PREVENTING CHRONIC DISEASE
PUBLIC HEALTH RESEARCH, PRACTICE, AND POLICY

RACISM IS A PUBLIC HEALTH CRISIS

Combating Racism Through Research, Training, Practice, and Public Health Policies

U.S. Department of Health and Human Services
Centers for Disease Control and Prevention

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Preventing Chronic Disease (PCD) is a peer-reviewed public health journal sponsored by the Centers for Disease Control and Prevention and authored by experts worldwide. PCD was established in 2004 by the National Center for Chronic Disease Prevention and Health Promotion with a mission to promote dialogue among researchers, practitioners, and policy makers worldwide on the integration and application of research findings and practical experience to improve population health.

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GUEST EDITORIAL

Combating Racism Through Research, Training, Practice, and Public Health Policies

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PEER REVIEWED

Racism is "a system [of power and oppression] of structuring opportunity and assigning value based on the social interpretation of how one looks (which is what we call "race") that unfairly disadvantages some individuals and communities, unfairly advantages other individuals and communities, and saps the strength of the whole society through the waste of human resources" (1). At a systems level, racism is a public health problem, threat, and crisis (2–4). Its presence in society's policies, practices, and programs creates inequities in access to vital conditions for health and well-being based on social ascriptions of race and ethnicity — resulting, for instance, in disparate access to and the quality of basic requirements for health and safety; residential neighborhood and housing options; developmental and educational experiences; and jobs, careers, and lifestyles (5–11). These inequities, in turn, produce and perpetuate disparities in health and disease experiences and outcomes. Because of its omnipresence, racism permeates every level of society, including the health care and public health sectors, creating racial and ethnic inequities in the operations of their infrastructures and, accordingly, in the delivery of essential services (12–21).

The work in this collection, "Combating Racism Through Research, Training, Practice, and Public Health Policies," captures insights on roles and actions taken in public health, medicine, and policy to eliminate racism as a public health threat. *Preventing Chronic Disease* solicited manuscripts to elucidate research, training, practice, and public health policy–based efforts that address topics ranging from the effects of racism and racial discrimination on psychological, mental, and emotional health and disease risk to institutional, organizational, or community policies and changes implemented to address institutional racism. Articles in this collection 1) link exposures to racial discrimination with morbidity among diverse populations; 2) detail implementation of multicomponent antiracist initiatives enacted in schools of public health, schools of medicine, and other university-affiliated units; and 3) elevate attention to underlying drivers of structural inequities in housing and to domains through which meaningful community engagement in health initiatives is achievable.

Racial Discrimination Experiences and Morbidity

The creation of racially and ethnically patterned differences in morbidity and mortality is well documented — covering many populations and health dimensions (7,22–26). However, continued expansion and updating of knowledge about how racism affects health, and who it affects, are critical to ensure that health care and public health remain capable of accounting for and mitigating the effects of all its manifestations. Original research by Reyes-Ortiz et al (27) demonstrates the continued salience of personally mediated racism and interpersonal racial discrimination as an emphasis toward which the performance of core functions must be directed and adapted.

Experiencing rejection, unfair treatment, or discrimination because of the meanings assigned to race, ethnicity, and skin color affects the odds of experiencing 2 or more chronic conditions concurrently in older adulthood among Colombians (27). Such experiences may increase or amplify the burden and complexity of multimorbidity patterns with which Columbian health care and public health systems must contend. They also may necessitate adoption of life course approaches to chronic disease management that are more socioecologically and clinically nuanced. Using racially informed, life course–anchored practice models may help assure equitable service delivery to older adults whose current health reflects culturally structured, race-related stress accumulated in social institutions during sensitive periods, developmentally significant social transitions, or ubiquitously over a lifetime (28–31).

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Implementation of Multicomponent Antiracist Initiatives in University-Affiliated Units

Academic organizations play an important role in perpetuating racism and its effects on health through institutional norms, pedagogy, and research practices (32–36). Several approaches to dismantling institutional racism are described in this collection. Rinderknecht et al (37) describe work to break down structurally racist processes and cultural barriers to entry into medical careers. They describe a novel longitudinal mentorship program for aspiring medical students who come from backgrounds underrepresented in medicine. Students articulated key areas they perceived as structurally racist barriers to successful medical school application, including difficulty with medical school entrance examination preparation, lack of mentorship, and financial considerations. Moreover, the authors describe a novel program in which racially and ethnically minoritized (hereinafter referred to as minoritized) medical students provide direct mentorship to aspiring racial and ethnic minority premedical students to help them overcome these barriers, resulting in increases in confidence and competencies required for successful medical school application. Their work provides a model for enhancing the entry of students from minoritized communities into medical and public health careers.

Both Allen et al (38) and Polston et al (39) describe efforts to eliminate institutional-level racism in schools of public health through organizational change efforts. Allen et al describe a comprehensive process at the University of California, Berkeley, whereby the organization is undergoing an active and transformative longitudinal process to embed antiracism throughout the school's culture and practices. Efforts focus on multiple facets of the school's community and culture, including improvement of faculty and workforce development, student experiences, curriculum and pedagogy, community outreach, and business processes. They describe robust efforts to collect data to drive assessment and accountability and provide an exemplar for similar efforts. Polston et al describe similarly motivated efforts at the University of North at Carolina Chapel Hill's Gillings School of Global Public Health, whereby student activism and grassroots efforts, including qualitative data collection and analysis, led to the development of an institutional Equity Task Force. The task force developed and implemented antiracism actions in 6 areas, including 1) transforming culture and climate; 2) enhancing teaching, mentoring, and training; 3) revisiting how faculty and staff performance are assessed; 4) strengthening recruitment and retention of minoritized faculty; 5) increasing transparency in student hiring and resources; and 6) improving equity research–oriented planning. They provide a planning tool to help guide others in creating an antiracist institutional culture.

The approach to pedagogy in institutions of health-related higher learning also represents an important focus for antiracism efforts (17,34,40). Specifically, a need exists to ensure students in health-related fields are well trained to recognize and dismantle racism and to develop strategies to eliminate racism in their future professional practice. Durham Walker et al (41) describe a community heath course at Morehouse School of Medicine that trains medical students to work with minoritized and disadvantaged individuals and communities. This service-learning course shifts the lens of pedagogy beyond a traditional patient-centric focus on pathology to a diagnosis and assessment of the health of communities. Coursework helps students learn to develop action plans to improve aspects of community health, providing students with foundational knowledge of the effect of racism on health. This work provides a model for others seeking to fundamentally change workforce views on racism and its harmful effects on health, and to activate health professionals to dismantle the effect of racism on health through action.

Academic organizations also promote and support research that has promulgated well-earned distrust of medical research (42,43). Lebow-Skelley et al (44) acknowledge research centers as entities that affect faculty, students, and surrounding communities and have the potential to dismantle historically systemically racist research practices. They describe efforts at Emory University's Rollins School of Public Health through the HERCULES environmental research program to 1) acknowledge and confront the university's history of slavery and dispossession and 2) recognize and act on the need to address systemic and institutional racism in research practices. They embrace antiracist actions to transform their approach to university and academic partnerships with the ultimate goals of improving trust and accountability and creating equity in academic–community partnerships that provide a model for others.

Drivers of Structural Inequities: Housing and Community Engagement

Health-based efforts to dismantle racism must eliminate racial and ethnic inequities in social determinants of health such as housing while maximizing community agency in health promotion and disease prevention (7–9,18,19,26,45). In her essay, Wonderly first encourages additional attention to housing as a particularly important social determinant of health. She links racial and ethnic disparities in COVID-19 risks and outcomes to inequities in housing access to further catalyze consideration of how housing costs, conditions, consistency, and contexts influence health, health care,

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and public health outcomes (46). Eliminating housing as a key arena where racial and ethnic health disparities are created requires interventions that expand and stabilize access to physically sound, high-quality, affordable housing in neighborhoods with robust environments, infrastructures, and institutions. Elevating humane housing as a vital condition for health as part of intersectoral action may aid in permanently expelling racism from this arena. Strategic integrations of Antiracist and Health and Equity in All Policies approaches could facilitate remediation of racist policies and practices that determine housing stock availability, neighborhood composition and resource allocations, and wealth accumulation opportunities associated with home ownership.

Although Wonderly's discussion of housing calls for addressing features of social structure, her treatment of meaningful community engagement urges committed investment in enhancing community agency. At base, she asserts that meaningful advancement of health equity and systems transformation can result from strengthening partnerships and alliances, expanding co-created community knowledge, designing community-relevant health and health care programs and policies, and cultivating thriving communities (46). Centering and embracing historically marginalized racial and ethnic communities as true action partners via concerted investment in such domains may diminish power imbalances and reduce health disparities resulting from structural racism. Significant strides in dismantling and healing the harms of racist systems can be made together with communities who feel engaged and who capably wield tools for systems change in a manner consistent with their felt needs and interests.

Conclusion and Directions Forward

The articles in this PCD collection provide inspiration for future efforts to dismantle racism in public health and medicine, and they also help identify gaps in the field for future progress. First, these articles demonstrate the need for continued efforts to link exposures to racial discrimination with morbidity experiences among minoritized individuals and communities. Studies could include efforts that elucidate interactions between racialized contexts in shaping health, such as specific life stages and settings for experiences of discrimination for discrete populations. Research could also include more sophisticated analyses of policies, such as redlining and resultant differences in built environments and health-promoting environments, which are associated with inequitable health outcomes. Regarding the former set of studies, examinations of how distinctive combinations of institutional policies of specific places reinforce social marginalization could help devise more robust tactics for pursuing equity with populations whose social positions are reinforced by particular racialization and multiple, overlapping minoritization processes. New discoveries here are key to overcome limitations of strategies for addressing racism through universal remediation — which ignore important within-population and between-population differences in structural positioning that can vary exposures to chronic stress and the availability of protective social and socioeconomic capital. In addition, actively considering intersections of multiple interlocking systems of privilege and oppression, such as racism, heterosexism, and cisgenderism, in shaping health allows health care and public health to be in a better position to address the compounded effects of these systems on physical and mental health (16,18,31,47–50). Each new effort here advances use of intersectional frameworks that give increasingly more relevant service to populations whose social positions relative to well-being are jointly determined by the many social systems, processes, and hierarchies stratifying society. Regarding the latter category of studies, analyses of interdependencies in nested policy hierarchies and networks governing racial equity and evidence-driven recommendations for altering them are crucial to demolish racist systems effectively and permanently. Better addressing enmeshed local, state and territorial, and national policies linked to racially disparate treatment and disproportionate impact could clear grounds upon which antiracist systems could be constructed.

The articles in this collection also highlight the need for educational institutions in medicine and public health to look within themselves to identify and dismantle fundamentally racist norms, pedagogies, and processes that perpetuate racist practices in clinical and public health practice and research. Efforts should examine and reform admissions and hiring practices, curricula, teaching and mentor training and hiring practices, approaches to retain and promote minoritized individuals and staff, and institutional partnerships and contracting practices. Strategies for effectively synergizing organizational change efforts of individual institutions to eliminate systemic racism require additional attention. Strides here are key to transforming racism initiatives within institutions into movements capable of tackling racism in health care and public health systems.

Increased attention is also needed to codify and actualize the imperative of meaningfully engaging community partners in focused efforts to address inequities in housing, food insecurity and poverty, and other "nonhealth" domains that affect health. We must find ways to make community-centered strategies that incorporate multisystemic, intersectional approaches our norm and mandate. Doing so may more effectively blend and leverage community and institutional assets, evidence, and know-how to address racism in all systems affecting health opportunity.

