# Circulation

# **AHA POLICY STATEMENT**

# Addressing Structural Racism Through Public Policy Advocacy: A Policy Statement From the American Heart Association

Michelle A. Albert, MD, MPH, FAHA, Chair; Keith Churchwell, MD, FAHA, Vice Chair; Nihar Desai, MD, FAHA; Janay C. Johnson, MPH; Michelle N. Johnson, MPH; Amit Khera, MD, FAHA; Jennifer H. Mieres, MD, FAHA; Fatima Rodriguez, MD, MPH, FAHA; Gladys Velarde, MD, FAHA; David R. Williams, PhD; Joseph C. Wu, MD, PhD, FAHA; on behalf of the American Heart Association Advocacy Coordinating Committee

ABSTRACT: During the COVID-19 pandemic, the American Heart Association created a new 2024 Impact Goal with health equity at its core, in recognition of the increasing health disparities in our country and the overwhelming evidence of the damaging effect of structural racism on cardiovascular and stroke health. Concurrent with the announcement of the new Impact Goal was the release of an American Heart Association presidential advisory on structural racism, recognizing racism as a fundamental driver of health disparities and directing the American Heart Association to advance antiracist strategies regarding science, business operations, leadership, quality improvement, and advocacy. This policy statement builds on the call to action put forth in our presidential advisory, discussing specific opportunities to leverage public policy in promoting overall well-being and rectifying those long-standing structural barriers that impede the progress that we need and seek for the health of all communities. Although this policy statement discusses difficult aspects of our past, it is meant to provide a forward-looking blueprint that can be embraced by a broad spectrum of stakeholders who share the association's commitment to addressing structural racism and realizing true health equity.

Key Words: AHA Scientific Statements ■ cardiovascular diseases ■ education ■ housing ■ racism ■ social determinants of health ■ systemic racism

gainst the backdrop of the COVID-19 pandemic, the United States experienced a historic reckoning on the impact of structural inequities and structural racism, defined as "the normalization and legitimization of an array of dynamics-historical, cultural, institutional and interpersonal—that routinely advantage White people while producing cumulative and chronic adverse outcomes for people of color."1 This period of reflection coincided with worsening health outcomes across the country, including a dramatic rise in cardiovascular disease deaths, with the largest increases occurring in Asian, Black, and Hispanic populations.<sup>2</sup> In recognition of the widening health disparities during the pandemic compounded by the overwhelming evidence of structural racism on cardiovascular and stroke health, the American Heart Association (AHA) shifted its strategic focus and timeline to a 2024 Impact Goal with health equity at its core.3 The release of this Impact Goal in 2020 was

followed by an AHA presidential advisory on structural racism, which recognized racism as a fundamental driver of health disparities and outlined the history of racism in the United States, including the role of public policy in creating, contributing to, and perpetuating structural racism in society. The advisory declared unequivocal support of antiracist principles and directed the AHA to advance antiracist strategies regarding science, business operations, leadership, quality improvement, and advocacy.<sup>4</sup>

The history of structural racism in the United States and the resulting inequities persisting across generations did not occur by chance. Public policy and governmental authority, historically and often by design, were used to impose and promote discriminatory policies and practices and societal norms that advantaged White Americans at the expense of other minoritized racial and ethnic groups. Similarly, structural racism with its persisting policies and substantial health consequences

is evident in other countries in the Americas, Europe, Africa, and other parts of the world and thus is not a uniquely US construct. The growing magnification of and public attention to the pervasiveness of structural racism in the United States and around the globe represent opportunities to reverse and shift policy and resources, governmental and nongovernmental, to acknowledge and address structural racism and structural inequities and to advance social justice and eliminate disparities in health outcomes to prevent death and disability from cardiovascular disease and other chronic conditions and to improve overall health and well-being.

The AHA, when declaring structural racism as a fundamental driver of health inequity, committed to use its ability to influence public policy and organization- and systemslevel policy to challenge racist policies that are fundamental barriers to health equity. Advocacy, the act of pushing change to existing social structures, policies, and practice to promote social justice, has an important role in highlighting the tremendous physical, emotional, and psychological consequences that racist policies have on the health of the population. This includes the identification and disruption of policies at the local, state, and federal levels that perpetuate the vestiges of inequities for historically marginalized racial and ethnic groups. With a health equity-first policy agenda and commitment to antiracist principles, the AHA must continue to combat structural racism and advance policies that reverse discriminatory practices and advance opportunities for every person living in the United States to have a full, healthy life. This policy statement builds on the call to action put forth in our presidential advisory, discussing specific opportunities to leverage public policy change and public/private partnerships to remove or mitigate the effects of the previously identified barriers to equitable health and well-being. Although it discusses difficult aspects of our past, it is meant to provide a forwardlooking blueprint of the association's commitment to address structural racism and realize true health equity.

# ADDRESSING THE INFLUENCE OF STRUCTURAL RACISM ON HEALTH AND PUBLIC POLICY: IMPLICATIONS FOR HEALTH CARE, NUTRITION, ACCESS TO CAPITAL, HOUSING, EDUCATION, AND THE ENVIRONMENT

Eliminating structural racism requires a multidimensional, transdisciplinary approach involving stakeholders in public health, public policy, and social justice uniting and affirming their role in advancing this cause. This means delivering expedient and accessible interventions that target overlapping social determinants and address long-standing inequities that drive disparate health outcomes. The link between structural racism and social determinants of health to produce inequities in health outcomes is well established.<sup>4</sup>

The association's explicit focus on health equity, along with its commitment to addressing structural racism, requires a reprisal of the toxic effects of structural racism on health and well-being mediated through social determinants. It further requires the articulation of a strategic advocacy agenda that supports using the levers of government to reverse and shift public policy and resources to advance social justice and eliminate inequities in health outcomes. The following section traces the contours of structural racism in various social drivers of health outcomes—including health care, healthy food and nutrition access, access to capital, housing, and education, and the environment—and offers specific policy levers that can be thoughtfully adapted and pursued to address challenges within each of these domains (Table).

Although the breadth and complexity of these challenges may seem daunting, it is important to recognize that no single entity can undertake the responsibility of dismantling structural racism alone. Thus, the AHA, cognizant of its strengths and limitations and acknowledging the expertise of other dedicated institutions, presents these policy considerations in the spirit of shared responsibility and collective action. We are mindful that certain issues are being championed by others who are equipped to lead in those spheres, and we stand ready to support and amplify their efforts. Our aim in offering this guidance, therefore, is to inspire a broader coalition of diverse stakeholders to confront, through public policy advocacy, the far-reaching and multifaceted repercussions of structural racism on health equity.

#### Access to High-Quality Health Care

The COVID-19 pandemic and its ongoing impact have disproportionately affected Black, Hispanic/Latino, and Native American populations, with >50% of early COVID-19 hospitalizations and deaths in the AHA COVID-19 registry occurring in Black and Hispanic/Latino individuals despite the fact that they represent less than half of the general population.<sup>6</sup> The historical distrust of medical establishments because of their tumultuous history with racially and ethnically underrepresented communities continues to influence engagement among these communities with the health system. During the pandemic, this distrust contributed to vaccine hesitancy and slow and poor uptake in the highest-risk communities, resulting in widening disparities in cardiovascular disease outcomes and sequelae of delayed care.7 These outcomes are inextricably linked to historical inequities in our public health infrastructure and the manifestations of structural racism embedded in US health care delivery. Racial and ethnic disparities in access to high-quality health care and health insurance coverage go back to the Reconstruction era when people from underrepresented racial and ethnic populations were systematically excluded from meaningful health insurance. These groups were also relegated to

#### Table. Suggested Policy Levers to Address the Role of Structural Racism Through Public Policy

Issue	Policy Solutions	Examples of specific public policy levers				
Access to quality health care	Pursue efforts to enhance access to and adequacy and affordability of adequate	Enhance the consumer protections of the Affordable Care Act, including premium and cost- sharing assistance				
	health coverage for every person living in the United States	Advance Medicaid expansion				
	the officed offices	Mitigate the proliferation of substandard health insurance products				
		Improve prior authorization policies that restrict or delay access to guideline-recommended treatments				
		Oppose changes to public charge policy that restrict access to critical public benefits for legal immigrants				
		Maintain telehealth flexibilities implemented during the COVID-19 public health emergency				
		Advance policies that compel public and private insurers to collect claims, quality, and other data aggregated by race and ethnicity to reveal and address inequities in coverage and care				
	Enhance the ability of the health system to	Reduce/eliminate cost-sharing for preventive, primary, and mental health care				
	advance primary care and prevention, to assess and address social needs, and to build trust with communities of color	Implement health insurance benefit designs that support robust, diverse health care professional networks				
		Elevate and integrate community health professionals in health care professional networks and as members of the care team				
		Support states and CMS in implementing value-based payment model that drive and incentivize preventive practice (eg, Making Care Primary Model)				
		Expand appropriations for the support of FQHCs and other health care facilities that that serve remote, historically excluded, or underresourced communities				
	Support the ability of medical institutions	Define metrics that institutions should assess to improve quality of care				
	to examine and address the role of structural racism on patient care and outcomes	Pursue medical-legal partnerships that embed legal professionals on the care team to resolve social and environmental concerns at the appropriate policy level				
	Support robust and diverse clinical trials through the elimination of barriers that disproportionately impede the participation of individuals living in rural areas, communities with lower socioeco-	Provide financial compensation and reimbursement for expenses associated with participation in clinical trials (transportation, lodging, childcare, etc)				
		Improve flexibility of clinical trial study designs to make participation less burdensome for participants (eg, reducing frequency of study visits, using electronic communication tools)				
	nomic status, and underrepresented racial and ethnic populations	Codesign new therapies, treatments, and interventions with members of the community whom they are aimed to serve and prioritize their access once treatments are developed and approved				
	Work to eliminate institutional barriers to	Facilitate STEM scholarship programs for students from historically excluded communities				
	academia to widen the pathway for more diverse practitioners and scientists to enter the medical workforce and serve as investigators for research affecting historically excluded populations	Support the development of community-driven health equity plans to help communities identify and address disparities experienced by at-risk populations				
Healthy food access and nu- trition security	Support and eligibility for food assistance programs and expand other federal income support benefits	Maintain and expand programs such as SNAP, SNAP-ED, WIC, FDPIR, CACFP, and school meal programs				
	Prioritize policies that incentivize and support the ability of health systems and	Remove health system- and health care professional-level barriers to nutritional counseling in the clinical setting				
	insurers to address food insecurity	Support food-as-medicine initiatives				
		Develop and implement a national measure of nutrition security, expanding the USDA food security screening tool				
		Support the efforts of CMS and other health care organizations efforts to pilot programs addressing food insecurity (eg, state Medicaid innovation waivers, the Accountable Health Communities model)				
	Develop partnerships with local governments and community boards to advocate for healthy and culturally relevant foods in restaurants, schools, and other public-facing institutions	Implement universal school meal program with robust nutrition standards aligned with most current Dietary Guidelines for Americans				
	Pursue policies that address and mitigate the impact of the disproportionate marketing of unhealthy food products to children from underrepresented racial and ethnic groups who reside in underresourced communities	Develop and implement federal standards for unhealthy food and beverage marketing to children Implement tax policies on sugary drinks or other unhealthy products, directing tax revenue to underresourced communities that have been targeted by marketing				

(Continued)

