certain population groups and geographic areas more vulnerable to COVID-19.

First, the report documents increased working-age mortality from drug poisoning and cardiometabolic diseases, such as obesity, hypertension, and diabetes; and these conditions were identified as risk factors for COVID-19 morbidity and mortality and defined vulnerable groups in need of prioritized care. The increased prevalence of cardiometabolic diseases in the U.S. working-age population highlighted in this report may help explain the unexpectedly high COVID-19 death toll seen among young and middle-age adults in the United States compared to other countries. Moreover, there is emerging evidence that the stressors of the pandemic led to an increase in substance use (both alcohol and drugs) as a coping mechanism, potentially foreshadowing future increases in mortality from these causes.

Second, the report examines geographic and socioeconomic disparities in health among the U.S. population, the growth in social division and income inequality, and the potential association of these disparities with trends in working-age mortality. Similarly, the pandemic exposed the heightened vulnerability of certain geographic areas (e.g., hard-hit states, rural areas, low-income neighborhoods and communities) and the economically disadvantaged to COVID-19. Low-income individuals were disproportionately represented among service and front-line workers with the greatest exposure to the virus and were less likely than more-advantaged groups to be able to work from home, adhere to social distancing guidelines, and sustain their families (e.g., to avoid food and housing insecurity) amid a

devastated economy. They were also more likely to have comorbidities associated with more severe COVID-19 illness.

Third, the report documents large disparities in mortality among people of color. These disparities are reflected in the disproportionately high rates of infection, hospitalization, and death from COVID-19 experienced by Blacks and Hispanics. Although these racial/ethnic disparities were undoubtedly due at least in part to the geographic concentration of the initial surge in infections in large, racially and ethnically diverse central metropolitan areas, such as New York City, San Francisco, Seattle, and Los Angeles, the virus subsequently spread to less-populated and less-diverse areas of the country. By January 2021, both case and mortality rates for COVID-19 were higher in nonmetropolitan than in metropolitan counties. And even in nonmetropolitan areas, large racial/ethnic disparities persisted.

Implications for Research and Policy

From a historical perspective, the recent rise in U.S. working-age mortality and resulting declines in life expectancy are relatively new phenomena. As the committee's report documents, because the rise in working-age mortality was specific to certain causes of death but with varying patterns by age, sex, race and ethnicity, socioeconomic status, and geography, existing research into these complex and multilayered patterns is sparse, and research attempting to better understand the explanations for these changing patterns is nascent. Much remains to be learned, therefore, and the committee proposes numerous research efforts to generate better evidence that can serve as a basis for evaluating and refining salient policies. These recommendations span multiple levels and modes of analysis (individual, institutional, societal, and cross-national; quantitative and qualitative); address a variety of disparities (socioeconomic, racial/ethnic, geographic); encompass a range of causes of death and related factors (drug poisoning; alcohol-related deaths; suicide; cardiometabolic diseases; mental illness; obesity; adverse childhood experiences; psychosocial indicators, such as stress, despair, hopelessness,

coping, and resilience; long-term economic changes; social factors, such as family structure, community support, and religiosity); and propose numerous improvements to the data infrastructure that supports this research.

The report focuses on an exceptionally complex set of patterns, trends, and explanations for which clear or simple solutions are lacking. Nonetheless, despite this complexity and the necessary reliance on observational and administrative data, the committee emphasizes the urgency of policy action in the face of a population health crisis that is claiming the lives of people in the prime of their lives (a crisis that has been exacerbated by the COVID-19 pandemic). Like the phenomena driving the crisis, policy responses need to be multilevel, focusing not only on the immediate causes of these deaths, such as drugs and obesity, but also on the upstream “causes of the causes,” such as living conditions that increase the vulnerability of communities, families, and individuals to premature mortality.

The committee accordingly offers policy recommendations (see Table 1 below) regarding obesity prevention programs, interventions to target the substance use and overdose crisis at multiple levels on both the supply and demand sides, and the expansion of Medicaid under the Affordable Care Act. The committee also presents broader policy conclusions (see table below) regarding the need to balance the rights of the food industry, advertisers, grocers, and restaurants to enjoy free market competition against the public health imperative to limit the promotion and consumption of foods and beverages that contribute to obesity; the need to revitalize the communities hit hardest by the overdose crisis by addressing the larger economic and social strains and dislocations that made those communities vulnerable in the first place; and the importance of dismantling structural racism and discriminatory policies of exclusion so as to reduce and ultimately eliminate inequalities that continue to drive racial/ ethnic disparities in health and mortality in the United States.