Additional gaps in ongoing work, not highlighted in this collection, should also be addressed. For example, the public health sector should become more actively engaged in efforts to dismantle

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policy-mediated causes of racial health inequities. Novel strategies, including partnerships with grassroots action efforts (ie, emanating from communities) that inform system changes could be pursued to stimulate action to develop or support implementation of antiracist policies. Similar strategic partnerships with other nonhealth sectors (eg, business, justice) for maximum effectiveness could create powerful alliances with the potential to influence social change in and across systems linked to racial and ethnic differences in health. Within the public health sector itself, work to synchronize and achieve strategic alignments of antiracist interventions in the areas of education, research, and public health practice will amplify and accelerate progress toward inseparable racial and health equity goals.

Lastly, further examination of the role of the COVID-19 pandemic in reinforcing the very systemic racism responsible for observed disproportionate burden of COVID-19 among some racial and ethnic minority populations should be contemplated as directions for future effort are considered. New longitudinal efforts here could describe and address the long-term consequences of systemic racism not only for the patterning of COVID-19 health disparities by race and ethnicity but also for the persistence and patterning of chronic disease disparities and inequities in the social determinants of health. These efforts could cover potential additional increases in morbidity and mortality that may occur among some racial and ethnic populations as COVID-19 becomes endemic. But they might also cover possible enduring functional limitations and chronic conditions that could be associated with complications of COVID-19, such as the development of 1) multisystem inflammatory syndrome in children, 2) multisystem inflammatory syndrome in adults, and 3) post-COVID-19 conditions (also known as long-COVID and postacute sequelae of SARS-CoV-2 infection). Additional variations in subsequent disproportionate effects by race and ethnicity on well-being for different age cohorts should also be explored. This exploration is suggested because the consequences of the COVID-19 pandemic for social development, social participation, social network density, and psychosocial resource availability likely also vary by chronological age and social placement during the life course within race and ethnicity. Lastly, the disparate systemic implications of COVID-19 for the socioeconomic positions, collective efficacy, and access of vital conditions for health and well-being (eg, humane housing, quality education, meaningful work and wealth) of racially and ethnically diverse communities should be continuously documented and addressed. Doing so may ensure that the increased attention to systemic linkages between racism, health, and well-being stimulated by COVID-19 and social injustices occurring during the past 3 years will be sustained and leveraged toward societal transformation.

At a health systems level, pandemic-associated racial and ethnic inequities in access to prevention and treatment should be further dissected and prospectively monitored. First, health systems research could continue to identify circumstances where access inequities existing before the onset of the COVID-19 pandemic may have been exacerbated (eg, access to screenings, treatments, or procedures for breast cancer) (51). Characterizing and addressing the differential effects of such access inequities on population health care trajectories across time is essential to prevent further expansion of health gaps that widened during the pandemic. Second, equitable receipt of COVID-19 vaccines, novel therapeutics (eg, monoclonal antibody therapies and oral antiviral therapeutics), and expedited treatment of individuals who received a positive test result for the virus remain essential to reduce disparities in severe COVID-19–associated illness and deaths that continue to affect some racial and ethnic minority populations (52–54). Accordingly, research that clarifies strong leverage points and tactics for severing pathways through which structural racism shapes inequities in access to such modalities among racially and ethnically diverse populations is important to improve enjoyment of the protective benefits of these interventions by people with higher risks for exposure to SARS-CoV-2 and for adverse outcomes. Moreover, evaluations of supply prioritization, allocation, and distribution strategies and resource triage protocols enacted during the pandemic may provide evidence that strengthens the case for giving precedence to racial equity considerations when deciding how to deploy scare resources as SARS-CoV-2 continues to evolve (54,55). Work in these 2 highlighted areas could secure health system changes that ensure all persons have fair and just opportunities to avoid, cope with, and recover from the effects of COVID-19, regardless of their race or ethnicity.

Ultimately, work to dismantle racist systems present in health will require multipronged efforts that draw on numerous strengths from within and outside health care and public health institutions. As this work moves forward, our fields are called to consider bold and innovative actions that have the potential to produce lasting change.

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ORIGINAL RESEARCH

Racial Discrimination and Multimorbidity Among Older Adults in Colombia: A National Data Analysis

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PEER REVIEWED

Summary

What is already known on this topic?

Studies that used US national databases found an association between discrimination and multimorbidity; these studies focused on adults and everyday discrimination measures.

What is added by this report?

This study is the first to use national data on an older population in a Latin American nation to investigate the relationship between racial discrimination and multimorbidity. We found additional racial discrimination measures associated with multimorbidity, including childhood racial discrimination and recent racial discrimination situations.

What are the implications for public health practice?

Early identification of exposure to racial discrimination would help to inform strategies for preventing multimorbidity.

Abstract

Introduction

Multimorbidity is a prevalent worldwide problem among older adults. Our objective was to assess the association between life-course racial discrimination and multimorbidity among older adults in Colombia.

Methods

We used data from the SABE (Salud, Bienestar y Envejecimiento) Colombia Study in 2015 (N = 18,873), a national cross-sectional survey among adults aged 60 years or older. The outcome was multimorbidity, defined as having 2 or more chronic conditions. The main independent variables were 3 racial discrimination measures: 1) everyday racial discrimination (yes or no), 2) childhood racial discrimination score (scored from 0 [never] to 3 [many times]), and 3) situations of racial discrimination in the last 5 years (scored from 0 to 4 as a sum of the number of situations [group activities, public places, inside the family, health centers]). Other variables were sociodemographic characteristics, diseases, economic or health adversity during childhood, and functional status. We used weighted logistic regression analyses to adjust for differences between groups.

Results

Multivariate logistic regression models showed that multimorbidity was significantly associated with experiencing everyday racial discrimination (OR, 2.21; 95% CI, 1.62–3.02), childhood racial discrimination (OR, 1.27; 95% CI, 1.10–1.47), and the number of situations of racial discrimination (OR= 1.56; 95% CI, 1.22–2.00). Multimorbidity was also independently associated with multimorbidity during childhood.

Conclusion

Racial discrimination experiences were associated with higher odds of multimorbidity among older adults in Colombia. Strategies to decrease life course experiences of racial discrimination may improve the health of older adults.

Introduction

Multimorbidity, the coexistence of 2 or more chronic conditions, is a common problem among older adults worldwide (1). Multimorbidity is associated with greater vulnerability to diseases or safety issues, less resistance to acute health threats, and elevated risk of death, disability, poor functional status, poor quality of life, and adverse drug events (1,2). Identifying risk factors or underlying causes would help in developing strategies for preventing multimorbidity. Multimorbidity is highly prevalent among older adults in Colombia, but its relationship with experiences of racial or ethnic discrimination has not been explored (3).

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In Latin America, racial discrimination based on skin color is a societal problem deeply rooted in the history of the region, which placed European conquerors and their descendants at the top of a racial and class-based hierarchy and enslaved Africans and subjugated Indigenous peoples at the bottom (4). Perceived discrimination has been associated with various adverse health outcomes among older adults, such as poor self-reported health, increased symptoms of depression, poor memory, chronic diseases, functional limitations, slow walking, recurrent falling, and shorter telomere length (5,6). One study in Puerto Rico identified a mediating relationship for social class between skin color and blood pressure, so complex sociocultural processes are at work between socially defined racial categories and health status (7). More studies have examined the associations between racial discrimination and single health conditions or diseases than have examined the relationship between racial discrimination and multimorbidity (8–11). One study using the National Survey of American Life with a sample of 5,191 African Americans found that people who experienced everyday discrimination and major discriminatory events were significantly more likely than those who did not experience any discrimination to report all types of multimorbidity (physical, psychiatric, mixed, any) (8). In another study, among 3,570 African Americans, everyday racial discrimination was associated with the total number of chronic health problems (9). In yet another study, which used data from the National Latino and Asian American Study and the National Survey of American Life, a significant positive association was found between perceived discrimination and chronic pain only among Hispanic respondents , not other racial and ethnic groups; no association was found between discrimination and chronic cardiovascular or respiratory conditions (10). In a study focused on 2,554 Hispanic adults in the US, everyday discrimination was associated with a greater count of chronic diseases (11).

Considering the multiple physical and mental health effects of racial discrimination on the older adult population in Colombia, we hypothesized that racial discrimination (everyday exposure, childhood events, or recent situations) would be independently associated with multimorbidity after adjusting for potential confounding factors. This relationship might be explained because people who have experienced racial discrimination may be frail and have risk factors commonly associated with multimorbidity, such as poor functional status and low physical performance (6). Moreover, racial and ethnic discrimination interact in a syndemic way with other adversities and social inequalities that increase the possibility of becoming ill or dying (12). The objective of this study was to assess the association between several measures of racial discrimination and multimorbidity among older adults in Colombia.

Methods

This study was a secondary analysis of data from the SABE (Salud, Bienestar y Envejecimiento) Colombia Study, a cross-sectional survey conducted in urban and rural areas in Colombia among adults aged 60 years or older. Participants provided informed consent in the original study, and the ethics committees of the University of Caldas and the University of Valle approved the study protocol (13). The de-identified data are publicly available for secondary analysis.

Design

SABE Colombia used a probabilistic, multistage, stratified sampling design. The survey was based on the national master sample for country population surveys in Colombia. Data were collected from April through September 2015 through interviews conducted in participants' homes. Response rates were 62% in urban areas and 77% in rural areas. The final sample, including 244 municipalities in all departments (like states in the US), consisted of 23,694 men and women aged 60 years or older (13). The structure of SABE Colombia was like the structure of the SABE surveys led by the Pan American Health Organization in 7 Latin American cities (14). A section on violence, abuse, or discrimination experiences developed for the Colombian context was added to the survey. Detailed information about the SABE Colombia study and the sampling method is available elsewhere (13).

Participants

Participants were eligible to participate in the survey if they were aged 60 years or older, could communicate with the research team, and provided written informed consent. At the beginning of each interview, the potential participant was administered the Folstein Mini-Mental State examination, a simple test of cognitive function (15); individuals who had a total score of less than 13 (of a total possible score of 30) were interviewed by proxy. We excluded from analysis participants with responses by proxy (n = 4,690; 17.5%) because they could not answer questions about discrimination and another 131 participants with missing values. These exclusions led to a final analytic sample of 18,873 participants aged 60 or older.

Outcome

The outcome variable for this study was multimorbidity, which was assessed by asking the respondent the question "Have you ever been told by a doctor or a nurse that you have . . . ?" for each of the following medical conditions: hypertension, diabetes,

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coronary heart disease, arthritis, stroke, chronic pulmonary obstructive disease, osteoporosis, a mental (nervous, cognitive, or psychiatric) problem, or cancer. These medical conditions were counted from 0 to 9. Multimorbidity was defined as the presence of 2 or more chronic conditions (1,2).

Primary independent variables

The interview was administered to the participant in a separate room if they lived with another person. The leading independent variable was self-reported experiences of discrimination, assessed by 3 questions, modified from discrimination scales described by Williams et al (16) and Krieger et al (17) and adapted from national population surveys on aging in Latin America (18). The first question addressed everyday racial discrimination: "Have you felt rejected or discriminated against because of your race or ethnicity?" This is a 1-item variable, yes or no.