#### Table. Continued

Issue	Policy Solutions	Examples of specific public policy levers				
Access to capital and economic	Support policies that address poverty and target financial relief to families and children	Maintain and expand the EITC and CTC				
stability	Address the impact of racism in the	Explore opportunities to equitably raise the floor for workers in low-wage jobs				
	pipeline to and within the workforce	Increase federal and state appropriations for equitable workforce development and job training programs targeted to historically excluded communities				
		Support companies' ability to track and report race-aggregated hiring and wage data to identify and address disparities				
	Develop policies and institutions that support wealth building through capital investment, sustainable community partnerships, and equitable institutional policies and incentives that address the	Incentivize the creation of medical-financial partnerships, which are novel cross-sector collaborations between health care systems and financial service organizations to reduce patient financial stress				
		Create asset building and matching retirement programs for employees				
	racial and ethnic wealth gap	Support policies that reduce the racial and ethnic wealth gap, including paid family and medical leave, child educational savings funds, and baby bonds				
		Ensure that appropriations provide support for financial planning services in communities				
		Promote inclusion of financial literacy courses in schools				
	Address systematic racial disparities in	Expand access to health care through expanded access to quality, affordable medical coverage				
	debt and debt collection practices	Support financial assistance and payment plan options for medical patients with low income or who are from underresourced communities				
		Explore opportunities to advance student loan debt relief				
		Improve credit scoring and reporting models to enhance guidelines around data accuracy, consumer access, and transparency				
	Preserve local financial institutions, including minority-owned banks, in an effort to support longitudinal investments in the economic development of individuals and groups who live and work in the communities they serve	Develop community development financial institutions to address differential credit by race and ethnicity				
Access to eq-	Work to eliminate racial discrimination	Increase supply and improve physical and financial viability of affordable rental housing				
uitable housing	connected to acquisition of home loans and leasing and to improve environmental conditions associated with public or federally subsidized housing and integration of housing and health services	Equitably increase appropriations for federal rental assistance programs, including safe public housing, Section 8 Project-Based Rental Assistance, and Housing Choice Vouchers				
		Maintain and expand the Low-Income Housing Tax Credit				
		Reduce bias in the Federal Housing Administration program and other traditional channels to support first-time, lower-income home buyers				
		Increase mortgage lending on tribal trust lands				
	Build partnerships with financial institutions and foster the finance	Enhance appropriations for acquisition funding that enable developers who are creating affordable housing to acquire buildings				
	industry's responsibility and accountability to the communities where they live and serve	Eliminate bias in credit scoring systems to increase eligibility for historically disenfranchised racia and ethnic groups and social programs				
		Facilitate access to capital for diverse developers				
	Pursue multidisciplinary private-public stakeholder models to ensure that all communities are safe, are socially supportive, and have equitable access to health-sustaining resources	Encourage funders of CBDOs, including government, philanthropic, or corporate investors, to equitably invest in and expand donations to support the sustainability and financial health of CIDOs				
	Provide access for individuals who are experiencing housing instability or	Develop partnerships with federal, state, and local agencies to mitigate pathways from foster care and criminal justice systems to homelessness				
	homelessness, particularly those with disabilities or health conditions, to	Screen for homelessness and housing insecurity during health care visits				
	housing opportunities that also support their specific functional, psychosocial, and medical needs	Build capacity and procedures for health care professionals to connect patients with housing services				

(Continued)

#### Table. Continued

Issue	Policy Solutions	Examples of specific public policy levers				
Access to education	Pursue policies that ensure equity in funding and resources across early	Equitably address per-pupil allotments to public schools to narrow funding inequities and performance gaps				
	childcare and educational systems	Promote development of schools in areas that need them				
		Support smaller class sizes and the hiring and retention of qualified teachers				
		Support wage enhancements for educators who service historically underresourced communities				
	Support expanded access to Early	Support and expand federal appropriations for Head Start and Early Head Start				
	Childhood Education	Expand access to quality, affordable childcare programs				
	Support efforts that assist students from diverse backgrounds in optimizing their	Integrate a holistic approach to higher education admissions processes that considers lived experience along with the impact of differential access to resources				
	educational attainment and employment opportunities	Adequately fund and expand pipeline programs that prepare diverse students for successful educational attainment and employment, and incorporate strategies that mitigate structural, financial, and geographic access barriers				
		Improve affordability of higher education through expanded support for Pell grants and free and low-cost community college				
		Support appropriations for grant programs that support the recruitment, retention, and support of trainees from underrepresented racial and ethnic groups				
		Advocate for expanded financial support of HBCUs and other minority-serving institutions				
	Work to mitigate implicit and explicit	Reduce inappropriate referrals of students to the criminal justice system				
	bias among school staff and to examine disciplinary policies and the role of law enforcement in schools	Reduce the use and eliminate disparities in discipline practices by establishing clear and consistent policies that promote fairness and equity				
	emore emore in schools	Expand access to social support and mental health services for at-risk students				
		Implement mandatory bias training and improve and expand bias training of school staff				
		Develop mechanisms to measure the impact of bias training				
Environmental	Pursue policies that support	Mitigate environmental "sacrifice zones"				
health	advantageous community infrastructure and partnerships related to environmental problem solving	Create inclusive, community-driven planning, policy development, and budgeting processes to ac dress environmental issues				
	problem solving	Assess community impact in all transportation and industrial infrastructure projects to ensure environmental justice and health equity				
	Ensure that advocacy organizations leverage networks of science and community stakeholders with government agencies to help advance environmental population- and individual health-linked agendas	Strengthen air quality standards  Provide government investment and facilitate private-public partnerships to shift to the use of renewable energy				
	Advance policies that promote corporate responsibility for business operations and their environmental and health impacts in the communities in which they operate	Ensure that corporations commit to and government incentivizes through tax policy robust, measurable, environment, social, and governance goals				
	Work to expand research that helps to identify and address environmental health disparities and risks, as well as the long-term adverse health impacts associated with exposure to environmental hazards	Ensure that governments make investments in research to address environmental health dispaties and support data collection to assess improvement over time				
Public health and data infrastructure	Ensure that federal, state, and local governments make investments in public health infrastructure and workforce	Pursue partnerships among public health entities, trusted professional and community organizations, and other public figures to deliver tactical information to diverse audiences				
	Modernize and link local, state, and	Develop a comprehensive, standardized nationwide data infrastructure				
	federal data systems to provide effective and prescriptive results	Improve capture of social determinants of health data, including disaggregated data by race, ethnicity, sex, and gender identity at the patient and population level				
	Maintain and expand existing national	Enhance national health surveys to capture patient experiences of discrimination				
	databases that assess disparities health outcomes and social determinants of health	Maintain place-based tools that measure social factors and cumulative community risk and, when appropriate, integrate them into clinical practice (eg, CDC Social Vulnerability Index, HHS Environmental Justice Index)				

(Continued)

#### Table. Continued

Issue	Policy Solutions	Examples of specific public policy levers			
Health information technology	Advance "health techquity" through efforts that address the digital divide and the systematic neglect or exclusion of underresourced and geographically isolated populations from available technology	Increase access to smart devices and computers  Support policy efforts to make broadband more affordable and to enforce the provision of equitable internet service (eg, FCC Emergency Broadband Benefit)			
Civic engagement	Support policies that cultivate an active and engaged electorate, with a focus on ensuring equitable voting opportunities in local, state, and federal elections for communities of color who have been historically disenfranchised	Facilitate voter registration  Invest in "get out the vote" efforts to ensure that individuals are registered to vote, are educated about candidates and issues, and know how and where to vote			
	Oppose efforts to preempt the authority of communities to address their issues locally	Oppose preemption efforts that limit the ability of communities to regulate, tax, or otherwise enact legislation stronger than the state law			
	Advance policies that support the preservation of trust in and the integrity of our electoral process	Provide resources for robust technology and poll worker safety			

CACFP indicates Child and Adult Care Food Program; CBDO, community-based development organization; CDC, Centers for Disease Control and Prevention; CMS, Centers for Medicaid and Medicare Services; CTC, child tax credit; EITC, earned income tax credit; FCC, Federal Communications Commission; FDPIR, Food Distribution Program on Indian Reservations; FQHC, Federally Qualified Health Center; HBCU, historically Black colleges and universities; HHS, US Department of Health and Human Services; SNAP, Supplemental Nutrition Assistance Program Education; STEM, science, technology, engineering and math; USDA, US Department of Agriculture; and WIC, Special Supplemental Nutrition Program for Women, Infants, and Children.

underresourced facilities that provided subpar care. Social determinants of health are intimately tied to structural racism, and accordingly, the AHA, the Centers for Disease Control and Prevention, and other organizations have highlighted structural racism as a priority in public health.<sup>4</sup>

#### **Policy Implications**

Critical to ensuring that every person living in the United States has access to affordable health care is expanding access to adequate health coverage. This includes expanding Medicaid in states that have yet to do so. Evidence demonstrates that uninsured and underinsured patients are more likely to report access issues related to cost, including not filling a prescription or forgoing critical care services.8,9 Enhancing Affordable Care Act insurance subsidies and ensuring access to Medicaid have contributed to narrowing disparities between White adults and Black and Hispanic adults in cost-related access problems.<sup>10</sup> Several studies have found a significant increase in adults in Medicaid expansion states who use preventive services and receive consistent care for their chronic conditions<sup>11</sup> and greater improvements in cardiovascular outcomes, including larger declines in uninsured hospitalizations for cardiovascular events and smaller increases in rates of cardiovascular mortality, compared with nonexpansion states. 12,13 Further efforts should include the advancement of policies that compel public and private insurers to collect claims, quality, and other data aggregated by race and ethnicity to reveal and address inequities in coverage and care.

There are opportunities at the federal and state levels to support health plan benefit designs tailored to improve affordability by reducing or eliminating cost sharing for certain preventive, primary care, or mental health care services and to expand access to telehealth services. In alignment with the AHA's principles for adequate, accessible, and affordable health care, 14 further effort is needed to remove barriers and legal restrictions to health care access that correlate with immigration status. Insurance eligibility expansion has the potential to reduce coverage disparities and health care costs related to emergency care for undocumented immigrants and other individuals without health insurance who are ineligible for public assistance.

Advancing racial health equity also requires that the health system acknowledge and reconcile its tumultuous history and the resulting distrust that persists among communities of color. Authentic partnerships with community members and organizations and strong health care professional networks that are culturally responsive, reflect the diversity of their enrollees, and include essential clinical and community health care professionals in the network service area are essential to overcoming racial health disparities. For example, evidence demonstrates that greater Black representation in the primary care physician workforce is associated with better population health measures for Black individuals.<sup>15</sup> Indeed, the Supreme Court ruling reversing affirmative action in education may potentially affect the recruitment of a diverse medical workforce. Another key strategy is fiscal and infrastructural support for community health workers who can partner with health care entities to help assess and address social drivers of health and provide complementary, culturally concordant prevention services for patients and historically excluded populations. For example, low English proficiency is a critical barrier

that could be helped with the integration of culturally and linguistically appropriate community health workers such as promotoras into the care team. 16 Value-based insurance design presents an opportunity to integrate community health workers as part of the care team and to use payment to drive and incentivize the prevention and assessment of social needs in clinical practice. Maintaining and expanding support for federally qualified health centers and other health care facilities and professionals who serve remote or underresourced communities is also critical to this goal. In addition, the use of a nontraditional health care setting such as the randomized trial of blood pressure reduction in Black barbershops is an example of how coupling disease identification, patient education, and medication management with trustworthy and culturally familiar settings can also be successful.<sup>17</sup>

At the institutional level, examining the role of structural racism on patient care and outcomes is imperative. Defining metrics that institutions should strive to monitor, improve, and promote in the interest of achieving equitable access to and adequacy of care needs to be part of the performance measurement and reporting for all medical institutions. This includes better collection and representativeness of sociodemographic data. The AHA and other entities must also continue to support robust participation in clinical trials that are representative of the diversity of the US population. The disproportionate burden of chronic disease across historically marginalized racial and ethnic populations compared with the representation of these groups in clinical trials necessitates that effort be made not only to improve outreach to communities historically excluded from clinical trials but also to eliminate barriers that impede their participation, including transportation and financial barriers that disproportionately affect individuals living in rural areas, communities with lower socioeconomic status, and underrepresented racial and ethnic populations. Eliminating institutional barriers to and inside academia may also widen the pathway for more diverse practitioners and scientists to enter the medical workforce and serve as investigators for critical research affecting population health.