The United States is losing far too many lives far too early. While it is clear that the research base for understanding the nature of this complex problem needs to be strengthened, the rise in working-age mortality threatens the future of the nation’s families, workforce, economy, and national security. It therefore constitutes a crisis that requires action even if the evidence is imperfect or only suggestive of causal effects and solutions.

Thank you for the invitation to testify. I welcome any questions you might have.

Table 1. Policy Conclusions and Recommendations^a

Opioids, Other Drugs, and Alcohol
<p>Policy makers should implement policies that better address the U.S. addiction and overdose crisis and prevent future crises. In general, the most effective interventions target both risk and protective factors at multiple levels, including the individual, family, community, and society.</p> <ul style="list-style-type: none"> - The Food and Drug Administration, the Drug Enforcement Administration, and other federal and state regulatory agencies should strengthen regulatory control and monitoring of the development, marketing, distribution, and dispensing of prescription drugs. - The pharmaceutical industry (including manufacturers, distributors, dispensers, and trade associations) should develop and fund stronger internal standards, regulatory structures, and procedures for surveillance and prevention of activities that could result in misuse, addiction, or other harms among users of its products. It should also develop stronger sanctions for violation of these standards. - Federal, state, and local governments should invest in programs that focus on substance use as a public health issue and pursue alternatives to arrest and incarceration. Such programs should be aimed at reducing barriers to and encouraging entry into substance use disorder treatment. - Medicaid and state and local government agencies (e.g., health departments, social services, public schools) should expand access to and improve the quality of substance use prevention, treatment, recovery, and harm reduction programs, as well as mental health counseling and treatment for people with substance use disorders. Substance use prevention programs should begin early, focus on life skills training and prosocial development rather than on fear, and be targeted to children and adolescents most at risk of early initiation of drug and alcohol use (e.g., those living in neighborhoods of low socioeconomic status, those who have suffered adverse childhood experiences).
<p>Economic policies are needed to address the larger economic and social strains and dislocations that made communities that experienced economic decline over the past four decades vulnerable to opioids and other drugs. This effort may require a holistic approach to development that involves federal, state, and local governments as well as a range of private-sector actors.</p>

Cardiometabolic Diseases
<p>Designers of obesity prevention programs should focus on developing programs that start early in life and target children and adolescents most at risk of obesity (e.g., racial/ethnic minorities, females, people living in poverty and in neighborhoods of low socioeconomic status) and those who are overweight or gaining weight, thus intervening before obesity trajectories become set throughout adulthood.</p>
<p>To reduce the per capita calorie consumption and body mass index levels of the U.S. population, policy makers will need to implement laws and regulations that preserve a healthy balance between the rights of the food industry, advertisers, grocers, and restaurants to enjoy free market competition and the public health imperative to limit the promotion and consumption of foods and beverages that contribute to obesity.</p>
Cross-Cutting
<p>Given recent findings regarding largely better health and lower mortality among working-age adults who live in states that have expanded Medicaid under the Affordable Care Act, the 12 states that have not yet expanded access to Medicaid should do so as soon as possible. The National Institutes of Health and private foundations should also support research to analyze the long-term effects of Medicaid expansion on the health and mortality of the working-age population.</p>
<p>To reduce and ultimately eliminate racial/ethnic and other socioeconomic inequalities that continue to drive racial/ethnic disparities in U.S. working-age mortality, policy makers and decision makers at all levels of society will need to dismantle structural racism and discriminatory policies of exclusion (in such areas as education, employment and pay, housing, lending, civic participation, criminal justice, and health care) and be intentional in ensuring that new social and economic policies serve to eliminate, and not perpetuate, the social and economic inequalities to which racial/ethnic minority groups have long been exposed.</p>

^a Additional data and research recommendations are included in the full report, which has also been submitted into the record.