The second question addressed childhood discrimination events due to skin color: "Thinking back to your childhood and when you went to school and college, did you ever feel rejected, discriminated against, treated badly or unfairly because of your skin color?" Possible responses to this 1-item variable were never (coded as 0), rarely (coded as 1), sometimes (coded as 2), and many times (coded as 3) for a total score from 0 to 3, with a higher score indicating more discrimination. For sensitivity analyses, we defined any childhood racial discrimination as having any (≥1) of the 3 options of having an experience of racial discrimination (rarely, sometimes, many times). Any childhood racial discrimination event was coded as 1, and no childhood racial discrimination event was coded as 0. In the SABE Colombia study, this variable was specifically constructed for racial and skin color discrimination and separated from the section on adverse childhood experiences. Childhood discrimination experiences are a part of lifetime discrimination as a person ages and should be considered an expanded measure of adverse childhood experiences (6).

The third question addressed recent situations of discrimination due to skin color: "In the last five years, at some point, you have felt discriminated against or treated unfairly because of your skin color in the following situations: 1) In meetings or group activities, 2) In public places (such as in the street, squares, shopping centers or markets, recreational centers, and transportation), 3) Within your family, and 4) In health centers, clinics, or hospitals." This was a 4-item variable. Each item was coded as 0 (never or rarely) or 1 (sometimes or many times). The total score was created by summing the 4 items for a score of 0 to 4, with a higher score indicating more discrimination. This measure has an internal consistency of 0.71 (Cronbach α). For sensitivity analyses, we defined any recent situation of racial discrimination as having any (≥1) of the 4 options. Any recent situation of racial discrimination event was coded as 1, and no situation of racial discrimination event was coded as 0.

Other characteristics

We included established risk factors for multimorbidity among community-dwelling older adults that were available in the database (1,2) and education, race, and socioeconomic stratum (SES), variables considered relevant in previous discrimination studies (4). Sociodemographic variables were age (years), sex (male or female), marital status (married or not married), education (low, defined as 0–5 years or high, defined as ≥6 years), race (self-reported as social construct as Black, Indigenous, Mestizo [people of mixed ancestry with a White European and an Indigenous background], White, mixed, or other), place of residence (urban or rural), private health insurance (yes or no) (private or "contributive" indicates people who pay for their health insurance; other categories were subsidized, other, or none), and SES (1 = low/low, 2 = low, 3 = medium/low, 4 = medium, 5 = medium/high, and 6 = high [4, 5 and 6 were merged because of small numbers]. Stratum 1 comprises people who live in very low-income housing with little access to infrastructure (eg, sewage) and pay only 50% of the real cost of public services (eg, water, electricity). Stratum 6 comprises people living in high-income housing, with access to well-developed infrastructure or utilities; they pay up to 20% more than the real cost of public services (19).

The survey used the Lawton Instrumental Activities of Daily Living (IADL) Scale (20) to evaluate the functional status of the participant in 6 activities (using the telephone, taking medications, managing finances, preparing meals, shopping, and using transportation). Scores range from 0 to 6, with lower scores signifying lower functional status and a score of 5 or less considered low. Obesity was defined as a body mass index of 30.0 or more (calculated as weight in kilograms divided by height in meters squared and based on weight and height measured during the interview). Physical activity was assessed by the question, "Do you walk, at least three times a week, between 9 and 20 blocks (1.6 km) without resting?" Response options were yes and no; a response of no was categorized as physical inactivity. Smoking status was assessed as current or former smoker versus nonsmoker. Other childhood-related factors were also included: self-perceived childhood economic situation (poor or fair vs good, with poor considered childhood economic adversity) and self-perceived childhood health status (poor or fair vs good, with poor considered childhood health adversity). We counted from 0 to 7 the number of the following childhood diseases reported by the participant:

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asthma, bronchitis, hepatitis, measles, renal disease, rheumatic fever, or tuberculosis. Childhood multimorbidity was defined as the presence of 2 or more childhood diseases.

Statistical analysis

We used complex survey analyses to weight data, adjusting for the sampling survey design. We calculated descriptive statistics such as percentages and means (SEs). We used Wald χ^2 tests (categorical variables) and analysis of variance (continuous variables) in bivariate analyses of multimorbidity and independent variables. Multivariate logistic regression models examined characteristics associated with multimorbidity, and odds ratios (ORs) with 95% CIs were calculated. We combined expert knowledge with a data-driven variable selection method to explore the robustness of our models. We used the best subset selection method, based on bivariate *P* values below .25, for further extensive testing of the model according to Akaike information criterion (21). We also evaluated collinearity and excluded SES and childhood health adversity from models. Relevant interaction terms were tested. The level of statistical significance was set at $P < .05$. We used SAS version 9.4 (SAS Institute, Inc) for all analyses.

Results

Study participants had a mean (SE) age of 68.4 (0.10) years; 53.6% were women, 45.9% were Mestizo, and 43.3% were classified as having a multimorbidity. For racial discrimination measures, 2.2% reported experiencing everyday racial discrimination, 4.6% reported experiencing childhood racial discrimination, and 3.1% reported experiencing any situation of racial discrimination in the last 5 years (Table 1).

In bivariate analyses, all racial discrimination measures were significantly associated with multimorbidity. The following factors were also associated with multimorbidity: older age, female sex, not being married, low level of education, higher SES, having private health insurance, urban residence, physical inactivity, no history of smoking, obesity, low IADL score, childhood health adversity, and childhood multimorbidity (Table 2).

In multivariate analysis, multimorbidity was significantly associated with everyday racial discrimination (OR, 2.21; 95% CI, 1.62–3.02) [Model 1], childhood racial discrimination score (OR, 1.27; 95% CI, 1.10–1.47) [Model 2], and number of situations of racial discrimination in the last 5 years (OR, 1.56; 95% CI, 1.22–2.00) [Model 3] (Table 3). Older age, female sex, low level of education, having private health insurance, urban residence, physical inactivity, obesity, low IADL score, and childhood multimorbidity were also independently associated with multimorbidity (Table 3). Sensitivity analyses also showed that any childhood racial discrimination (OR, 1.60; 95% CI, 1.18–2.18; $P = .002$) and any situation of racial discrimination (OR, 2.23; 95% CI, 1.30–3.83; $P = .004$) were independently associated with multimorbidity.

Discussion

We found that higher scores on multiple racial discrimination measures were significantly associated with higher odds of multimorbidity among adults aged 60 years or older in Colombia. This is one of the first studies on the topic that used a nationally representative sample of a country's older adult population. Everyday racial discrimination, a higher childhood racial discrimination score, and a higher number of racial discrimination situations were significantly associated with multimorbidity after controlling for confounding factors.

Our results agree in part with other studies in the US that reported associations between racial discrimination and single health conditions or multimorbidity (8–11).

We consider that racial discrimination, within the larger construct of racism, represents cumulative stress and chronic psychological trauma during a lifetime (22), resulting in an additional risk factor for multimorbidity. Thus, discrimination as a source of chronic psychosocial stress results in neuroendocrine, autonomic, and immune systems dysregulation (23), which eventually results in changes in health outcomes conducive to multimorbidity.

In addition, the stress from racial discrimination has psychological consequences such as depressive symptoms and anxiety (22) that could lead to negative lifestyle and health behaviors, such as substance abuse, unhealthy diet, sleep problems, or physical inactivity (24,25), which together may lead to multimorbidity (2). Discrimination has also been associated with allostatic load (26), which as multisystem physiologic dysregulation and inflammation, predisposes a person to developing diseases such as hypertension and chronic kidney disease (27). Further research is needed to untangle these relationships to identify the independent effects of discrimination on multimorbidity.

An additional finding was the independent association between exposure to childhood multimorbidity and multimorbidity in older adults. This agrees with previous research findings where childhood disease has a direct negative association with later-life health (28). It seems that early-life conditions underlie susceptibility to later developing other diseases (28). Lower SES and poorer health conditions in childhood were associated with a greater likelihood of reporting physician-diagnosed heart diseases, even after controlling for conditions in adulthood and older age (29). A potential explanatory mechanism is the cohort morbidity phenotype hy-

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pothesis, where higher levels of infections at younger ages will be positively associated with inflammation and diseases at older ages because early infectious exposures may increase the activation of inflammatory pathways throughout the life course (30).

The research results mentioned (26–30) are closely related to a recent study that reported that a persistent exposure to racial discrimination predicted elevated inflammation and, in turn, chronic illnesses after adjusting for SES and other variables (31). Thus, the association between early and later multimorbidity in our study and other studies (28–30), along with our findings that early and later exposures to racial discrimination were associated with multimorbidity, may have a common pathway by chronic inflammation and allostatic load (26,30,31). Therefore, early interventions related to such exposures may reduce their health burden into older ages.

Our findings have potential implications for public health and medicine. All types of discrimination, such as everyday racial discrimination, childhood racial discrimination, and racial discrimination situations, reflect cumulative psychological trauma that may have late health consequences in older adults (32), such as multimorbidity. Indeed, the issue is complex, where racial discrimination, a frequent psychosocial risk factor, is associated with the biomedical multimorbidity syndrome and, from an aging perspective, could merit further attention from those who provide health care to older adults.

Concerning clinical practice, younger patients prone to experiencing discrimination should be referred to counselors or therapists who can help them mitigate the stress they may experience after being exposed to racial discrimination. This therapy may reduce long-term negative health consequences such as depression, poor self-rated health, recurrent falling, and multimorbidity (5,6,8,28,29,32).

This study has some limitations. The cross-sectional design did not allow us to determine causality or the direction of the relationship. Retrospective recall in the data collection may have caused recall bias. In addition, the discrimination questions are asked at older ages and not at early ages. Thus, people might self-select on their reporting (eg, those affected are more likely to report it), resulting in an upward bias, because we cannot observe those who experienced discrimination but were not similarly adversely affected. However, our study has several strengths. The study sample is representative of the older population in Colombia. We showed that several measures of racial discrimination are associated with multimorbidity, a pervasive geriatric problem. This supports the idea that repetitive discrimination throughout a person's life may have later consequences in the development of multimorbidity.

Our findings open new areas of clinical and public health research by expanding the potentially harmful effect of lifetime racial discrimination exposure that should be considered in the pathway for multimorbidity.

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Tables

Table 1. Demographic Characteristics of Participants (N = 18,873) in the SABE (*Salud, Bienestar y Envejecimiento*) Colombia Study, 2015

Characteristic	Value[a]
Age, y	
60–64	36.5
65–69	26.8
70–74	17.7
≥75	19.0
Sex	
Male	46.4
Female	53.6
Race	
Black	6.0
Indigenous	5.1
Mestizo[b]	45.9
White	30.5
Mixed	3.3
Other	9.2
Marital status	
Not married	44.3
Married	55.7
Education, y	
0–5 (low)	70.0
≥6 (high)	30.0
Socioeconomic stratum	
1 (low/low)	25.9
2 (low)	39.9

[a] Unless otherwise indicated, values are weighted percentages.
[b] Defined as people of mixed ancestry with a White European and an Indigenous background.
[c] Defined as a body mass index ≥30.0, calculated as weight in kilograms divided by height in meters squared and based on weight and height measured during the interview.
[d] The Lawton Instrumental Activities of Daily Living Scale (20) evaluated the functional status of participants in 6 activities (using the telephone, taking medications, managing finances, preparing meals, shopping, and using transportation). Scores range from 0 to 6, with lower scores signifying lower functional status and a score ≤5 considered low.
[e] Survey asked about the following 7 childhood diseases: asthma, bronchitis, hepatitis, measles, renal disease, rheumatic fever, or tuberculosis.
[f] Question was, "Have you felt rejected or discriminated against because of your race or ethnicity?"
[g] Question was, "Thinking back to your childhood and when you went to school and college, did you ever feel rejected, discriminated against, treated badly or unfairly because of your skin color?"
[h] Scored from 0 to 3, with a higher score indicating more discrimination, based on following coding: never = 0, rarely = 1, sometimes = 2, and many times = 3.
[i] Question was, "In the last five years, at some point, you have felt discriminated against or treated unfairly because of your skin color in the following situations . . ."
[j] Each situation was coded as 0 (never or rarely) or 1 (sometimes or many times). Total score was created by summing the 4 items for a score of 0 to 4, with a higher score indicating more discrimination.
[k] Question was, "Have you ever been told by a doctor or a nurse that you have . . . ?" for each of the following medical conditions: hypertension, diabetes, coronary heart disease, arthritis, stroke, chronic pulmonary obstructive disease, osteoporosis, a mental (nervous, cognitive, or psychiatric) problem, or cancer. Multimorbidity was defined as the presence of ≥2 chronic conditions.