Because many complex health issues are the result of not only clinical factors but also the policies and systems that shape the patient's environment, there is an urgent need and opportunity to improve the ability of the health system to address the upstream issues that influence health outcomes. Community-driven health equity plans have demonstrated success in laying the groundwork for communities to identify systems disparities experienced by at-risk populations and then leverage multisector collaboration to improve access to the resources that community members need to live healthy and productive lives. Medical-legal partnerships are another innovative approach that can help to address social and environmental factors by embedding lawyers in the clinical care team who not only leverage their legal expertise to help

resolve these issues on a family-by-family basis but also might aggregate the concerns of a community to the appropriate policy level. Such a collaborative care model consisting of medical personnel, legal service professionals, and social workers has significant potential for equitable improvements in population health.

#### **Healthy Food Access and Nutrition Security**

Food security refers to access to sufficient food for an active, healthy life; nutrition security means having consistent access to, availability of, and affordability of foods that promote well-being and prevent disease. Both food security and nutrition security are critical to maintaining a healthy diet, which the AHA identifies as an essential component for optimizing cardiovascular health and for the primary prevention of cardiovascular disease. However, the challenges that get in the way of healthy diets for all are attributable to myriad factors driven by structural racism, resulting in poverty, unemployment, underemployment, and residential segregation. 22,23

In 2019, the mean prevalence of food insecurity in the United States was 10.5%.24,25 The rates of food insecurity among underrepresented racial and ethnic groups are substantially higher than the US mean rate at 21.7% and 17.2% for Black populations and Hispanic populations, respectively. Native American individuals are also twice as likely as White individuals to experience food insecurity.<sup>25,26</sup> Food insecurity limits and undermines opportunities to make healthy dietary choices and has been directly linked to poorer educational and cardiovascular outcomes and higher mortality.27 The COVID-19 pandemic contributed to a sharp rise in food insecurity, sending many families into food insecurity for the first time, and these effects were largest in underrepresented racial and ethnic groups.<sup>28</sup> Although several policy provisions, including expansion of Supplemental Nutrition Assistance Program eligibility and benefits, were enacted to push back against rising rates of food insecurity during the pandemic, the end of the federal COVID-19 public health emergency in May 2023 marks the end of many of these flexibilities, increasing the risk of hunger and hardship for the individuals and families who benefited from them.

In addition, many stakeholders across the food industry have historically targeted communities of color, translating into higher rates of unhealthy food marketing in predominantly Black and Hispanic/Latino neighborhoods. Concerted efforts to target children and preschoolers, especially through television and in the area of sweetened beverages, have had a disproportionate impact on Black and Hispanic/Latino youth, who now have the highest per capita consumption of sugar-sweetened beverages. In addition, significant investments were made by the fast-food industry in predominantly Black and Hispanic/Latino communities. These targeted marketing and advertising tactics have

been demonstrated to contribute to increased consumption of nonnutritious, ultraprocessed unhealthy foods, disproportionately accelerating the prevalence of obesity and cardiovascular disease.<sup>36-38</sup>

#### **Policy Implications**

Policymakers should maintain and expand benefits and eligibility for food and nutrition assistance programs, including the Supplemental Nutrition Assistance Program; Supplemental Nutrition Assistance Program Education; Supplemental Nutrition Assistance Program for Women, Infants, and Children; Food Distribution Program on Indian Reservations; Child and Adult Care Food Program; and nutritious school meal programs. These programs are fundamental to ensuring healthy food access and nutrition security for historically excluded populations across the life course. Efforts to advance policies that incentivize and support the ability of health systems and insurers to address nutrition insecurity, including the removal of barriers to nutrition counseling, food-as-medicine initiatives, and integration of the provision of food assistance and medically tailored meals into clinical care, should be prioritized. Another critical next step is the development and implementation of a national measure of nutrition security because no standard measure currently exists. Such efforts are essential to enhancing the ability of the health system to screen for nutrition insecurity in the clinical setting and connect patients with community-based organizations assistance services such as food pantries or federal assistance programs such as the Supplemental Nutrition Assistance Program.

Advocacy for policies that promote food and nutrition security must extend to other federal income support benefits that widen latitudes to access healthy foods such as the Earned Income Tax Credit and Child Tax Credit. Additional opportunities exist to enhance nutrition education in schools with specific emphasis on immediate and long-term health and psychosocial benefits. Partnerships with local government and community boards to advocate for the presence of healthy food options in restaurants, especially those embedded in Black, Hispanic/Latino, and indigenous communities, are important. Key aspects of any such partnership should include prioritization of nutritious foods that are culturally relevant to respective communities and advocacy for policies that address the disproportionate marketing of unhealthy food products to children from underrepresented racial and ethnic groups who reside in historically underresourced communities.

#### Access to Capital and Economic Stability

Building wealth and capital in racially and ethnically diverse populations is key to economic stability, educational advancement, and better health at the individual and population levels. However, disparities in wealth by race and ethnicity are striking and are skewed toward

White households. Wealth disparities are compounded by unequal employment opportunities by race and ethnicity. Although White households, which make up 68% of US households, hold 86.8% of overall wealth in the country, Black and Hispanic households hold only 2.9% and 2.8% of wealth, respectively, while accounting for 15.6% and 10.9% of the US population.<sup>39</sup> For Black Americans, 12 generations of unpaid labor before the civil war have contributed to severe difficulties in wealth generation and accumulation. This dynamic is compounded by the systemic exclusion of Black Americans from national programs meant to promote economic recovery and stability. For example, during the Great Depression, the New Deal, the Social Security Act of 1935, and unemployment insurance programs disqualified Black and Hispanic/Latino workers from receiving benefits.40-42

The impact of poverty and disparate living and social conditions on the health of the individual and population in the United States has been studied and recognized since the 1800s. In 1899, the first sociological study of Black people in America by W.E.B. Du Bois,43 The Philadelphia Negro, detailed the findings that the difference in mortality in Black and White people in Philadelphia was explained by the deficits in economic status, sanitary conditions, and education of the studied populations, not by the differences between skin color and origin. A recent study by Boen and colleagues<sup>44</sup> detailed the association of better health and a better financial status, with those owning stock and accumulating significant savings having better self-reported health, fewer health conditions, less risk of work limitations, less disability, and lower levels of stress.

#### **Policy Implications**

Building wealth in racially and ethnically diverse populations is key to economic stability, educational advancement, and better health for the individual and the populations at risk. Wealth building through capital resources and programs can lead to economic stability and should be an important goal in addressing the long-standing disparities that continue to ravage communities of color. Institutional investment policies and strategies leading to capital investment and greater economic stability are necessary according to specific community needs.<sup>45</sup> Maximizing income and reducing expenses while increasing savings for individuals and families can have a positive impact on wealth generation for underresourced populations and will have a direct impact on better health. Equitably expanding support for policies that address poverty and target financial relief to families and children such as the Child Tax Credit and Earned Income Tax Credit is critical. Such efforts should extend to regulating the subprime and predatory lending industries and addressing the systematic racial and socioeconomic disparities in debt, including but not limited to student loans, public fines and fees, and medical debt, as well as debt collection practices.

In addition, public policies at all levels of government addressing the impact of racism in the pipeline to and within the workforce are necessary. This includes efforts to equitably raise the floor for workers in low-wage jobs, investments in equitable workforce development and job training programs targeted to historically excluded communities, and more robust tracking and reporting of raceaggregated hiring and wage data. Expanded access to paid family and medical leave, which helps prevent drastic losses of income for individuals caring for family or recovering from unexpected or long-term illness, should also be prioritized in improving wealth-building capacity for workers with low wages or those from underrepresented racial and ethnic groups.46 Other public policy proposals such as a nationwide baby bond program, which would provide an equity-based trust fund to newborns that they could access after reaching adulthood, may also be impactful. 47,48

Health systems can engage with communities and use internal expertise to help with tax preparation to maximize income generation within the rules set forward by the government. As an example, the Medical-Financial Partnership at Philadelphia Children's Hospital has done work with families for tax preparation that, over a 2-year period, led to >300 tax returns prepared with nearly \$700 000 in refunds to the community. Institutional investments in financial planning for communities, asset building with matching retirement programs by institutions for their employees, and ensuring that lucrative building projects have defined participation from companies with racially and ethnically diverse ownership spread the financial opportunity and can promote building capital and wealth in communities that have been left behind.

Another important goal in sustaining economic stability in local neighborhoods is ensuring that financial institutions within communities invest in the economic development of individuals and groups who live and work in the area. Historically, between the end of the era of Reconstruction and the Great Depression, >130 Black-owned banks were opened, providing an important resource for capital, entrepreneurship, and funding for prospective homeowners.<sup>50</sup> In 2008, the Partnership for Progress was started by the Board of Governors of the Federal Reserve to encourage and help preserve minority-owned banks that predominantly serve communities of underrepresented races and ethnicities. Despite this effort, the number of Black-owned banks declined from 48 in 2001 to 22 in 2019.51 The loss of local resources to aid in developing knowledge and strategies for capital investment is compounded by an environment in which creditworthiness and credit scoring are difficult to improve once credit is damaged and credit score falls, making it significantly harder to qualify for capital opportunities and banking services. Average credit scores by race tabulated in 2021 show Hispanic and Black Americans at the bottom of the ratings scale.52 One solution to addressing differential

credit by race and ethnicity is the development of Community Development Financial Institutions—private sector financial institutions that focus on personal lending, financial advising, and business development in distressed local communities in need of revitalization. Community Development Financial Institutions are a result of the Community Reinvestment Act of 1977, which was revised in 2020 and has been funded by the federal government specifically to ensure that real estate and business loans are available in communities affected by previous segregationist policies, including redlining. Innovations in policy and law addressing the opportunities for financial growth, greater retention of wealth, and financial security and stability will have a significantly positive effect on improving health in our communities at greatest risk.

#### **Access to Equitable Housing**

According to the AHA, "Housing is a prominent social determinant of cardiovascular health and well-being and should be considered in the evaluation of prevention efforts to reduce and eliminate racial/ethnic and socioeconomic disparities" and to improve cardiovascular health.53 Exclusionary policies affect multiple facets of life for Black, Hispanic/Latino, Native American, and Asian and Pacific Islander people in the United States, with access to housing and residential segregation policy as some of the most pernicious historic examples. The systematic sorting of people into certain neighborhoods or communities with historic and persistent economic and environmental disadvantages based on race or ethnicity has striking, long-standing, and far-reaching social, economic, and health consequences for individuals and communities.53,54 Although residential segregation was ended legislatively with the Fair Housing Act in 1968, residential segregation remains visible in the geography of cities and disproportionately affects available infrastructure (eg, green spaces, built environment, public transportation, broadband access), services (eg, social services, health care, public safety, affordable prekindergarten-grade 12 schools), and employment opportunities.