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(continued)

Table 1. Demographic Characteristics of Participants (N = 18,873) in the SABE (*Salud, Bienestar y Envejecimiento*) Colombia Study, 2015

Characteristic	Value[a]
3 (medium/low)	26.8
4,5, and 6 (medium, medium/high, and high)	7.4
Has private health insurance	
Yes	51.9
No	48.1
Place of residence	
Urban	80.2
Rural	19.8
Physical inactivity	
Yes	42.2
No	57.8
Smoking	
Former or current	52.9
Never	47.1
Obese[c]	
Yes	21.1
No	78.9
Functional status[d]	
Low	12.6
High	87.4
Childhood exposures	
Self-perceived economic adversity	
Yes	66.0
No	34.0
Self-perceived health adversity	

[a] Unless otherwise indicated, values are weighted percentages.
[b] Defined as people of mixed ancestry with a White European and an Indigenous background.
[c] Defined as a body mass index ≥30.0, calculated as weight in kilograms divided by height in meters squared and based on weight and height measured during the interview.
[d] The Lawton Instrumental Activities of Daily Living Scale (20) evaluated the functional status of participants in 6 activities (using the telephone, taking medications, managing finances, preparing meals, shopping, and using transportation). Scores range from 0 to 6, with lower scores signifying lower functional status and a score ≤5 considered low.
[e] Survey asked about the following 7 childhood diseases: asthma, bronchitis, hepatitis, measles, renal disease, rheumatic fever, or tuberculosis.
[f] Question was, "Have you felt rejected or discriminated against because of your race or ethnicity?"
[g] Question was, "Thinking back to your childhood and when you went to school and college, did you ever feel rejected, discriminated against, treated badly or unfairly because of your skin color?"
[h] Scored from 0 to 3, with a higher score indicating more discrimination, based on following coding: never = 0, rarely = 1, sometimes = 2, and many times = 3.
[i] Question was, "In the last five years, at some point, you have felt discriminated against or treated unfairly because of your skin color in the following situations . . ."
[j] Each situation was coded as 0 (never or rarely) or 1 (sometimes or many times). Total score was created by summing the 4 items for a score of 0 to 4, with a higher score indicating more discrimination.
[k] Question was, "Have you ever been told by a doctor or a nurse that you have . . . ?" for each of the following medical conditions: hypertension, diabetes, coronary heart disease, arthritis, stroke, chronic pulmonary obstructive disease, osteoporosis, a mental (nervous, cognitive, or psychiatric) problem, or cancer. Multimorbidity was defined as the presence of ≥2 chronic conditions.

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(continued)

Table 1. Demographic Characteristics of Participants (N = 18,873) in the SABE (*Salud, Bienestar y Envejecimiento*) Colombia Study, 2015

Characteristic	Value[a]
Yes	19.3
No	80.7
Childhood multimorbidity[e]	
Yes (≥2 childhood diseases)	10.7
No (≤1 childhood diseases)	89.3
Racial discrimination measures	
Everyday racial discrimination[f]	
Yes	2.2
No	97.8
Childhood racial discrimination[g]	
Never	95.5
Rarely	1.2
Sometimes	1.7
Many times	1.6
Any childhood racial discrimination (rarely, sometimes, or many times)	4.6
Childhood racial discrimination score, mean (SE)[h]	0.09 (0.01)
Total no. of situations of racial discrimination in last 5 years[i]	
None	96.9
In meetings or group activities	2.0
In public places	0.5
Within your family	0.4
In health centers, clinics, or hospitals	0.2
Any situation of racial discrimination (any of the 4 previous options)	3.1
No. of situations of racial discrimination in past 5 years, mean (SE)[j]	0.05 (0.01)
Outcome	

[a] Unless otherwise indicated, values are weighted percentages.
[b] Defined as people of mixed ancestry with a White European and an Indigenous background.
[c] Defined as a body mass index ≥30.0, calculated as weight in kilograms divided by height in meters squared and based on weight and height measured during the interview.
[d] The Lawton Instrumental Activities of Daily Living Scale (20) evaluated the functional status of participants in 6 activities (using the telephone, taking medications, managing finances, preparing meals, shopping, and using transportation). Scores range from 0 to 6, with lower scores signifying lower functional status and a score ≤5 considered low.
[e] Survey asked about the following 7 childhood diseases: asthma, bronchitis, hepatitis, measles, renal disease, rheumatic fever, or tuberculosis.
[f] Question was, "Have you felt rejected or discriminated against because of your race or ethnicity?"
[g] Question was, "Thinking back to your childhood and when you went to school and college, did you ever feel rejected, discriminated against, treated badly or unfairly because of your skin color?"
[h] Scored from 0 to 3, with a higher score indicating more discrimination, based on following coding: never = 0, rarely = 1, sometimes = 2, and many times = 3.
[i] Question was, "In the last five years, at some point, you have felt discriminated against or treated unfairly because of your skin color in the following situations . . ."
[j] Each situation was coded as 0 (never or rarely) or 1 (sometimes or many times). Total score was created by summing the 4 items for a score of 0 to 4, with a higher score indicating more discrimination.
[k] Question was, "Have you ever been told by a doctor or a nurse that you have . . . ?" for each of the following medical conditions: hypertension, diabetes, coronary heart disease, arthritis, stroke, chronic pulmonary obstructive disease, osteoporosis, a mental (nervous, cognitive, or psychiatric) problem, or cancer. Multimorbidity was defined as the presence of ≥2 chronic conditions.

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Table 1. Demographic Characteristics of Participants (N = 18,873) in the SABE (*Salud, Bienestar y Envejecimiento*) Colombia Study, 2015

Characteristic	Value[a]
Multimorbidity[k]	
Yes (≥2 conditions)	43.3
No (≤1 conditions)	56.7

[a] Unless otherwise indicated, values are weighted percentages.
[b] Defined as people of mixed ancestry with a White European and an Indigenous background.
[c] Defined as a body mass index ≥30.0, calculated as weight in kilograms divided by height in meters squared and based on weight and height measured during the interview.
[d] The Lawton Instrumental Activities of Daily Living Scale (20) evaluated the functional status of participants in 6 activities (using the telephone, taking medications, managing finances, preparing meals, shopping, and using transportation). Scores range from 0 to 6, with lower scores signifying lower functional status and a score ≤5 considered low.
[e] Survey asked about the following 7 childhood diseases: asthma, bronchitis, hepatitis, measles, renal disease, rheumatic fever, or tuberculosis.
[f] Question was, "Have you felt rejected or discriminated against because of your race or ethnicity?"
[g] Question was, "Thinking back to your childhood and when you went to school and college, did you ever feel rejected, discriminated against, treated badly or unfairly because of your skin color?"
[h] Scored from 0 to 3, with a higher score indicating more discrimination, based on following coding: never = 0, rarely = 1, sometimes = 2, and many times = 3.
[i] Question was, "In the last five years, at some point, you have felt discriminated against or treated unfairly because of your skin color in the following situations . . ."
[j] Each situation was coded as 0 (never or rarely) or 1 (sometimes or many times). Total score was created by summing the 4 items for a score of 0 to 4, with a higher score indicating more discrimination.
[k] Question was, "Have you ever been told by a doctor or a nurse that you have . . . ?" for each of the following medical conditions: hypertension, diabetes, coronary heart disease, arthritis, stroke, chronic pulmonary obstructive disease, osteoporosis, a mental (nervous, cognitive, or psychiatric) problem, or cancer. Multimorbidity was defined as the presence of ≥2 chronic conditions.

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Table 2. Results of Weighted Bivariate Analyses, by the Outcome Multimorbidity, Among Participants (N = 18,873) in the SABE (*Salud, Bienestar y Envejecimiento*) Colombia Study, 2015[a]

Characteristic	Multimorbidity, % (n = 7,821)	No multimorbidity, % (n = 11,052)	*P* value[b]
Age, y			
60–64	35.0	65.0	<.001
65–69	43.4	56.6	
70–74	47.4	52.6	
≥75	55.1	44.9	
Sex			
Male	31.4	68.6	<.001
Female	53.6	46.4	
Race			
Black	42.7	57.3	.17
Indigenous	37.9	62.1	
Mestizo[c]	42.9	57.1	
White	45.8	54.2	
Mixed	44.4	55.6	
Other	39.7	60.3	
Marital status			
Not married	48.5	51.5	.007
Married	39.1	60.9	
Education, y			
0–5 (low)	45.3	54.7	.04
≥6 (high)	41.1	58.9	
Socioeconomic stratum			
1 (low/low)	38.9	61.1	<.001
2 (low)	43.1	56.9	
3 (medium/low)	46.9	53.1	

[a] Unless otherwise indicated, values are weighted percentages. Question on multimorbidity was, "Have you ever been told by a doctor or a nurse that you have . . . ?" for each of the following medical conditions: hypertension, diabetes, coronary heart disease, arthritis, stroke, chronic pulmonary obstructive disease, osteoporosis, a mental (nervous, cognitive, or psychiatric) problem, or cancer. Multimorbidity was defined as the presence of ≥2 chronic conditions.
[b] Determined by Wald χ^2 tests (categorical variables) and analysis of variance (continuous variables); $P<.05$ considered significant.
[c] Defined as people of mixed ancestry with a White European and an Indigenous background.
[d] Defined as a body mass index ≥30.0, calculated as weight in kilograms divided by height in meters squared and based on weight and height measured during the interview.
[e] The Lawton Instrumental Activities of Daily Living Scale (20) evaluated the functional status of participants in 6 activities (using the telephone, taking medications, managing finances, preparing meals, shopping, and using transportation). Scores range from 0 to 6, with lower scores signifying lower functional status and a score ≤5 considered low.
[f] Survey asked about the following 7 childhood diseases: asthma, bronchitis, hepatitis, measles, renal disease, rheumatic fever, or tuberculosis.
[g] Question was, "Have you felt rejected or discriminated against because of your race or ethnicity?"
[h] Question was, "Thinking back to your childhood and when you went to school and college, did you ever feel rejected, discriminated against, treated badly or unfairly because of your skin color?"
[i] Scored from 0 to 3, with a higher score indicating more discrimination, based on following coding: never = 0, rarely = 1, sometimes = 2, and many times = 3.
[j] Question was, "In the last five years, at some point, you have felt discriminated against or treated unfairly because of your skin color in the following situations [4 situations listed, plus an option for zero]." Each situation was coded as 0 (never or rarely) or 1 (sometimes or many times). Total score was created by summing the 4 items for a score of 0 to 4, with a higher score indicating more discrimination.

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(continued)

Table 2. Results of Weighted Bivariate Analyses, by the Outcome Multimorbidity, Among Participants (N = 18,873) in the SABE (*Salud, Bienestar y Envejecimiento*) Colombia Study, 2015[a]

Characteristic	Multimorbidity, % (n = 7,821)	No multimorbidity, % (n = 11,052)	*P* value[b]
4,5, and 6 (medium, medium/high, and high)	46.2	53.8	
Has private health insurance			
Yes	47.4	52.6	<.001
No	38.8	61.2	
Place of residence			
Urban	45.1	54.9	<.001
Rural	35.7	64.3	
Physical inactivity			
Yes	54.5	45.5	<.001
No	35.1	64.9	
Smoking			
Former or current	38.8	61.2	<.001
Never	48.3	51.7	
Obese[d]			
Yes	57.2	42.8	<.001
No	39.6	60.4	
Functional status[e]			
Low	52.1	47.9	.002
High	39.6	60.4	
Childhood exposures			
Self-perceived economic adversity			
Yes	44.2	55.8	.29
No	41.5	58.5	
Self-perceived health adversity			

[a] Unless otherwise indicated, values are weighted percentages. Question on multimorbidity was, "Have you ever been told by a doctor or a nurse that you have . . . ?" for each of the following medical conditions: hypertension, diabetes, coronary heart disease, arthritis, stroke, chronic pulmonary obstructive disease, osteoporosis, a mental (nervous, cognitive, or psychiatric) problem, or cancer. Multimorbidity was defined as the presence of ≥2 chronic conditions.
[b] Determined by Wald χ^2 tests (categorical variables) and analysis of variance (continuous variables); $P<.05$ considered significant.
[c] Defined as people of mixed ancestry with a White European and an Indigenous background.
[d] Defined as a body mass index ≥30.0, calculated as weight in kilograms divided by height in meters squared and based on weight and height measured during the interview.
[e] The Lawton Instrumental Activities of Daily Living Scale (20) evaluated the functional status of participants in 6 activities (using the telephone, taking medications, managing finances, preparing meals, shopping, and using transportation). Scores range from 0 to 6, with lower scores signifying lower functional status and a score ≤5 considered low.
[f] Survey asked about the following 7 childhood diseases: asthma, bronchitis, hepatitis, measles, renal disease, rheumatic fever, or tuberculosis.
[g] Question was, "Have you felt rejected or discriminated against because of your race or ethnicity?"
[h] Question was, "Thinking back to your childhood and when you went to school and college, did you ever feel rejected, discriminated against, treated badly or unfairly because of your skin color?"
[i] Scored from 0 to 3, with a higher score indicating more discrimination, based on following coding: never = 0, rarely = 1, sometimes = 2, and many times = 3.
[j] Question was, "In the last five years, at some point, you have felt discriminated against or treated unfairly because of your skin color in the following situations [4 situations listed, plus an option for zero]." Each situation was coded as 0 (never or rarely) or 1 (sometimes or many times). Total score was created by summing the 4 items for a score of 0 to 4, with a higher score indicating more discrimination.

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(continued)

Table 2. Results of Weighted Bivariate Analyses, by the Outcome Multimorbidity, Among Participants (N = 18,873) in the SABE (*Salud, Bienestar y Envejecimiento*) Colombia Study, 2015[a]

Characteristic	Multimorbidity, % (n = 7,821)	No multimorbidity, % (n = 11,052)	*P* value[b]
Yes	49.8	50.2	.003
No	41.7	58.3	
Childhood multimorbidity (≥2 diseases)[f]			
Yes (≥2 childhood diseases)	56.5	43.5	<.001
No (≤1 childhood diseases)	41.7	58.3	
Racial discrimination measures			
Everyday racial discrimination[g]			
Yes	58.5	41.5	.005
No	42.9	57.1	
Any childhood racial discrimination[h]			
Yes	55.7	44.3	.02
No	42.7	57.3	
Childhood racial discrimination score, mean (SE)[i]	0.13 (0.01)	0.07 (0.01)	<.001
Total no. of situations of racial discrimination in last 5 years, mean (SE)[j]	0.07 (0.01)	0.03 (0.01)	.03
Any situation of racial discrimination in last 5 years			
Yes	60.2	39.8	.04
No	42.7	57.3	

[a] Unless otherwise indicated, values are weighted percentages. Question on multimorbidity was, "Have you ever been told by a doctor or a nurse that you have . . . ?" for each of the following medical conditions: hypertension, diabetes, coronary heart disease, arthritis, stroke, chronic pulmonary obstructive disease, osteoporosis, a mental (nervous, cognitive, or psychiatric) problem, or cancer. Multimorbidity was defined as the presence of ≥2 chronic conditions.
[b] Determined by Wald χ^2 tests (categorical variables) and analysis of variance (continuous variables); $P < .05$ considered significant.
[c] Defined as people of mixed ancestry with a White European and an Indigenous background.
[d] Defined as a body mass index ≥30.0, calculated as weight in kilograms divided by height in meters squared and based on weight and height measured during the interview.
[e] The Lawton Instrumental Activities of Daily Living Scale (20) evaluated the functional status of participants in 6 activities (using the telephone, taking medications, managing finances, preparing meals, shopping, and using transportation). Scores range from 0 to 6, with lower scores signifying lower functional status and a score ≤5 considered low.
[f] Survey asked about the following 7 childhood diseases: asthma, bronchitis, hepatitis, measles, renal disease, rheumatic fever, or tuberculosis.
[g] Question was, "Have you felt rejected or discriminated against because of your race or ethnicity?"
[h] Question was, "Thinking back to your childhood and when you went to school and college, did you ever feel rejected, discriminated against, treated badly or unfairly because of your skin color?"
[i] Scored from 0 to 3, with a higher score indicating more discrimination, based on following coding: never = 0, rarely = 1, sometimes = 2, and many times = 3.
[j] Question was, "In the last five years, at some point, you have felt discriminated against or treated unfairly because of your skin color in the following situations [4 situations listed, plus an option for zero]." Each situation was coded as 0 (never or rarely) or 1 (sometimes or many times). Total score was created by summing the 4 items for a score of 0 to 4, with a higher score indicating more discrimination.

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Table 3. Results of Weighted Multivariate Logistic Regression Analyses of Associations With Multimorbidity[a] Among Participants (N = 18,873) in the SABE (*Salud, Bienestar y Envejecimiento*) Colombia Study, 2015

Characteristic	Odds ratio (95% CI) [*P* value]		
	Model 1[b]	Model 2[c]	Model 3[d]
Age, y			
60–64	1 [Reference]	1 [Reference]	1 [Reference]
65–69	1.39 (1.18–1.64) [<.001]	1.40 (1.17–1.66) [<.001]	1.39 (1.17–1.65) [<.001]
70–74	1.61 (1.32–1.96) [<.001]	1.61 (1.31–1.97) [<.001]	1.61 (1.32–1.97) [<.001]
≥75	1.93 (1.66–2.24) [<.001]	1.95 (1.66–2.28) [<.001]	1.95 (1.68–2.26) [<.001]
Sex			
Male	1 [Reference]	1 [Reference]	1 [Reference]
Female	2.00 (1.80–2.22) [<.001]	1.98 (1.78–2.20) [<.001]	2.00 (1.80–2.23) [<.001]
Race			
Black	1.08 (0.75–1.55) [.66]	1.13 (0.80–1.59) [.49]	1.12 (0.80–1.60) [.52]
Indigenous	1 [Reference]	1 [Reference]	1 [Reference]
Mestizo[e]	1.14 (0.80–1.63) [.41]	1.14 (0.82–1.59) [.44]	1.15 (0.81–1.63) [.44]
White	1.19 (0.85–1.68) [.31]	1.18 (0.86–1.62) [.32]	1.17 (0.83–1.64) [.37]
Mixed	1.30 (0.70–2.44) [.41]	1.26 (0.70–2.28) [.44]	1.21 (0.65–2.24) [.55]
Other	0.93 (0.62–1.41) [.74]	0.91 (0.61–1.35) [.63]	0.89 (0.59–1.36) [.60]
Marital status			
Not married	1 [Reference]	1 [Reference]	1 [Reference]
Married	0.93 (0.80–1.08) [.33]	0.93 (0.81–1.07) [.30]	0.92 (0.79–1.07) [.30]
Education			
High	1 [Reference]	1 [Reference]	1 [Reference]
Low	1.19 (1.03–1.37) [.02]	1.18 (1.02–1.36) [.03]	1.17 (1.02–1.35) [.03]
Has private health insurance			

Abbreviation: —, does not apply.

[a] Question on multimorbidity was, "Have you ever been told by a doctor or a nurse that you have . . . ?" for each of the following medical conditions: hypertension, diabetes, coronary heart disease, arthritis, stroke, chronic pulmonary obstructive disease, osteoporosis, a mental (nervous, cognitive, or psychiatric) problem, or cancer. Multimorbidity was defined as the presence of ≥2 chronic conditions.

[b] Racial discrimination is main predictor; covariates were adjusted for all variables in the table.

[c] Childhood racial discrimination is main predictor; covariates were adjusted for all variables in the table.

[d] Total number of situations of racial discrimination is main predictor; covariates were adjusted for all variables in the table.

[e] Defined as people of mixed ancestry with a White European and an Indigenous background.

[f] Defined as a body mass index ≥30.0, calculated as weight in kilograms divided by height in meters squared and based on weight and height measured during the interview.

[g] The Lawton Instrumental Activities of Daily Living Scale (20) evaluated the functional status of participants in 6 activities (using the telephone, taking medications, managing finances, preparing meals, shopping, and using transportation). Scores range from 0 to 6, with lower scores signifying lower functional status and a score ≤5 considered low.

[h] Survey asked about the following 7 childhood diseases: asthma, bronchitis, hepatitis, measles, renal disease, rheumatic fever, or tuberculosis.

[i] Question was, "Have you felt rejected or discriminated against because of your race or ethnicity?"

[j] Question was, "Thinking back to your childhood and when you went to school and college, did you ever feel rejected, discriminated against, treated badly or unfairly because of your skin color?" Scored from 0 to 3, with a higher score indicating more discrimination, based on following coding: never = 0, rarely = 1, sometimes = 2, and many times = 3.

[k] Question was, "In the last five years, at some point, you have felt discriminated against or treated unfairly because of your skin color in the following situations [4 situations listed, plus an option for zero]." Each situation was coded as 0 (never or rarely) or 1 (sometimes or many times). Total score was created by summing the 4 items for a score of 0 to 4, with a higher score indicating more discrimination.

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Table 3. Results of Weighted Multivariate Logistic Regression Analyses of Associations With Multimorbidity[a] Among Participants (N = 18,873) in the SABE (*Salud, Bienestar y Envejecimiento*) Colombia Study, 2015

Characteristic	Odds ratio (95% CI) [*P* value]		
	Model 1[b]	Model 2[c]	Model 3[d]
No	1 [Reference]	1 [Reference]	1 [Reference]
Yes	1.41 (1.28–1.55) [<.001]	1.39 (1.25–1.53) [<.001]	1.41 (1.28–1.55) [<.001]
Residence			
Rural	1 [Reference]	1 [Reference]	1 [Reference]
Urban	1.44 (1.19–1.74) [<.001]	1.44 (1.19–1.75) [<.001]	1.43 (1.17–1.75) [<.001]
Physical inactivity			
No	1 [Reference]	1 [Reference]	1 [Reference]
Yes	1.68 (1.49–1.90) [<.001]	1.68 (1.48–1.90) [<.001]]	1.67 (1.48–1.88) [<.001]
Smoking status			
Never	1 [Reference]	1 [Reference]	1 [Reference]
Former or current smoker	0.88 (0.74–1.03) [.11]	0.88 (0.75–1.03) [.12]	0.87 (0.74–1.03) [.11]
Obese[f]			
No	1 [Reference]	1 [Reference]	1 [Reference]
Yes	1.76 (1.60–1.94) [<.001]	1.75 (1.59–1.94) [<.001]	1.77 (1.60–1.95) [<.001]
Functional status[g]			
High	1 [Reference]	1 [Reference]	1 [Reference]
Low	1.36 (1.19–1.55) [<.001]	1.36 (1.20–1.53) [<.001]	1.37 (1.20–1.55) [<.001]
Childhood exposures			
Childhood multimorbidity[h]			
No	1 [Reference]	1 [Reference]	1 [Reference]
Yes	1.86 (1.30–2.65) [<.001]	1.84 (1.28–2.63) [<.001]	1.85 (1.30–2.63) [<.001]

Abbreviation: —, does not apply.