Historically, many communities of color experienced disinvestment, the deliberate withholding of financial support that encourages economic growth, resulting in difficulty in obtaining seed money, bank loans, and mortgages. Predominantly Black "redlined" communities received less government funding and were avoided by investors. After World War II, properties in these areas were deemed ineligible for mortgage programs offered under the GI bill to returning veterans, and veterans of color were unable to purchase properties in suburbs that were occupied predominantly by White people because of racist real estate practices and restrictive covenants. The Homeowners' Loan Corporation of 1933 that followed the Great Depression led to predominantly Black neighborhoods being labeled as hazardous investment

areas. This reduced opportunities for communities with majority Black populations to receive mortgages and loans under the Homeowners' Loan Corporation program. These policies helped create separate and unequal neighborhoods with ongoing devastating impact on opportunity and health outcomes.

Discriminatory housing policies and practices extend to other underrepresented racial and ethnic populations, including Hispanic/Latino individuals. As recently as 2019, an analysis of home-lending data showed that Hispanic/Latino homebuyers pay higher interest rates and fees, reducing their ability to become homeowners compared with their non-Hispanic White counterparts.<sup>56</sup> Evidence also demonstrates differential treatment of Asian American and Pacific Islander people in housing rental and sales markets, often being told that there are fewer available rental properties and being shown fewer units than their White counterparts.<sup>57</sup> American Indian and American Native (AI/AN) individuals, particularly those living on tribal lands, face a unique set of housing challenges, many of which are related to the legal status of lands on reservations. This poses a barrier to originating mortgages on properties located in Indian country.<sup>58</sup> Moreover, the colonization and forced displacement of indigenous populations from their native lands by the Indian Removal Act and other actions by the US federal government contribute to significant housing distress in these communities, including challenges with affordability, infrastructure inadequacy, overcrowding, and homelessness. Native Hawaiian and other Pacific Islander people make up nearly 40% of the population experiencing homelessness in Hawaii despite making up only ≈10% of the state's population as a whole.<sup>59</sup> In fact, between 2020 and 2022, Native Hawaiian and other Pacific Islander people experienced the highest increase in homelessness compared with all other racial and ethnic groups.60 Among Al/AN households living in tribal areas, 23% live in housing with a deficit in its physical condition compared with 5% all US households.58 Al/ AN individuals living in urban areas also face challenges in the housing market, with AI/AN borrowers having a higher share of high-cost home purchase and refinance loans and higher loan denial rates compared with White borrowers across income levels.61

In addition to exclusionary housing policies, road construction policies have had a demonstrable impact on intergenerational housing and health disparities. The policies and practices that governed the construction of major interstate highways have uprooted, displaced, and isolated previously economically and culturally vibrant neighborhoods composed predominantly of people with lower incomes or people from underrepresented racial and ethnic groups. Limited transportation options and availability contribute to increased marginalization and social exclusion of these communities from well-paying job opportunities and the resulting enhanced resources

and amenities. These policies have profound effects on health; multiple analyses document higher rates of cancer and cardiovascular disease and shorter life expectancies for Americans living in segregated communities and areas that were previously redlined.<sup>54,62-64</sup>

#### **Policy Implications**

Eliminating discrimination connected to acquiring home loans, leasing, local zoning, and land use; improving environmental conditions associated with public or federally subsidized housing; and integrating housing and health services are essential components of healthy housing policy strategy. The development and maturation of community partnerships with financial institutions are also integral to advancing housing equity, population health, and economic well-being. The AHA is well positioned to support and convene multidisciplinary stakeholders to inform policy opportunities at all levels of government that elevate the responsibility and accountability the finance industry to the communities where they live and in which they serve. Examples include alliances that are working to eliminate biases coded into the credit scoring system and in the assessment of eligibility for social programs, which derail the opportunity for many people from underrepresented racial and ethnic groups to rent or purchase homes.

Enhancing access to and adequacy of federal rental assistance programs is another important strategy to equitably expand access to high-opportunity neighborhoods for families with low to moderate incomes. For example, evidence demonstrates that more individuals use the tenant-based housing voucher program when the program includes financial assistance such as a security deposit or insurance incentives for landlords.<sup>65</sup> Widespread implementation of the Small Area Fair Market Rents program, in which voucher amounts can vary according to the neighborhood, also allows more lowerincome households to move into higher-rent and higheropportunity areas.<sup>66,67</sup> Generational home ownership can be promoted through curtailing the consequences of gentrification, which disrupt legacy homes and homeowners and diminish the social fabric of communities. Policies that reduce barriers to accessing first-time homebuyer and down-payment assistance programs should be advanced and targeted to individuals and families with low to moderate incomes and those from communities historically affected by discriminatory housing and lending practices to widen the pathway to home ownership.

New economic development should be brought into and operate in partnership with historically underresourced neighborhoods, predominantly communities of color, to not alienate, stigmatize, or force out existing residents but align with their economic and health interests and needs. Community-based development organizations may also help deliver opportunities for the missing middle of housing affordability, a category often beyond the interest and reach of profit-driven developers

but ineligible for public housing. Efforts must be made to equitably support the sustainability and financial health of community-based development organizations, particularly among government, philanthropic, or corporate funders, which are a primary source of revenue for these entities. The consequences of the Not in My Backyard Syndrome, or NIMBYism, referring to neighborhood opposition to the development of affordable, supportive, and transitional housing and other construction projects serving at-risk or otherwise marginalized populations in the local area, should also be addressed. These efforts should include policies that mitigate restrictive zoning practices, promote flexibility in housing types and densities across communities, and support fair housing and due process for affordable housing project denials.

All people, particularly those with disabilities or health conditions who are experiencing housing instability or homelessness, need access to housing opportunities that also support their specific functional, psychosocial, and medical needs. As an example, an unhoused patient with heart failure should be afforded basic opportunities to access housing with extended medical services such as screening for weight gain, a potential indicator of escalating volume overload, as well as onsite or telemonitoring opportunities for medical advice. Consideration should be given to opportunities to enhance housing affordability assistance for those experiencing financial distress and toxicity due to high medical costs associated with chronic disease and comorbidities.<sup>70</sup>

#### **Equitable Access to Education**

Structural racism and discrimination result in dramatic effects on one of the strongest predictors of cardiovascular health and disease: educational attainment. Inequities in access to high-quality education have denied generations of students in many predominantly Black and Brown communities across the United States the skills and opportunities to secure better-paying jobs and financial security, contributing to and perpetuating existing health disparities in these populations.

Residential segregation is perhaps the greatest contributor to educational disparities because investment in schools is driven largely at the local government level and affected by the local tax base. As a result, predominantly White school districts receive approximately \$23 billion more than non-White school districts serving a similar student population density, resulting in less funding per student in non-White districts and negatively affecting the quality of education and high school graduation rates at schools serving predominantly Black, Hispanic/Latino, and Native American students. Long-standing racial and ethnic disparities in educational attainment persist and mirror disparities in other socioeconomic metrics. For example, at every educational level, Black and Hispanic individuals have a lower income level than

their White counterparts.<sup>72</sup> In addition, the diminishing-returns hypothesis postulates that compared to their White counterparts, individuals from historically excluded racial and ethnic groups do not have the same improvements in health as their socioeconomic levels and education increase.<sup>73,74</sup> The effects of ongoing discrimination and racism contribute to this gap, even when accounting for socioeconomic status.<sup>75</sup>

The discriminatory application of "zero tolerance" policies that criminalize minor infractions of school rules is also having deleterious impacts on lower-income, historically marginalized communities, primarily Black, Hispanic/ Latino, Native American, and Asian and Pacific Islander populations. In addition to leading to lower rates of high school graduation, such policies create a perverse pipeline of students from underrepresented racial and ethnic groups to the criminal justice system.76 Additional consideration should be given to the disproportionate application of suspensions and expulsions of Black children.<sup>77</sup> Disparities in disciplinary practices and exclusionary policies are observed as early as preschool<sup>78</sup> and are associated with a multitude of negative student outcomes, including lower academic performance, higher dropout rates, failure to graduate on time, decreased academic engagement, and future disciplinary exclusion.<sup>79</sup>

The disparities recorded across school disciplinary and criminal justice systems extend to the enforcement of tobacco purchase, use, and possession laws that criminalize tobacco use and possession by minors, rather than holding the tobacco industry and retailers accountable for marketing and selling tobacco products to youth. Many school policies regulating the use and possession of tobacco products include punitive and exclusionary measures, including suspensions and expulsions for student violations. In the control of the c

#### **Policy Implications**

In the United States, public school financing is inextricably tied to the wealth of a community by property values and property taxes. Despite efforts over the years to address educational funding inequities stemming from the unequal affluence between communities, often separated by only a few streets or city blocks, many students still attend public schools in racially concentrated, highpoverty school districts; 78% of these institutions serve predominantly non-White student populations.71 In this context, allocation of resources to teachers and schools to narrow performance gaps should be proportional to the community needs. A strategy to engage policymakers and to change rules to equitably increase per-pupil allotments, especially for predominantly segregated and impoverished schools, stands as a concrete and vital next step in meeting the needs of schools that have been historically underresourced. Concurrently, advocacy efforts directed at expanding the construction of schools in areas that require them, reducing class sizes, implementing

rigorous curricula, and prioritizing the recruitment and retention of qualified teachers are necessary.

In addition, significant evidence demonstrates links between high-quality early care and education and positive school outcomes, economic stability, and better physical and mental health, with financial savings to society. Prioritizing the expansion of access to high-quality early care and education programs is essential because many children from families with low incomes, especially those from underrepresented racial and ethnic groups, continue to face significant barriers to affordable early care and education opportunities. The AHA continues to support federal appropriations for Head Start and Early Head Start, as well as access to high-quality, affordable childcare programs.

A comprehensive strategy for combating structural racism in education should extend its focus to college and higher education admissions policies, adopting a holistic approach that takes into account lived experiences and the profound impact of differential access to resources across the educational continuum. Overreliance on academic success alone fails to consider that not all students have had the same opportunities to access and engage in high-quality education programs. For many students from underrepresented and historically excluded racial and ethnic backgrounds, unequal access to higher education and enrichment narrows the pathway to successful employment, including in the medical workforce. Effort should be made to remove barriers for individuals from racially and ethnically underrepresented communities, particularly Black, Hispanic, and indigenous populations, to apply to and enroll in institutions of higher learning, including through policy interventions at the federal, state, and local levels that make collegiate, technical, and professional education more affordable and provide longitudinal social, academic, and professional support as they matriculate and beyond. In medical and health professions schools especially, effort should be made to recruit, retain, and support trainees from diverse backgrounds and to identify and address experiences of discrimination that contribute to higher rates of burnout and attrition.83,84 Additional consideration should be given to those students from underrepresented racial and ethnic backgrounds with intersecting excluded identities. Policies should also ensure continued and expanded support for historically Black colleges and universities and other minority-serving institutions.

As a science organization, the AHA is uniquely positioned to lead in the diversification of our workforce with science and education at the forefront. For example, the AHA launched the Supporting Undergraduate Research Experiences program for undergraduate students from diverse backgrounds, including a fully virtual alternative to an in-person laboratory experience. Early results from this program suggest that students reported significant gains in scientific proficiency.<sup>85</sup> Such pipeline programs

must begin as early as kindergarten and incorporate strategies to help mitigate structural, financial, and geographical barriers that impede full student engagement.