[a] Question on multimorbidity was, "Have you ever been told by a doctor or a nurse that you have . . . ?" for each of the following medical conditions: hypertension, diabetes, coronary heart disease, arthritis, stroke, chronic pulmonary obstructive disease, osteoporosis, a mental (nervous, cognitive, or psychiatric) problem, or cancer. Multimorbidity was defined as the presence of ≥2 chronic conditions.

[b] Racial discrimination is main predictor; covariates were adjusted for all variables in the table.

[c] Childhood racial discrimination is main predictor; covariates were adjusted for all variables in the table.

[d] Total number of situations of racial discrimination is main predictor; covariates were adjusted for all variables in the table.

[e] Defined as people of mixed ancestry with a White European and an Indigenous background.

[f] Defined as a body mass index ≥30.0, calculated as weight in kilograms divided by height in meters squared and based on weight and height measured during the interview.

[g] The Lawton Instrumental Activities of Daily Living Scale (20) evaluated the functional status of participants in 6 activities (using the telephone, taking medications, managing finances, preparing meals, shopping, and using transportation). Scores range from 0 to 6, with lower scores signifying lower functional status and a score ≤5 considered low.

[h] Survey asked about the following 7 childhood diseases: asthma, bronchitis, hepatitis, measles, renal disease, rheumatic fever, or tuberculosis.

[i] Question was, "Have you felt rejected or discriminated against because of your race or ethnicity?"

[j] Question was, "Thinking back to your childhood and when you went to school and college, did you ever feel rejected, discriminated against, treated badly or unfairly because of your skin color?" Scored from 0 to 3, with a higher score indicating more discrimination, based on following coding: never = 0, rarely = 1, sometimes = 2, and many times = 3.

[k] Question was, "In the last five years, at some point, you have felt discriminated against or treated unfairly because of your skin color in the following situations [4 situations listed, plus an option for zero]." Each situation was coded as 0 (never or rarely) or 1 (sometimes or many times). Total score was created by summing the 4 items for a score of 0 to 4, with a higher score indicating more discrimination.

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(continued)

Table 3. Results of Weighted Multivariate Logistic Regression Analyses of Associations With Multimorbidity[a] Among Participants (N = 18,873) in the SABE (*Salud, Bienestar y Envejecimiento*) Colombia Study, 2015

Characteristic	Odds ratio (95% CI) [*P* value]		
	Model 1[b]	Model 2[c]	Model 3[d]
Racial discrimination measures			
Everyday racial discrimination[i]			
No	1 [Reference]	—	—
Yes	2.21 (1.62–3.02) [<.001]	—	—
Childhood racial discrimination score[j]	—	1.27 (1.10–1.47) [.001]	—
Total no. of situations of racial discrimination[k]	—	—	1.56 (1.22–2.00) [<.001]

Abbreviation: —, does not apply.

[a] Question on multimorbidity was, "Have you ever been told by a doctor or a nurse that you have . . . ?" for each of the following medical conditions: hypertension, diabetes, coronary heart disease, arthritis, stroke, chronic pulmonary obstructive disease, osteoporosis, a mental (nervous, cognitive, or psychiatric) problem, or cancer. Multimorbidity was defined as the presence of ≥2 chronic conditions.

[b] Racial discrimination is main predictor; covariates were adjusted for all variables in the table.

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ORIGINAL RESEARCH

Antiracism in Action: Development and Outcomes of a Mentorship Program for Premedical Students Who Are Underrepresented or Historically Excluded in Medicine

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PEER REVIEWED

Summary

What is already known on this topic?

While the US becomes increasingly diverse, Black, Latinx, Native American and Alaska Native, and other racial and ethnic minority groups remain underrepresented among US physicians. This disparity is associated with poor health outcomes in racial and ethnic minority populations.

What is added by this report?

Many previous interventions and mentorship programs aimed to diversify the health care workforce. We describe a novel and successful mentorship program run by racial and ethnic minority medical students and centered on antiracism in medicine.

What are the implications for public health practice?

Similar programs are likely to improve numbers of racial and ethnic minority physicians and reduce racial health disparities.

Abstract

Introduction

Black, Latinx, and Native American and Alaska Native people are underrepresented in medicine. The increasingly competitive medical school application process poses challenges for students who are underrepresented in medicine or historically excluded from medicine (UIM/HEM). The University of California, San Francisco–University of California, Berkeley (UCSF–UCB) White Coats for Black Lives Mentorship Program provides a novel and antiracist approach to mentorship for these premedical students.

Methods

The program recruited UIM/HEM premedical and medical students through a survey advertised by email, on the program's website, social media, and by word of mouth. The program paired students primarily with race-concordant mentors, all of whom were UCSF medical students. From October 2020 to June 2021, program mentees engaged in skills-building seminars based on an antiracism framework and received support for preparing medical school applications. The program administered preprogram and postprogram surveys to mentees, which were analyzed via quantitative and qualitative methods.

Results

Sixty-five premedical mentees and 56 medical student mentors participated in the program. The preprogram survey received 60 responses (92.3% response rate), and the postprogram survey received 48 responses (73.8% response rate). In the preprogram survey, 85.0% of mentees indicated that MCAT scores served as a barrier "a great deal" or "a lot," 80.0% indicated lack of faculty mentorship, and 76.7% indicated financial considerations. Factors that improved most from preprogram to postprogram were personal statement writing (33.8 percentage-point improvement, $P < .001$), peer mentorship (24.2 percentage-point improvement, $P = .01$), and knowledge of medical school application timeline (23.3% percentage-point improvement, $P = .01$).

Conclusion

The mentorship program improved student confidence in various factors influencing the preparation of medical school applications and offered access to skills-building resources that mitigated existing structural barriers.

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Introduction

Over the last century, despite the increasingly diverse US population, racial and ethnic diversity in the medical profession is stagnant. For example, the number of Black men who applied to medical school was lower in 2014 than in 1978 (1). As a consequence of historical and contemporary inequitable policies that systematically exclude racial and ethnic minority applicants, racial discordance persists. Black, Latinx, and Native American and Alaska Native people make up 5%, 5.8%, and 0.3% of US physicians, compared with 13.4%, 18.5%, and 1.5% of the US population, respectively (2,3).

These disparities result, in part, from historically racist policies, such as those resulting from the Flexner report (4). Published in 1910 to set medical education standards and practices, this report had a devastating effect on the racial makeup of medical schools and ultimately resulted in the closure of 13 historically Black colleges and universities that had been established between 1865 and 1904. An economic analysis of the effects of these closures determined that if this report had not been published, an additional 35,315 Black medical professionals would have been in the health care workforce in 2019 (4).

Racial discordance in the medical field likely perpetuates racially homogenous medical research, a lack of access to health care, and health disparities that disproportionately affect racial and ethnic minority groups (5). Black people in the US have the lowest life expectancy, and compared with their White counterparts, fare worse in maternal and childbirth outcomes and have higher rates of cancer, stroke, and hypertension (6). Increasing the number of racial and ethnic minority physicians would likely have a positive effect on reducing health disparities. Black and Latinx patients have a higher level of satisfaction with a racially concordant physician than with a physician from a different race (7), and physicians who are members of medically underserved racial or ethnic minority groups (Black, Latinx, or Native American/Alaska Native) are more likely than physicians who are not from medically underserved minority groups to provide health care to medically underserved populations (8).

Although mentorship programs exist for medical students who are underrepresented in medicine (UIM), or are "historically excluded in medicine" (HEM), few are run by medical students or physicians who identify as UIM/HEM. Moreover, to our knowledge, no current mentorship programs offer truly reparative solutions that mitigate structural barriers to navigating the medical school application process for racial and ethnic minority students.

The University of California, San Francisco–University of California, Berkeley, White Coats for Black Lives Mentorship Program (UCSF-UCB WC4BL) provides a novel and antiracist approach to mentorship and the development of pathway programs for UIM/HEM premedical students. The program uses antiracism as a framework for health professionals and trainees that incorporates critical perspectives to prepare individuals to directly address the root causes of race-based disparities in medicine and health care (9,10). This antiracist framework was operationalized through a series of seminars and workshops that incorporated the topics of restorative justice, multilevel systems of oppression, and imposter syndrome. Imposter syndrome is defined as "feelings of inferiority regardless of one's accomplishments and experiences. Imposter syndrome is often viewed as an experience that racially minoritized populations in higher education [encounter]" (11). Incorporating antiracism into the mentorship program included matching mentees with racially concordant mentors, comprehensive discussions on how systemic racism affects health care, scholarships for UIM/HEM premedical students, and tools on how to maintain well-being as racial and ethnic minority trainees in the medical field. The objective of our research was to describe the outcomes and lessons learned from this pilot program as a blueprint for antiracist UIM/HEM pathway programs.

Methods

Selection of mentees

The UCSF-UCB WC4BL medical-student leadership board selected UIM/HEM premedical and prehealth students or graduates from October 2020 to August 2021 for a year-long mentorship program organized by the UCSF-UCB chapter of the national WC4BL organization (www.whitecoats4blacklives.org). Potential mentees submitted applications, which included short personal statements and resumes, in August 2020. Volunteer mentors were UCSF medical students recruited in August 2020 from UIM/HEM student groups such as the Latino Medical Student Association, the Student National Medical Association, and other groups. The UCSF-UCB WC4BL leadership board, consisting of UIM/HEM medical students, reviewed all applications.

Eligibility criteria for mentee participation were 1) being a person from a UIM/HEM group as defined by the UCSF Office of Diversity and Outreach, with the option to self-identify, and 2) being on the premedical or prehealth track with at least first-year standing in an undergraduate institution (12). All applicants were accepted.

The mentorship program

Mentees were required to meet virtually with their mentors at least once per month from October 2020 through June 2021 and attend seminars to broaden their perspective on the field of medicine and

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learn key skills and information to be successful premedical students. Additionally, mentees were tasked with writing an op-ed that addressed an issue at the intersection of racism, health equity, and medicine, and in alignment with the mission of the program, they were asked to describe a plan of action for actualizing racial equity. This op-ed was an opportunity for students to apply the knowledge gained throughout the seminar series on antiracism in medicine and develop strategies and novel ideas to address structural issues affecting historically marginalized populations. At the start of the program, a virtual orientation was held, and instruction on op-ed writing was facilitated through a workshop. The UCSF-UCB WC4BL leadership board developed and coordinated virtual seminars on the medical school application process and other topics that were determined to be important for student success (Table 1). Mentees were also connected to clinical research and volunteer opportunities with the vaccine distribution program at UCB University Health Services to provide them with experiences vital to becoming successful medical student applicants.

The UCSF-UCB WC4BL program was made possible through The Big C (Big Community) Fee Referendum at UCB, which provides funding for student-initiated projects (13). Because this program was conducted for educational program quality improvement purposes, and not for research purposes, it did not require institutional review board review or approval.

Surveys

Mentees were sent 2 electronic surveys via email: a preprogram survey, administered on October 24, 2020, and a postprogram survey, administered on June 5, 2021, after completion of the program. The preprogram survey collected information on socioeconomic and demographic characteristics, including social and economic identity, gender identity, and racial and ethnic identity, and was used to pair mentees and mentors with similar interests and racial concordance. Both surveys asked about the extent to which certain factors posed barriers to their application to medical school and the extent of their confidence in certain aspects of their applications. Answer options were provided on a 5-point Likert scale ranging from "a great deal," "a lot," "a moderate amount," and "a little" to "none at all." Answer choices of "a great deal" and "a lot" were grouped together. Part of the postprogram survey used an adapted version of the Johns Hopkins Mentorship Effectiveness Scale (14). One question asked about stereotype threat, defined as the risk of confirming a negative stereotype about an individual's background such as their race, gender, or ethnicity (15). Lastly, the presurvey asked 4 open-ended questions: 1) What do you think is the biggest obstacle to developing an ideal mentor–mentee relationship? 2) How can your mentor best serve you? 3) What do you think most mentorship programs lack? and 4) Questions? Comments? Concerns?

Quantitative analysis

Data were collected, analyzed, and stored in Qualtrics (Qualtrics Software Company). For each question on confidence and barriers, we calculated the percentage of respondents who answered "a great deal" or "a lot." We linked data from the preprogram survey and postprogram survey and calculated percentage-point changes in confidence and barriers. We used the test of equal or given proportions in R studio (RStudio Team) to determine significant differences from preprogam to postprogram; $P \leq .05$ was considered significant. We also used this test to determine differences in demographic characteristics between our cohort and national data.

Qualitative analysis

Two independent coders used a latent, inductive approach to thematic content analysis and coded responses to the open-ended questions. Discrepancies in coding were resolved through team meetings. Several themes were identified by the coders, and the total number of responses that fit into these themes was recorded.

Ongoing program needs assessment

Given that this was a novel program, leadership continuously engaged mentees through conversations on mentorship needs that were not being met throughout the year. As program facilitators, it was necessary to be flexible and responsive to our cohorts' needs and barriers. We noted these factors informally.

Results

The mentorship program consisted of 65 premedical mentees and 56 medical student mentors. The preprogram survey received 60 responses (92% response rate), and the postprogram survey received 48 responses (74% response rate).

Mentee characteristics

Of the 60 mentees who responded to the preprogram survey, 24 (40.0%) identified as Black and 23 (38.3%) as Latinx (Table2), which was almost 4 times the percentage of Black and Latinx medical student applicants in the US (8.7% and 9.5%, respectively) (16). Fifty-five (92%) students in our cohort were UIM/HEM students.

Our cohort had a significantly greater proportion of students from a low socioeconomic background when compared with all medical students in the US (17) (43.3% vs 6.0%; $P < .001$). Similarly, our cohort had a significantly greater proportion of students who were first-generation college students when compared with US medical school matriculants in 2018–2019 (18) (43.3% vs 10.8%;

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$P < .001$). Lastly, our cohort had a higher proportion of gay, lesbian, bisexual, transgender, queer, intersex, and asexual (LGBTQIA+) students when compared with the percentage of LGBTQIA+ medical students in the US (19) (16.7% vs 9.3%; $P = .17$).

Barriers for UIM/HEM medical school applicants

Mentees reported many barriers to the medical school application process (Table 3). The factors that posed the greatest barriers to mentees in the preprogram survey were Medical College Admission Test (MCAT) scores, lack of faculty mentorship, and financial considerations: 85.0%, 80.0%, and 76.7% of students, respectively, indicated that these factors served as barriers a great deal or a lot.

The factors that improved most from preprogram to postprogram were as follows: personal statement development (33.8 percentage-point improvement, $P < .001$), peer mentorship (24.2 percentage-point improvement, $P = .01$), knowing the medical school application timeline (23.3 percentage-point improvement, $P = .01$), awareness of medical school professors who "look like me" (22.5 percentage-point improvement, $P = .02$), and faculty mentorship (21.7 percentage-point improvement, $P = .01$).

Many factors that had more than a 20.0 percentage-point improvement from preprogram to postprogram, such as personal statement development and knowledge of medical school application timeline, were reflected in the mentorship programming in seminars 1 (medical school application overview), 4 (personal statement workshop), 5 (open office hours), and 7 (nontraditional pathways and belonging).

Factors affecting mentee confidence

The factors that mentees were most confident about in the postprogram survey were knowledge of health equity (77.1%), being able to reach out to mentors in their medical school journey (72.9%), and identifying personal feelings of stereotype threat (72.9%). The factors that mentees gained the most confidence in from preprogram to postprogram were confidence in finding mentors (28.3 percentage-point improvement; $P < .001$) and confidence in their ability to identify their personal strengths (27.5 percentage-point improvement; $P < .001$). The factor that mentees had the least amount of confidence in in the postprogram survey was knowing what to do when they felt they had imposter syndrome (33.3%).

Key themes identified in qualitative analysis

We identified 5 key themes from the free-response text: 1) guidance through the medical school application process, 2) emotional support from mentors, 3) ability to be vulnerable with mentors, 4) tailored mentorship for UIM/HEM students, and 5) identity and race concordance (Table 4). For example, for the first theme, one mentee stated that they gained "insight into the application process . . . interview tips . . . and feedback on personal statement." For emotional support from mentors, one mentee stated they were reminded "how to stay grounded and motivated with so much injustice and constant reminders [UIM/HEM premed students] are "not good enough" or "do not belong." For the ability to be vulnerable with mentors, one mentee remarked they had difficulty with deciphering "when it is necessary to reach out to your mentor [while ensuring] you are not overbearing." For identity and race concordance, for example, one mentee stated that they highly valued "[s]hared background/life experience that can help with relatability and feeling understood" as a key strength in the relationship with their mentor.

Needs assessment

In response to informal conversations during the program year, WC4BL leadership developed new partnerships and seminars. A seminar series was launched on strengthening study strategies for the MCAT and a partnership was formed with the Princeton Review to provide mentees discounted MCAT preparation courses and an advisor at the Princeton Review who assisted mentees with planning their study strategy free of charge. Additionally, mentees were able to apply for scholarships from UCSF–UCB, and 5 mentees per semester were eligible to receive an additional stipend for contributions to program development. Because 43% of the mentees indicated being from a low-income background, this partnership and these scholarships were essential to alleviating a key structural barrier, financial disadvantage and resultant stress, while supporting students in their academic pursuits. Lastly, to address perceived barriers to faculty mentorship, we held 2 conferences during the year in which UIM/HEM faculty were invited to speak and connect with mentees, providing additional active support to students to mitigate structural barriers.

Discussion

It is clear from the literature (1–3,8) and analysis of the UCSF-UCB WC4BL mentee experience that specialized mentorship programs that center the needs of UIM/HEM students are successful and necessary to recruit future diverse health care professionals.

Several factors in the approach of the UCSF-UCB WC4BL mentorship program were unique and tailored to the mentorship of UIM/HEM students. These factors included having a leadership team composed of UIM/HEM medical students who had intimate knowledge of the UIM/HEM premedical lived experience. This factor was essential to the program's success in targeting the barriers UIM/HEM students face in their path to medical school. Additionally, the program used an antiracist framework, ensuring first

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that students were aware of key antiracism concepts such as power, privilege, and levels of oppression and intersectionality. The program also offered examples of systemic racism in the health care field and real-world first-hand narratives of UIM/HEM leaders in medicine, and equipped UIM/HEM students with the skills and self-care techniques necessary for successfully navigating a career in medicine. Furthermore, the program acknowledged and attempted to rectify structural barriers, such as lack of access to resources for MCAT preparation and access to racially concordant faculty mentors, through an equity-centered reparative approach.

This dynamic mentorship program was tailored to the needs of our mentees; we prepared preprogram surveys to understand what mentees identified as barriers in their medical school journey and created seminars based on this information. Additionally, we generated regular feedback throughout the year in discussions with mentors and mentees, to make changes to the program in real time.

Access to resources such as mentorship, knowledge of medical school application, and personal statement development were factors that improved the most from preprogram to postprogram. These findings suggest that our seminars, conferences, and one-on-one mentoring were effective in reducing mentees' barriers to applying to medical school.

The 5 themes identified through our qualitative analysis showed that racial concordance and shared background experience between mentees and mentors were key to the success of the program as determined by the mentees. In addition to recruiting UIM/HEM mentors, we held 2 conferences that featured UIM/HEM physicians and offered opportunities for career and social networking. This programming was deemed successful by mentees, who reported they were significantly more likely after the program than before the program to feel confident there were physicians who looked like them. These findings highlight the importance of recruiting and using mentors and role models with some shared identities and understanding of the unique experiences of racial and ethnic minority students who are pursuing careers in medicine.

The seminar series placed special attention on supportive messaging to prevent the possibility of imposter syndrome, provide guidance in the form of narratives from UIM/HEM medical students who had faced challenges in their own pathway to medical school, and offer novel strategies to find financial and material resources. However, we did not have seminars focused solely on financial barriers in medicine or how to diminish stereotype threat and imposter syndrome. The lack of this type of seminar may explain why financial issues and confidence in overcoming stereotype threat were 2 factors that did not improve as much as other factors from preprogram to postprogram. Future programming should create partnerships to provide additional resources in these areas.

From our partnership with the Princeton Review, we determined that it was essential to bring in outside expertise to provide tailored and detailed instructions for UIM/HEM students to be successful. In the future, we hope to partner with certified financial planners, mental health counselors that work with UIM/HEM in the health care field, and campus wellness resource groups. This strategy can contribute to the feasibility and sustainability of pathway development and mentorship programs by reducing strain on program leadership and stretching limited funding.

The mentorship program was made possible through UCB funding. Without continued funding, the program would not be sustainable. Our program relied on volunteers (ie, UIM/HEM medical students) to serve as mentors; future efforts must include financial support for these students, who are working to alleviate racial disparities and navigate their own future in medicine.

Lastly, simply increasing the numbers of UIM/HEM medical students is not enough to rectify the harmful effects of structural racism in the medical field. It is imperative that medical schools also take an antiracist approach in clinical and medical education. However, addressing this larger topic was outside the scope of our student-led initiative.

Limitations

Our study has several limitations. First, our cohort had limited gender diversity; 91.7% identified with the she/her series. Moving forward, we intend to increase gender diversity, especially considering the decreasing numbers of Black men in medicine (1). Second, we had only 1 Native American/Alaska Native mentee, and we aim to increase this number through partnerships with Tribal colleges and universities. Third, we could not calculate exact numbers of racial concordance between mentors and mentees, because we did not record the number of racially concordant mentee–mentor pairs. Fourth, the postprogram survey response rate was 74%, possibly as a result of self-selection bias: those who completed the postprogram survey may have benefited more from the program than those who were lost to follow-up. Fifth, the sample size of 65 premedical students was small, and as such, we cannot claim that our results are generalizable to other populations. Finally, we do not yet have data on the number of program participants who have been accepted to medical school. Future research will follow this cohort and assess the success rate of our program.

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Conclusion

To achieve the goal of racial equity in medicine, programs like the UCSF-UCB WC4BL pathway development program are essential. These programs must have leadership teams composed of UIM/HEM medical students and professionals and implement programming informed by antiracist practices for UIM/HEM students to be fully supported in their medical school journeys.