Training school staff to recognize their implicit biases and cultivating a positive school climate through the establishment of clear and consistent discipline policies that promote fairness, equity, and achievement for students are critical. These efforts should also include reducing inappropriate referrals of students to law enforcement, examining the role of law enforcement officers in schools, and expanding access to social support and mental health services for at-risk students.

#### **Environmental Health**

The policies of redlining and segregation noted earlier have contributed to higher levels of exposure to a broad range of pathogenic exposures for racial and ethnic minorities. For example, at every level of income, communities of color are exposed to higher levels of air pollution.86 Conditions of lower levels of tree canopy and higher urban heat are also present in the residential areas that were historically redlined.87 In addition, local zoning ordinances, or the lack thereof, have contributed to higher concentrations of garbage dumps, industrial plants, congested roads, and airports in neighborhoods of color.88,89 As a result, these neighborhoods are more likely to experience environmental exposures from ambient pollution associated with proximity to such enterprises, particularly in homes where there are older ventilation systems and high-density living units. These adverse exposures have had broad negative effects on cardiovascular risk factors and disease. 90,91 For example, exposures to ambient pollution and toxic metals are associated with heightened oxidative stress, autonomic dysfunction, hypertension, diabetes, and cardiovascular disease.92-96 Data also indicate associations between stroke and atherosclerosis risk and exposure to toxic metals such as lead from old pipes and industrial waste byproducts. 97,98 Furthermore, communities of color are less likely to have green spaces and recreational facilities that create opportunities for physical activity.99 The absence of a green canopy is linked to negative heat effects of climate change, in turn resulting in a higher ozone level, which has deleterious health effects. 100

#### **Policy Implications**

All communities need direct access to clean water and air. However, race is an independent predictor of pollution distribution regardless of income. For example, Black households with incomes between \$50000 and \$60000 live in neighborhoods that are more polluted than the average neighborhood of White households with incomes below \$10000.101 The concentrated and significant presence of environmental toxins in communities of color warrants greater investigation and pathways developed for mitigation. Many low-income neighborhoods and communities

of color have become environmental "sacrifice zones," or residences adjacent to heavily polluted industries with unequal or no environmental protection. Policy and legislative action supporting and encouraging business investment in advantageous community infrastructure, as well as partnerships with communities related to environmental problem solving, is also necessary. In addition, transportation and industrial infrastructure projects should assess community impact to ensure environmental justice and health equity.

Racial, ethnic, and socioeconomic diversity within planning teams is also imperative in addressing complex environmental issues. Processes of planning, policy development, and budgeting should engage relevant stakeholders and those communities most affected by environmental pollution and poor health outcomes in developing culturally sensitive and ecologically appropriate solutions.

At the medical professional society level, understanding and implementing safe and equitable environmental practices will require, for example, leveraging the network of the AHA's science and community stakeholders with governmental agencies to help advance environmental population and individual health-linked agendas. To achieve maximal impact, professional societies from various sectors should also collaborate with environmental justice organizations.

# ADDITIONAL ISSUES AT THE INTERSECTION OF STRUCTURAL RACISM AND HEALTH EQUITY

#### **Public Health and Data Infrastructure**

The COVID-19 pandemic has served as a reminder of the importance of a competent, capable, and adequately resourced public health and public health data infrastructure. Investment in public health is associated with better population health outcomes and increased life expectancy.<sup>102,103</sup> However, there is still an urgent need for an expanded role of and investments in public health to effectively address the persistent components contributing to health inequities. To do so, integration of the tenets of health equity into the framework and goals of a robust, structured, national public health system is critical. Local, state, and federal public health data systems need modernization and linkage with each other and with clinical care health system data systems to provide efficient, effective, and equitable results regardless of the health care need or crisis. An urgent need also exists for a comprehensive, nationwide data infrastructure that captures real-time individual-, local health system-, and population-level data in a standardized, representative manner, including race, ethnicity, and other structural and social determinants of health, and with sufficient granularity, that is, data disaggregation, to identify health inequities, to develop and implement solutions, and to track performance. Existing survey databases such as the National Health Interview Survey offer unique opportunities to understand the extent of racial and ethnic disparities in chronic disease prevalence, mortality, and access to care indicators on a population level. However, there are few to no data on perceived discrimination in these databases, which should be addressed. Other place-based, federally supported tools such as the Centers for Disease Control and Prevention Social Vulnerability Index<sup>104</sup> that measure health and social risk factors with an equity lens and help public health officials identify communities that need support should also be maintained and expanded.

The extensive overhaul of the public health data infrastructure must remain contemporary while being reformatted to facilitate rapid, accurate data collection, analysis, and interpretation for known and as-yet unknown health factors and communicable and non-communicable diseases. A fundamental principle for this refurbished data collection process and system must be that data be accessible to and usable by any and all stakeholders and be used to inform community engagement, planning, and investments and to spark systemic change rather than to further stigmatize and marginalize communities.

#### **Health Information Technology**

Affordability and equitable expansion of access to smart devices, computers, and broadband remain foundational to closing the digital divide and bringing essential clinical and nonclinical support services within reach for historically excluded populations. These efforts should include support for "health techquity" (universal broadband access) and active opposition to "digital redlining," or the systematic neglect or exclusion of lower-income neighborhoods from adequate broadband service by internet service providers. Racial and ethnic disparities in ownership of a traditional computer or access to home broadband continue to persist, with Black, Hispanic, Asian, and AI/AN adults consistently citing affordability as a primary barrier. 105,106 Policies can be implemented at the individual, health systems, and community levels to widen consumers' abilities to participate in an expanding digital health and health care ecosystem, including the Federal Communications Commission's Emergency Broadband Benefit for low-income families and digital health equity task forces within health institutions.107 Regulatory efforts at the federal level requiring internet service providers to equitably service every resident or business within their service geography, particularly in traditionally isolated, rural, or other similar environments, would also help reduce disparities in technology infrastructure.

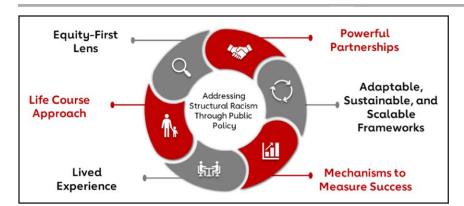


Figure. Principles for addressing structural racism through public policy.

### **Civic Engagement**

The AHA believes that an active and engaged electorate strengthens the ability of a community to overcome structural racism and barriers to equitable health. An engaged electorate includes greater voter participation in the election process, with a focus on preserving trust in and the integrity of elections and ensuring equitable voting opportunities for historically disenfranchised populations, which have systematically been denied the opportunity to inform, shape, and influence issues that directly affect their lives. 108 Similarly, the ability of communities to have the discretion and authority to actively pursue public policy that promotes the health and safety of their residents must be preserved, protected, and even expanded. Opposing efforts to preempt community authority to address their issues locally and work in allyship with organizations that promote and protect voting rights and elections is key for communities to have a true voice in the advancement of health, favorable social determinants of health, and health care. Such efforts may include promoting nonpartisan voter registration and participation in elections at the local, state, and federal levels, along with supporting equitable access to voting.

## PRINCIPLES FOR ADDRESSING STRUCTURAL RACISM THROUGH PUBLIC POLICY ADVOCACY

The AHA has developed a set of principles to guide its advocacy and to help provide a road map for successful policy agendas focused on mitigating structural racism (Figure).

- Public policy advocacy should be advanced with a lens toward equity, recognizing the complex interaction between intersecting identities (for example, race, ethnicity, class, sex, gender expression, sexual orientation) and social determinants of health.
- Public policies to address structural racism should be developed with a life course approach, considering the cumulative influence of social and environmental factors on health and well-being and the critical, intergenerational transition stages when intervention may be most impactful.

- Individuals with lived experience navigating structural racism have valuable insight that can inform the development of inclusive, culturally appropriate policies and interventions that respond effectively and authentically to the needs of communities. Mechanisms to engage those with lived experience—particularly patients, communities, and even colleagues from historically excluded or underrepresented racial and ethnic backgrounds—and to incorporate lived experience into decision-making around advocacy activities should be developed, implemented, and sustained. However, addressing structural racism and championing health equity should not be solely the responsibility of those individuals or groups with lived experience; everyone must be involved.
- To eliminate the impact of structural racism on economic, social, and health inequities, powerful partnerships within communities and across sectors and disciplines must be cultivated and maintained.
- Advocates should prioritize policies that are flexible, adaptable, and scalable.
- Effort should be made to support the development of well-defined goals, indicators, and data sources that promote accountability and facilitate the ability to adjudicate the success of policies and the organization's role in its successful adoption and implementation.

#### CONCLUSION

The influence of structural racism is embedded in the evolution of our country's social structures and how our cities and communities have been shaped. To advance health for all communities in the United States, the AHA and stakeholders across disciplines, sectors, and industries must address structural racism in policy and practice. The AHA commits to working with diverse stakeholders and partners to improve social determinants of health and to tackle the root causes of health inequities. Policies and initiatives at all levels of government that center efforts on key drivers of multisectoral, intergenerational inequities should be a key aspect of all work. With the help of our local communities and complementary programmatic efforts, the public poli-

cy opportunities outlined in this policy statement can serve as a crucial starting point to real, lasting change and an elevation of health equity for the generations to come.

#### ARTICLE INFORMATION

The American Heart Association makes every effort to avoid any actual or potential conflicts of interest that may arise as a result of an outside relationship or a personal, professional, or business interest of a member of the writing panel. Specifically, all members of the writing group are required to complete and submit a Disclosure Questionnaire showing all such relationships that might be perceived as real or potential conflicts of interest.

This advisory was approved by the American Heart Association Advocacy Coordinating Committee on November 3, 2023, and the American Heart Association Executive Committee on November 3, 2023. A copy of the document is available at https://professional.heart.org/statements by using either "Search for

Guidelines & Statements" or the "Browse by Topic" area. To purchase additional reprints, call 215-356-2721 or email Meredith.Edelman@wolterskluwer.com

The American Heart Association requests that this document be cited as follows: Albert MA, Churchwell K, Desai N, Johnson J, Johnson MN, Khera A, Mieres JH, Rodriguez F, Velarde G, Williams DR, Wu JC; on behalf of the American Heart Association Advocacy Coordinating Committee. Addressing structural racism through public policy advocacy: a policy statement from the American Heart Association. *Circulation*. 2024;149:e312–e329. doi: 10.1161/CIR.00000000000001203

The expert peer review of AHA-commissioned documents (eg, scientific statements, clinical practice guidelines, systematic reviews) is conducted by the AHA Office of Science Operations. For more on AHA statements and guidelines development, visit https://professional.heart.org/statements. Select the "Guidelines & Statements" drop-down menu, then click "Publication Development."

Permissions: Multiple copies, modification, alteration, enhancement, and distribution of this document are not permitted without the express permission of the American Heart Association. Instructions for obtaining permission are located at https://www.heart.org/permissions. A link to the "Copyright Permissions Request Form" appears in the second paragraph (https://www.heart.org/en/about-us/statements-and-policies/copyright-request-form).

#### **Disclosures**

#### **Writing Group Disclosures**

Writing group member	Employment	Research grant	Other research support	Speakers' bureau/ honoraria	Expert witness	Ownership interest	Consultant/ advisory board	Other
Michelle A. Albert	University of California, San Francisco	None	None	None	None	None	None	None
Keith Churchwell	Yale-New Haven Hospital	None	None	None	None	None	None	None
Nihar Desai	Yale School of Medicine	None	None	None	None	None	None	None
Janay Johnson	American Heart Association	None	None	None	None	None	None	None
Michelle N. Johnson	Memorial Sloan Kettering Cancer Center	None	None	None	None	None	None	None
Amit Khera	UT Southwestern Medical Center	None	None	None	None	None	None	None
Jennifer H. Mieres	Northwell Health	None	None	None	None	None	None	None
Fatima Rodriguez	Stanford University	None	None	None	None	None	None	None
Gladys Velarde	University of Florida-Jacksonville	None	None	None	None	None	None	None
David R. Williams	Harvard T.H. Chan School of Public Health	None	None	None	None	None	None	None
Joseph C. Wu	Stanford University	None	None	None	None	None	None	None

This table represents the relationships of writing group members that may be perceived as actual or reasonably perceived conflicts of interest as reported on the Disclosure Questionnaire, which all members of the writing group are required to complete and submit. A relationship is considered to be "significant" if (a) the person receives \$5000 or more during any 12-month period, or 5% or more of the person's gross income; or (b) the person owns 5% or more of the voting stock or share of the entity, or owns \$5000 or more of the fair market value of the entity. A relationship is considered to be "modest" if it is less than "significant" under the preceding definition.

#### **Reviewer Disclosures**

Reviewer	Employment	Research grant	Other research support	Speakers' bureau/honoraria	Expert witness	Ownership interest	Consultant/ advisory board	Other
Quinn Capers	University of Texas Southwestern	None	None	None	None	None	None	None
Nadine Gracia	Trust for America's Health	None	None	None	None	None	None	None
Zulqarnain Javed	Division of Health Equity & Disparities Research, Center for Outcomes Research, Houston Methodist Center for Outcomes Research	None	None	None	None	None	None	None
Modele O. Ogunniyi	Emory University	None	None	None	None	None	None	None

This table represents the relationships of reviewers that may be perceived as actual or reasonably perceived conflicts of interest as reported on the Disclosure Questionnaire, which all reviewers are required to complete and submit. A relationship is considered to be "significant" if (a) the person receives \$5000 or more during any 12-month period, or 5% or more of the person's gross income; or (b) the person owns 5% or more of the voting stock or share of the entity, or owns \$5000 or more of the fair market value of the entity. A relationship is considered to be "modest" if it is less than "significant" under the preceding definition.

#### REFERENCES

- Lawrence K, Keheler T. Chronic disparity: strong and pervasive evidence of racial inequalities. Paper presented at: Race and Public Policy Conference; November 11, 2004; Berkeley, CA.
- Tsao CW, Aday AW, Almarzooq ZI, Anderson CAM, Arora P, Avery CL, Baker-Smith CM, Beaton AZ, Boehme AK, Buxton AE; et al; on behalf of the American Heart Association Council on Epidemiology and Prevention Statistics Committee and Stroke Statistics Subcommittee. Heart disease and stroke statistics-2023 update: a report from the American Heart Association [published corrections appear in *Circulation*. 2023;147:e622 and *Circulation*. 2023;148:e4]. *Circulation*. 2023;147:e93-e621. doi: 10.1161/CIR.00000000000001123
- 3. Lloyd-Jones DM, Elkind M, Albert MA. American Heart Association's 2024 Impact Goal: every person deserves the opportunity for a full, healthy life. *Circulation*. 2021;144:e277-e279. doi: 10.1161/CIRCULATIONAHA.121.057617
- Churchwell K, Elkind MSV, Benjamin RM, Carson AP, Chang EK, Lawrence W, Mills A, Odom TM, Rodriguez CJ, Rodriguez F, et al; on behalf of the American Heart Association. Call to action: structural racism as a fundamental driver of health disparities: a presidential advisory from the American Heart Association. *Circulation*. 2020;142:e454-e468. doi: 10.1161/CIR.000000000000000936
- Centers for Disease Control and Prevention. COVID data tracker. 2022. Accessed November 15, 2022. https://covid.cdc.gov/covid-data-tracker/#demographicsovertime
- Rodriguez F, Solomon N, de Lemos JA, Das SR, Morrow DA, Bradley SM, Elkind MSV, Williams JH, Holmes D, Matsouaka RA, et al. Racial and ethnic differences in presentation and outcomes for patients hospitalized with COVID-19: findings from the American Heart Association's COVID-19 Cardiovascular Disease Registry. Circulation. 2021;143:2332–2342. doi: 10.1161/CIRCULATIONAHA.120.052278
- Wadhera RK, Figueroa JF, Rodriguez F, Liu M, Tian W, Kazi DS, Song Y, Yeh RW, Joynt Maddox KE. Racial and ethnic disparities in heart and cerebrovascular disease deaths during the COVID-19 pandemic in the United States. *Circulation*. 2021;143:2346–2354. doi: 10.1161/CIRCULATIONAHA.121.054378
- Smolderen KG, Spertus JA, Nallamothu BK, Krumholz HM, Tang F, Ross JS, Ting HH, Alexander KP, Rathore SS, Chan PS. Health care insurance, financial concerns in accessing care, and delays to hospital presentation in acute myocardial infarction. *JAMA*. 2010;303:1392–1400. doi: 10.1001/jama.2010.409
- Collins SR. Bhupal HK, Doty MM. Health insurance coverage eight years after the ACA: fewer uninsured Americans and shorter coverage gaps, but more underinsured. The Commonwealth Fund. 2019. Accessed November 15, 2022. https://commonwealthfund.org/sites/default/files/2019-02/ Collins\_hlt\_ins\_coverage\_8\_years\_after\_ACA\_2018\_biennial\_survey\_ sb.pdf
- Baumgartner JC, Collins SR, Radley DC, Hayes SL. How the Affordable Care Act has narrowed racial and ethnic disparities in access to health care. 2020. Accessed November 15, 2022. https://commonwealthfund. org/sites/default/files/2020-01/Baumgartner\_ACA\_racial\_ethnic\_ disparities\_db.pdf
- 11. Guth M, Garfield R, Rudowitz R. The effects of Medicaid expansion under the ACA: studies from January 2014 to January 2020. Kaiser Family Foundation. 2020. Accessed November 15, 2022. https://kff.org/report-section/the-effects-of-medicaid-expansion-under-the-aca-updated-findings-from-a-literature-review-report/
- Akhabue E, Pool LR, Yancy CW, Greenland P, Lloyd-Jones D. Association of state Medicaid expansion with rate of uninsured hospitalizations for major cardiovascular events, 2009-2014. *JAMA Netw Open.* 2018;1:e181296. doi: 10.1001/jamanetworkopen.2018.1296
- Khatana SAM, Bhatla A, Nathan AS, Giri J, Shen C, Kazi DS, Yeh RW, Groeneveld PW. Association of Medicaid Expansion With Cardiovascular Mortality. *JAMA Cardiol.* 2019;4:671–679. doi: 10.1001/jamacardio.2019.1651
- 14. Warner JJ, Benjamin IJ, Churchwell K, Firestone G, Gardner TJ, Johnson JC, Ng-Osorio J, Rodriguez CJ, Todman L, Yaffe K, et al; on behalf of the American Heart Association Advocacy Coordinating Committee. Advancing healthcare reform: the American Heart Association's 2020 statement of principles for adequate, accessible, and affordable health care: a presidential advisory from the American Heart Association. Circulation. 2020;141:e601–e614. doi: 10.1161/CIR.000000000000000759
- Snyder JE, Upton RD, Hassett TC, Lee H, Nouri Z, Dill M. Black representation in the primary care physician workforce and its association with

- population life expectancy and mortality rates in the US. *JAMA Netw Open.* 2023;6:e236687. doi: 10.1001/jamanetworkopen.2023.6687
- Balcazar HG, Byrd TL, Ortiz M, Tondapu SR, Chavez M. A randomized community intervention to improve hypertension control among Mexican Americans: using the Promotoras de Salud Community Outreach model. *J Health Care Poor Underserved*. 2009;20:1079–1094. doi: 10.1353/hpu.0.0209
- Victor RG, Lynch K, Li N, Blyler C, Muhammad E, Handler J, Brettler J, Rashid M, Hsu B, Foxx-Drew D, et al. A cluster-randomized trial of blood-pressure reduction in Black barbershops. N Engl J Med. 2018;378:1291–1301. doi: 10.1056/NEJMoa1717250
- 18. National Academy of Medicine. Community-driven health equity action plans. Accessed November 15, 2022. https://nam.edu/programs/culture-of-health/community-driven-health-equity-action-plans/#:~:text=A%20Community-Driven%20Health%20Equity%20Action%20Plan%20is%20meant,good%20health%20among%20local%20residents%20across%20the%20country
- USDA National Institute of Food and Agriculture. Food and nutrition security. Accessed July 5, 2023. https://nifa.usda.gov/topics/food-nutrition-security
- Lloyd-Jones DM, Allen NB, Anderson CAM, Black T, Brewer LC, Foraker RE, Grandner MA, Lavretsky H, Perak AM, Sharma G, et al; on behalf of the American Heart Association. Life's Essential 8: updating and enhancing the American Heart Association's construct of cardiovascular health: a presidential advisory from the American Heart Association. Circulation. 2022:146:e18-e43. doi: 10.1161/CIR.0000000000001078
- Arnett DK, Blumenthal RS, Albert MA, Buroker AB, Goldberger ZD, Hahn EJ, Himmelfarb CD, Khera A, Lloyd-Jones D, McEvoy JW, et al. 2019 ACC/AHA guideline on the primary prevention of cardiovascular disease: a report of the American College of Cardiology/American Heart Association Task Force on Clinical Practice Guidelines [published corrections appear in Circulation. 2019;140:e649–e650, Circulation. 2020;141:e60, and Circulation. 2020;141:e774]. Circulation. 2019;140:e596–e646. doi: 10.1161/CIR.000000000000000678
- New York Law School and Racial Justice Project. Unshared bounty: how structural racism contributes to the creation and persistence of food deserts (with American Civil Liberties Union). Racial Justice Project. 2012; Book 3.
   Accessed November 15, 2022. https://digitalcommons.nyls.edu/cgi/ viewcontent.cgi?article=1002&context=racial\_justice\_project
- Odoms-Young A, Bruce MA. Examining the impact of structural racism on food insecurity: implications for addressing racial/ethnic disparities. Fam Community Health. 2018;41(suppl 2, Food Insecurity and Obesity):S3–S6. doi: 10.1097/fch.0000000000000183
- 24. Thorndike AN, Gardner CD, Kendrick KB, Seligman HK, Yaroch AL, Gomes AV, Ivy KN, Scarmo S, Cotwright CJ, Schwartz MB; on behalf of the American Heart Association Advocacy Coordinating Committee. Strengthening US food policies and programs to promote equity in nutrition security: a policy statement from the American Heart Association [published correction appears in Circulation. 2022;146:e137]. Circulation. 2022;145:e1077–e1093. doi: 10.1161/CIR.000000000001072
- Coleman-Jensen A, Rabbit MP, Gregory CA, Singh A. Household food security in the United States in 2020. 2021. Accessed November 15, 2022. https://ers.usda.gov/publications/pub-details/?pubid=102075
- Jernigan VBB, Huyser KR, Valdes J, Simonds VW. Food insecurity among American Indians and Alaska Natives: a national profile using the current population survey-food security supplement. J Hunger Environ Nutr. 2017;12:1–10. doi: 10.1080/19320248.2016.1227750
- Sun Y, Liu B, Rong S, Du Y, Xu G, Snetselaar LG, Wallace RB, Bao W. Food insecurity is associated with cardiovascular and all-cause mortality among adults in the United States. *J Am Heart Assoc.* 2020;9:e014629. doi: 10.1161/JAHA.119.014629
- Feeding America. The impact of the Coronavirus on food insecurity in 2020 & 2021. 2021. Accessed November 15, 2022. https://feedingamerica.org/sites/default/files/2021-03/National%20Projections%20 Brief\_3.9.2021\_0.pdf
- Robinson RG, Barry M, Bloch M, Glantz S, Jordan J, Murray KB, Popper E, Sutton C, Tarr-Whelan K, Themba M, et al. Report of the Tobacco Policy Research Group on marketing and promotions targeted at African Americans, Latinos, and women. *Tob Control*. 1992;1:S24–S30. doi: 10.1136/tc.1.suppl1.s24
- Lempert LK, Glantz SA. Tobacco industry promotional strategies targeting American Indians/Alaska Natives and exploiting tribal sovereignty. *Nicotine Tob Res.* 2019;21:940–948. doi: 10.1093/ntr/nty048
- UConn Rudd Center for Food Policy & Obesity. Increasing disparities in unhealthy food advertising targeted to Hispanic and Black youth. 2019. Accessed November 15, 2022. https://media.ruddcenter.uconn.edu/PDFs/TargetedMarketingReport2019.pdf

- Berkeley Media Studies Group. PLACE: the 4 Ps of marketing-selling junk food to communities of color. 2019. Accessed January 13, 2023. https:// bmsg.org/wp-content/uploads/2019/07/bmsg\_place\_target\_marketing.pdf
- Bleich SN, Vercammen KA, Koma JW, Li Z. Trends in beverage consumption among children and adults, 2003-2014. Obesity (Silver Spring). 2018;26:432-441. doi: 10.1002/obv.22056
- Fleming-Milici F, Harris JL. Television food advertising viewed by preschoolers, children and adolescents: contributors to differences in exposure for Black and White youth in the United States. *Pediatr Obes*. 2018;13:103–110. doi: 10.1111/ijpo.12203
- 35. Harris JL, Fleming-Millici F, Phaneuf L, Jensen M, Choi YY, McCann M, Mancini S. Fast food advertising: billions in spending, continued high exposure by youth. UConn Rudd Center for Food Policy & Obesity. 2021. Accessed November 15, 2022. https://media.ruddcenter.uconn.edu/PDFs/FACTS2021.pdf
- Story M, French S. Food advertising and marketing directed at children and adolescents in the US. Int J Behav Nutr Phys Act. 2004;1:3. doi: 10.1186/1479-5868-1-3
- Grier S, Davis B. Are all proximity effects created equal? Fast food near schools and body weight among diverse adolescents. J Public Policy Marketing. 2013;32:116–128. doi: 10.1509/jppm.11.158
- Fryar CD, Carroll MD, Ahluwalia N, Ogden CL. Fast food intake among children and adolescents in the United States, 2015-2018. 2020. NCHS Data Brief No. 375. Accessed November 15, 2022. https://cdc.gov/nchs/data/databriefs/db375-h.odf
- Aladangady A, Forde A. Wealth inequality and the racial wealth gap. FEDS Notes. 2021. Accessed July 5, 2023. https://doi.org/10.17016/2380-7172.2861
- Darity W Jr, Hamilton D, Paul M, Aja A, Price A, Moore A, Chiopris C. What we get wrong about closing the racial wealth gap. 2018. Accessed November 15, 2022. https://socialequity.duke.edu/wp-content/uploads/2019/10/ what-we-get-wrong.pdf
- DeWitt L. The decision to exclude agricultural and domestic workers from the 1935 Social Security Act. Soc Sec Bull. 2010;70. Accessed November 15, 2022. https://ssa.gov/policy/docs/ssb/v70n4/v70n4p49.html
- Rodems R, Shaefer H. Left out: policy diffusion and the exclusion of Black workers from unemployment insurance. Soc Sci History. 2016;40:385– 404. doi: https://doi.org/10.1017/ssh.2016.11
- 43. Du Bois W. The Philadelphia Negro. University of Pennsylvania Press; 1899.
- Boen C, Keister L, Aronson B. Beyond net worth: racial differences in wealth portfolios and Black-White health inequality across the life course. J Health Soc Behav. 2020;61:153–169. doi: 10.1177/0022146520924811
- South E, Venkataramani A, Dalembert G. Building Black wealth: the role of health systems in closing the gap. N Engl J Med. 2022;387:844–849. doi: 10.1056/NEJMms2209521
- 46. US Department of Labor. Paid Family and Medical Leave fact sheet. 2022. Accessed July 5, 2023. https://dol.gov/sites/dolgov/files/WB/paid-leave/PaidLeavefactsheet.pdf#:~:text=Access%20to%20paid%20family%20 and%20medical%20leave%20can,in%20lower%20earnings%2C%20 wealth%20building%20and%20retirement%20security
- Zewde N. Universal baby bonds reduce Black-White wealth inequality, progressively raise net worth of all young adults. Rev Black Political Economy. 2020;47:3–19. doi: 10.1177/0034644619885321
- Hamilton D, Darity W Jr. Can "baby bonds" eliminate the racial wealth gap in putative post-racial America? Review Black Political Economy. 2010;37:207–216. doi: 10.1007/s12114-010-9063-1
- Dalembert G, Fiks A, O'Neill G, Rosin R, Jenssen BP. Impacting poverty with medical financial partnerships focused on tax incentives. NEJM Catalyst. 2021;2. doi: 10.1056/CAT.20.0594. https://catalyst.nejm.org/doi/ full/10.1056/CAT.20.0594
- Gerena C. Economic history: opening the vault. Federal Reserve Bank of Richmond. 2007;11. Accessed November 15, 2022. https://fraser. stlouisfed.org/title/3941/item/476937/toc/504086
- McKinney J. Looking back at the history of America's Black banks, even as they strive for vitality. Black Enterprise. 2019. Accessed November 15, 2022. https://blackenterprise.com/black-banks-struggle/
- 52. Broady K, McComas M, Ouazad A. An analysis of financial institutions in Black-majority communities: Black borrowers and depositors face considerable challenges in accessing banking services. 2021. Accessed November 15, 2022. https://brookings.edu/research/an-analysis-of-financial-institutions-in-black-majority-communities-black-borrowers-and-depositors-face-considerable-challenges-in-accessing-banking-services/
- 53. Sims M, Kershaw KN, Breathett K, Jackson EA, Lewis LM, Mujahid MS, Suglia SF; on behalf of the American Heart Association Council on Epidemiology and Prevention and Council on Quality of Care and Outcomes Research.

- Importance of housing and cardiovascular health and well-being: a scientific statement from the American Heart Association. *Circ Cardiovasc Qual Outcomes*. 2020;13:e000089. doi: 10.1161/HCQ.000000000000000089
- Williams DR, Collins C. Racial residential segregation: a fundamental cause of racial disparities in health. *Public Health Rep.* 2001;116:404–416. doi: 10.1093/phr/116.5.404
- Mitchell JFB. HOLC "redlining" maps: the persistent structure of segregation and economic inequality. National Community Reinvestment Coalition. 2018. Accessed November 15, 2022. https://ncrc.org/wp-content/ uploads/dlm\_uploads/2018/02/NCRC-Research-HOLC-10.pdf
- So A. Richardson J. Hispanic mortgage lending: 2019 HDMA analysis: National Community Reinvestment Coalition. 2019. Accessed November 15, 2022. https://ncrc.org/wp-content/uploads/dlm\_uploads/2020/11/ Hispanic-Mortgage-Lending-2019-HMDA-Analysis-v6.pdf
- Turner MA, Santos R, Levy DK, Wissoker D, Aranda C, Pitingolo R, The Urban Institute. Housing discrimination against racial and ethnic minorities 2012. US Department of Housing and Urban Development. 2013. Accessed November 15, 2022. https://huduser.gov/portal/Publications/pdf/HUD-514 HDS2012.pdf
- 58. Pindus N, Kingsley GT, Bless J, Levy D, Simington J, Hayes C, The Urban Institute. Housing needs of American Indians and Alaska Natives in tribal areas: a report from the Assessment of American Indian, Alaska Native, and Native Hawaiian Housing Needs. 2017. Accessed November 15, 2022. https://huduser.gov/portal/sites/default/files/ pdf/HNAIHousingNeeds.pdf
- US Department of Housing and Urban Development. Housing needs of Native Hawaiians: a report from the Assessment of American Indian, Alaska Native, and Native Hawaiian Housing Needs. 2017. Accessed July 5, 2023. https://huduser.gov/portal/sites/default/files/pdf/HNNH.pdf
- de Sousa T, Andrichik A, Cuellar M, Marson J, Prestera E, Rush K. The 2022 Annual Homelessness Assessment Report (AHAR) to Congress. 2022. Accessed July 5, 2023. https://huduser.gov/portal/sites/default/files/pdf/2022-AHAR-Part-1.pdf
- 61. Levy DK, Biess J, Baum A, Pindus N, Murray B. Housing needs of American Indians and Alaska Natives living in urban areas: a report from the Assessment of American Indian, Alaska Native, and Native Hawaiian Housing Needs. US Department of Housing and Urban Development. 2017. Accessed November 15, 2022. https://huduser.gov/portal/sites/default/files/pdf/NAHSG-UrbanStudy.pdf
- Diez Roux AV, Mair C. Neighborhoods and health. Ann NY Acad Sci. 2010;1186:125–145. doi: 10.1111/j.1749-6632.2009.05333.x
- Diez Roux AV, Merkin SS, Arnett D, Chambless L, Massing M, Nieto FJ, Sorlie P, Szklo M, Tyroler HA, Watson RL. Neighborhood of residence and incidence of coronary heart disease. N Engl J Med. 2001;345:99–106. doi: 10.1056/NEJM200107123450205
- Diez-Roux AV, Nieto FJ, Muntaner C, Tyroler HA, Comstock GW, Shahar E, Cooper LS, Watson RL, Szklo M. Neighborhood environments and coronary heart disease: a multilevel analysis. Am J Epidemiol. 1997;146:48–63. doi: 10.1093/oxfordjournals.aje.a009191
- 65. Bergman P, Chetty R, DeLuca S, Hendren N, Katz LF, Palmer C. Creating moves to opportunity: experimental evidence on barriers to neighborhood choice. National Bureau of Economic Research. 2020. Working Paper 26164. doi: 10.3386/w26164. https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&cad=rja&uact=8&ved=2ahUKEwiFhsH4kt aCAvVDk2oFHW41AzsOFnoECBEOAO&url=https%3A%2F%2Fwww.nber.org%2Fsystem%2Ffiles%2Fworking\_papers%2Fw26164%2Fw26164.pdf&usg=AOvVaw1eFtzk9KpfZb6RKfa4ifHu&opi=89978449
- 66. Bell A, Sard B, Koepnick B. Prohibiting discrimination against renters using housing vouchers improves results. 2018. Accessed November 15, 2022. https://cbpp.org/research/housing/prohibiting-discrimination-againstrenters-using-housing-vouchers-improves-results
- 67. Dastrup S, Finkel M, Burnett K, de Sousa T. Small area fair market rent demonstration evaluation: final report. US Department of Housing and Urban Development. 2018. Accessed November 15, 2022. https://urban.org/sites/default/files/2022-10/Financial%20Health%20of%20CBDOs%20Using%20IRS%20Data%20to%20Assess%20Sector%20Health.pdf
- Lo L, Scally CP, Lecy J, Kumari S. The financial health of community-based development organizations. The Urban Institute. 2022. Accessed November 15, 2022. https://urban.org/sites/default/files/2022-10/Financial%20 Health%20of%20CBDOs%20Using%20IRS%20Data%20to%20Assess%20Sector%20Health.pdf
- Ross J. Overcoming NIMBY opposition to affordable housing. National Low Income Housing Coalition. 2022. Accessed July 5, 2023. https://nlihc.org/ sites/default/files/2022-03/2022AG\_2-11\_Avoiding-Overcoming.pdf

CLINICAL STATEMENTS

- Khera R, Valero-Elizondo J, Nasir K. Financial toxicity in atherosclerotic cardiovascular disease in the United States: current state and future directions. J Am Heart Assoc. 2020;9:e017793. doi: 10.1161/JAHA.120.017793
- EdBuild. \$23 Billion. 2019. Accessed November 15, 2022. https://edbuild. org/content/23-billion/full-report.pdf
- Thomas J, Thomas DJ, Pearson T, Klag M, Mead L. Cardiovascular disease in African American and White physicians: the Meharry cohort and Meharry-Hopkins cohort studies. *J Health Care Poor Underserved*. 1997;8:270–283. doi: 10.1353/hpu.2010.0526
- Farmer MM, Ferraro KF. Are racial disparities in health conditional on socioeconomic status? Soc Sci Med. 2005;60:191–204. doi: 10.1016/j.socscimed.2004.04.026
- Albert M. Dr. Michelle Albert gives the 2022 Presidential Address at #AHA22. 2022. Accessed February 1, 2023. https://youtube.com/ watch?v=Rdv122VUiYA
- 75. National Center for Health Statistics. Indicator 4 snapshot: children living in poverty for racial/ethnic subgroups. 2019. Accessed November 15, 2022. https://nces.ed.gov/programs/raceindicators/indicator\_rads.asp#:~:text=The%20percentages%20of%20children%20living%20in%20poverty%20were,and%20Asian%20children%20%2811%20percent%20each%29.%20Figure%204S.2
- 76. APA Zero Tolerance Task Force; Skiba R, Reynolds CR, Graham S, Sheras P, Conoley JC, Garcia-Vazquez E. Are zero tolerance policies effective in the schools? An evidentiary review and recommendations. American Psychological Association. 2008. Accessed November 15, 2022. https://www.apa.org/pubs/reports/zero-tolerance-report.pdf
- US Department of Education Office for Civil Rights. Suspensions and expulsions in public schools. 2022. Accessed November 15, 2022. https://ocrdata.ed.gov/assets/downloads/Suspensions\_and\_Expulsion\_Part2.pdf
- 78. Gilliam WS, Maupin AN, Reyes CR, Accavitti M, Shic F. Do early educators' implicit biases regarding sex and race relate to behavior expectations and recommendations of preschool expulsions and suspensions? Yale University Child Study Center. 2016. Accessed November 15, 2022. https://files-profile.medicine.yale.edu/documents/75afe6d2-e556-4794-bf8c-3cf105113b7c?sv=2023-11-03&se=2023-12-11714%3A 12%3A55Z&sr=b&sp=r&sig=iV5cR3bUwQU k6FoO3vco8DhWBw3aifARoyPkXEMBumk%3D
- Lamont JH, Devore CD, Allison M, Ancona R, Barnett SE, Gunther R, Holmes B, Lamont JH, Minier M, Okamoto JK, et al; Council on School Health. Outof-school suspension and expulsion. *Pediatrics*. 2013;131:e1000–e1007. doi: 10.1542/peds.2012-3932
- Whitsel LP, Johnson JC. Addressing social and racial justice in public policy for healthy living. *Prog Cardiovasc Dis.* 2022;71:37–42. doi: 10.1016/j.pcad.2022.04.007
- 81. Public Health Law Center. Addressing student tobacco use in schools: alternative measures. 2018. Accessed November 15, 2022. https://publichealthlawcenter.org/sites/default/files/resources/Addressing-Student-Tobacco-Use-in-Schools-2019.pdf
- 82. Meloy B, Gardner M, Darling-Hammond L. Untangling the evidence on preschool effectiveness:insights for policymakers. Learning Policy Institute. 2018. https://edworkingpapers.org/sites/default/files/Untangling\_Evidence\_ Preschool\_Effectiveness\_REPORT.pdf
- Teshome BG, Desai MM, Gross CP, Hill KA, Li F, Samuels EA, Wong AH, Xu Y, Boatright DH. Marginalized identities, mistreatment, discrimination, and burnout among US medical students: cross sectional survey and retrospective cohort study. BMJ. 2022;376:e065984. doi: 10.1136/bmj-2021-065984
- Nguyen M, Chaudhry SI, Desai MM, Chen C, McDade WA, Fancher TL, Boatright D. Association of mistreatment and discrimination with medical school attrition. *JAMA Pediatr.* 2022;176:935–937. doi: 10.1001/jamapediatrics.2022.1637
- Ajayi TB, Mueller AL, Okwuosa IS, Barshilia A, Wu JC, Benjamin EJ, Barnett JV, Oliver KH. Innovations in undergraduate research training through multisite collaborative programming: American Heart Association Summer Undergraduate Research Experience Syndicate. J Am Heart Assoc. 2022;11:e022380. doi: 10.1161/JAHA.121.022380
- Lane HM, Morello-Frosch R, Marshall JD, Apte JS. Historical redlining is associated with present-day air pollution disparities in US cities. *Environ Sci Technol Lett*. 2022;9:345–350. doi: 10.1021/acs.estlett.1c01012
- Hoffman JS, Shandas V, Pendleton N. The effects of historical housing policies on resident exposure to intra-urban heat: a study of 108 US urban areas. Climate. 2020;8:12. doi: 10.3390/cli8010012
- Rugh JS, Massey DS. Racial segregation and the American foreclosure crisis. Am Sociol Rev. 2010;75:629–651. doi: 10.1177/0003122410380868

- Mohai P, Lantz PM, Morenoff J, House JS, Mero RP. Racial and socioeconomic disparities in residential proximity to polluting industrial facilities: evidence from the Americans' Changing Lives Study. Am J Public Health. 2009;99(suppl 3):S649–S656. doi: 10.2105/AJPH.2007.131383
- Cosselman KE, Navas-Acien A, Kaufman JD. Environmental factors in cardiovascular disease. Nat Rev Cardiol. 2015;12:627–642. doi: 10.1038/nrcardio.2015.152
- Al-Kindi SG, Brook RD, Biswal S, Rajagopalan S. Environmental determinants of cardiovascular disease: lessons learned from air pollution. *Nat Rev Cardiol.* 2020;17:656–672. doi: 10.1038/s41569-020-0371-2
- Simkhovich BZ, Kleinman MT, Kloner RA. Air pollution and cardiovascular injury epidemiology, toxicology, and mechanisms. J Am Coll Cardiol. 2008;52:719–726. doi: 10.1016/j.jacc.2008.05.029
- 93. Brook RD. Cardiovascular effects of air pollution. *Clin Sci (Lond)*. 2008;115:175–187. doi: 10.1042/CS20070444
- 94. Brook RD, Rajagopalan S, Pope CA 3rd, Brook JR, Bhatnagar A, Diez-Roux AV, Holguin F, Hong Y, Luepker RV, Mittleman MA, et al; on behalf of the American Heart Association Council on Epidemiology and Prevention, Council on the Kidney in Cardiovascular Disease, and Council on Nutrition, Physical Activity and Metabolism. Particulate matter air pollution and cardiovascular disease: an update to the scientific statement from the American Heart Association. Circulation. 2010;121:2331–2378. doi: 10.1161/CIROb013e3181dbece1
- Pope CA 3rd, Dockery DW. Health effects of fine particulate air pollution: lines that connect. J Air Waste Manag Assoc. 2006;56:709–742. doi: 10.1080/10473289.2006.10464485
- Rajagopalan S, Al-Kindi SG, Brook RD. Air pollution and cardiovascular disease: JACC state-of-the-art review. J Am Coll Cardiol. 2018;72:2054– 2070. doi: 10.1016/j.jacc.2018.07.099
- Solenkova NV, Newman JD, Berger JS, Thurston G, Hochman JS, Lamas GA. Metal pollutants and cardiovascular disease: mechanisms and consequences of exposure. Am Heart J. 2014;168:812–822. doi: 10.1016/j.ahj.2014.07.007
- Nigra AE, Ruiz-Hernandez A, Redon J, Navas-Acien A, Tellez-Plaza M. Environmental metals and cardiovascular disease in adults: a systematic review beyond lead and cadmium. *Curr Environ Health Rep.* 2016;3:416– 433. doi: 10.1007/s40572-016-0117-9
- Nardone A, Rudolph KE, Morello-Frosch R, Casey JA. Redlines and greenspace: the relationship between historical redlining and 2010 greenspace across the United States. *Environ Health Perspect* 2021;129:17006. doi: 10.1289/EHP7495
- Brunekreef B, Holgate ST. Air pollution and health. Lancet. 2002;360:1233–1242. doi: 10.1016/S0140-6736(02)11274-8
- Downey L, Hawkins B. Race, income, and environmental inequality in the United States. Social Perspect. 2008;51:759–781. doi: 10.1525/sop.2008.51.4.759
- 102. Mays GP, Smith SA. Evidence links increases in public health spending to declines in preventable deaths. *Health Aff (Millwood)*. 2011;30:1585– 1593. doi: 10.1377/hlthaff.2011.0196
- 103. Erwin PC, Mays GP, Riley WJ. Resources that may matter: the impact of local health department expenditures on health status. *Public Health Rep.* 2012;127:89–95. doi: 10.1177/003335491212700110
- 104. Centers for Disease Control and Prevention. CDC/ATSDR Social Vulnerability Index (SVI). Accessed July 5, 2023. https://atsdr.cdc. gov/placeandhealth/svi/fact\_sheet/pdf/GRASP-Social-Vulnerability-Index-v10262022.pdf
- 105. Atske S, Perrin A. Home broadband adoption, computer ownership vary by race, ethnicity in the U.S. 2021. Pew Research Center. Accessed November 15, 2022. https://pewresearch.org/fact-tank/2021/07/16/ home-broadband-adoption-computer-ownership-vary-by-race-ethnicity-in-the-u-s/
- National Consumer Law Center. Broadband service is a racial equity priority. 2020. Accessed November 15, 2022. https://nclc.org/wp-content/ uploads/2022/10/IB\_Broadband\_Racial\_Equity.pdf
- 107. Merid B, Robles MC, Nallamothu BK. Digital redlining and cardiovascular innovation. *Circulation*. 2021;144:913–915. doi: 10.1161/CIRCULATIONAHA.121.056532
- 108. Advancement Project. Voting behavior and the impact of the Black vote in 2018 mid-term elections. 2018. Accessed January 15, 2023. https:// advancementproject.org/news/new-polling-voting-behavior-and-theimpact-of-the-black-vote-in-2018-mid-term-elections/