Of course, pathway development and mentorship programs alone cannot solve the devastating consequences of centuries of exclusionary policies. As this unique program has done, medical institutions must approach this problem with a reparative justice lens (20), pairing acknowledgment of these past harms with substantive efforts to repair and redress these harms with resources and support for UIM/HEM students. By actively centering antiracism and providing material support in the form of financial aid and preparation for exams, more programs can actualize a reparative justice approach to enhance future workforce diversification and eliminate racism in health care and beyond.

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Tables

Table 1. Monthly Seminar Series for Participants in White Coats for Black Lives (WC4BL) Mentorship Program, University of California, San Francisco–University of California, Berkeley, 2020–2021

Seminar topic	Learning objectives	Presenter
Fall 2020 programming		
Medical school application overview	• Review the multiple components of medical school applications such as general prerequisites, general application timeline, personal statements, letters of recommendations, MCAT • Identify scholarships and resources to afford costs of medical school applications	UCSF medical students
UCSF–UCB WC4BL UC PRIME Mentorship Conference	• Provide a networking opportunity for UC PRIME medical students and premedical undergraduate students • Foster dialogue on racism as a public health concern and discuss how to end racial discrimination in medical care • Prepare future physicians to be advocates for racial justice • Provide a framework for a successful mentee–mentor relationship	UCSF medical students
MCAT 101	• Review study strategies and organizational practices for MCAT readiness • Discuss paid and free MCAT study resources	UCSF medical students
Personal statements workshop	• Elucidate typical personal statement questions • Learn how to effectively write about personal experiences and difficult events • Provide a framework on asking for and implementing feedback	UCSF medical students
Open office hours	• Provide a space to ask questions about medical school applications, personal statements, the MCAT, and other topics • Receive feedback on writing pieces and personal statements	UCSF medical students
Spring 2021 programming		
AMCAS activities section overview	• Explore the significance of the “most meaningful activity” on AMCAS and strategize how to maximize writing about one's extracurricular activities • Learn how to engage in extracurricular activities during the pandemic	UCSF medical students
Nontraditional pathways and belonging	• Understand the differences between formal and informal postbaccalaureate programs • Identify and combat imposter syndrome	UCSF medical students
AMCAS overview	• Review the components of AMCAS • Examine resources to organize personal statements, letters of recommendation, and more	UCSF medical students
UC Berkeley public health literature and research seminar	• Learn how to approach public health literature research from a UC Berkeley Public Health librarian • Understand the tools to conduct literature research and analysis	UC Berkeley Public Health librarian
PRIME-US and WC4BL premedical conference	• Participate in a half-day conference catered to all groups of premedical students • Understand how you want to share a difficult topic into your application • Reframe the narrative of who we are as underrepresented minority students • Compare the pros and cons of a gap year between undergraduate and medical school • Break down the different components of the medical school application process	Keynote speakers: Leticia Rolón, MD, and Ronald L. Copeland, MD, FACS Physicians and UCSF medical students

Abbreviations: AMCAS, American Medical College Application Service; MCAT, Medical College Admission Test; PRIME-US, Program in Medical Education for the Urban Underserved at UCSF; UCB, University of California, Berkeley; UC PRIME, University of California Programs in Medical Education; UCSF, University of California, San Francisco; URM, underrepresented minority.

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Table 2. Characteristics of Participants in White Coats for Black Lives Mentorship Program, University of California, San Francisco–University of California, Berkeley, 2020–2021[a]

Characteristics	No. (%) (n = 60)
Social and economic identity	
Low socioeconomic background	26 (43.3)
First-generation college student	26 (43.3)
LGBTQIA+	10 (16.7)
Gender identity (pronouns)	
She/her series	55 (91.7)
He/him series	5 (8.3)
Racial and ethnic identity[b]	
Black	24 (40.0)
Latinx	23 (38.3)
Filipinx/a/o	6 (10.0)
Non-Hmong, Non-Filipinx/a/o, or non-Vietnamese Asian	4 (6.7)
Pacific Islander	2 (3.3)
Hmong, Vietnamese, Cambodian, Laotian, Thai, Burmese	2 (3.3)
Afro-Latinx	1 (1.7)
Southeast Asian (Nepalese)	1 (1.7)
Native American or Alaska Native	1 (1.7)
Year in school	
Freshman (college)	1 (1.7)
Sophomore (college)	7 (11.7)
Junior (college)	14 (23.3)
Senior (college)	7 (11.7)
Postbaccalaureate/masters	13 (21.7)
Nontraditional student	14 (23.3)
Other	4 (6.7)

Abbreviation: LGBTQIA+, lesbian, gay, bisexual, transgender, queer, intersex, asexual.
[a] Data collected from the preprogram survey; of the 65 students who participated in the program, 60 completed the preprogram survey.
[b] Participants could choose >1 race or ethnicity.

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Table 3. Preprogram and Postprogram Barriers and Confidence in Applying to Medical School and Career in Medicine Among Participants (N = 65) in White Coats for Black Lives Mentorship Program, University of California, San Francisco–University of California, Berkeley, 2020–2021

Survey question	Preprogram, %[a] (n = 60)	Postprogram, %[a] (n = 48)	Percentage-point change	*P* value[b]
To what extent does the following serve as a barrier for medical school application?				
My MCAT (current or anticipated) test scores	85.0	75.0	−10.0	.14
Lack of faculty mentorship	80.0	58.3	−21.7	.01
Financial considerations	76.7	72.9	−3.8	.63
My personal statement	73.3	39.6	−33.8	<.001
Awareness of medical school professors that look like me	68.3	45.8	−22.5	.02
Lack of peer mentorship	61.7	37.5	−24.2	.01
Racism (in any way you perceive this)	61.7	62.5	+0.8	>.99
Knowing the medical school application timeline	48.3	25.0	−23.3	.01
Indicate the extent of your confidence in the following factors				
I am confident that I can reach out to mentors throughout my journey.	55.0	72.9	+17.9	.01
I am confident in my knowledge of health equity.	53.3	77.1	+23.8	<.001
I am confident that I can identify personal feelings of stereotype threat.	48.3	72.9	+24.6	<.001
I am confident that I will apply the self-care techniques that I know, when I feel I need them.	41.7	64.6	+22.9	.002
I am confident that I will gain acceptance into medical school.	25.0	45.8	+20.8	.003
I am confident that I can identify all my personal strengths.	18.3	45.8	+27.5	<.001

Abbreviation: MCAT, Medical College Admission Test.
[a] Answer options were provided on a 5-point Likert scale ranging from “a great deal,” “a lot,” “a moderate amount,” and “a little” to “none at all.” Answer choices of “a great deal” and “a lot” were grouped together and calculated as percentages.
[b] Test of equal or given proportions in R studio (RStudio Team) was used to determine significant differences from preprogam to postprogram; $P \leq .05$ was considered significant.

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Table 4. Mentee Quotes Representative of Key Themes Identified by Cohort Analysis, White Coats for Black Lives Mentorship Program, University of California, San Francisco–University of California, Berkeley, 2020–2021[a]

Themes	Representative quotes	No. (%) (n = 60)[b]
Guidance through medical school application process	1) [I]insight into the application process 2) interview tips: especially tips on how to navigate microaggressions on the interview trail 3) feedback on personal statement: how much is too much to share related to traumas that have shaped my drive to pursue medicine 4) strengthen my "why medicine" pitch.	29 (48.3)
Emotional support	[H]ow to stay grounded and motivated with so much injustice and constant reminders we are "not good enough" or do not belong. . . [H]ow to feel valued and not "othered" when our values do not align with institutions.	23 (38.3)
	It has been difficult, to say the least, navigating this journey with minimal guidance. I applied to this program because this year I realized I cannot continue on this path alone. I had many breakdowns that I believe could have been prevented if I had mentors to turn to who can provide guidance and resources as I continue on my path to medical school. I can say with confidence that participating in this program will contribute to the fabric of my excellence, putting me on the right path to fulfilling my dreams of becoming a physician. This program will not only positively impact me, but also my community.	
Mentee anxiety about being vulnerable with mentor	From my personal experience, I believe often times no matter how welcoming or reassuring a mentor is, a mentee can feel [that] their curiosity comes across as overbearing, and they avoid asking any many questions they would like. It can be difficult to decipher at times when it is necessary to reach out to your mentor, but also ensuring you are not overbearing.	17 (28.3)
Tailored mentorship for UIM/HEM students	A better understanding of the premed and medical school experience as an underrepresented student	7 (11.7)
Identity mismatch	Shared background or life experience that can help with relatability and feeling understood.	5 (8.3)
	Mentors not looking like their mentee or not having anything in common to connect with.	

Abbreviation: UIM/HEM, underrepresented in medicine or historically excluded from medicine.
[a] A preprogram survey asked 4 open-ended questions: 1) What do you think is the biggest obstacle to developing an ideal mentor–mentee relationship? 2) How can your mentor best serve you? 3) What do you think most mentorship programs lack? and 4) Questions? Comments? Concerns?
[b] Number of students who provided an open-ended comment that fit with each theme. All 60 participants responded to the open-ended questions.

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TOOLS FOR PUBLIC HEALTH PRACTICE

Leading Change at Berkeley Public Health: Building the Anti-racist Community for Justice and Social Transformative Change

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PEER REVIEWED

Summary

What is already known on this topic?

Schools and programs of public health (SPPH) have a moral, ethical, and disciplinary imperative to address problems that undermine our collective mission to improve health and well-being for all. Many SPPH have declared racism a public health crisis, but little guidance exists in the published literature for addressing racism, including structural racism, in academic public health.

What is added by this report?

We describe ARC4JSTC, an inclusive data-informed initiative at the University of California, Berkeley, School of Public Health, for actively working toward becoming an antiracist institution.

What are the implications for public health practice?

We conclude with a discussion of lessons learned and next steps to inform antiracist institutional change efforts in SPPH.

Abstract

A transformative change grounded in a commitment to antiracism and racial and health equity is underway at the University of California, Berkeley, School of Public Health. Responding to a confluence of national, state, and local circumstances, bold leadership, and a moral and disciplinary imperative to name and address racism as a root cause of health inequities, our community united around a common vision of becoming an antiracist institution. Berkeley Public Health has a long history of efforts supporting diversity, equity, inclusion, belonging, and justice. Building upon those efforts, we pursued an institution-wide initiative, one that creates a more equitable and inclusive school of public health that models and supports the development of future public health leaders, practitioners, scholars, and educators. Grounded in the principles of cultural humility, we recognized that our vision was a journey, not a destination. This article describes our efforts from June 2020 through June 2022 in developing and implementing ARC4JSTC (Anti-racist Community for Justice and Social Transformative Change), a comprehensive, multiyear antiracist change initiative encompassing faculty and workforce development, student experience, curriculum and pedagogy, community engagement outreach, and business processes. Our work is data informed, grounded in principles of change management, and focused on building internal capacity to promote long-term change. Our discussion of lessons learned and next steps helps to inform our ongoing work and antiracist institutional change efforts at other schools and programs of public health.

Background

The permanence of racism as an enduring feature of society is well-documented (1,2). It is embedded in all institutional structures, including higher education (3). Academic public health has a moral, ethical, and disciplinary imperative to address problems that undermine our collective mission to improve health and well-being, particularly for oppressed groups who, due to the concentration of privilege, that is, "when one group has something of value that is denied to others simply because of the groups they belong to," (4) have suffered the *dis*accumulation of protective resources and *hyper*accumulation of risk (3,5). Fulfilling that charge will require doubling down on our efforts to hold ourselves ac-

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countable including critical self-reflection as institutional change agents to ensure, internally, we are up to the task.

Discussions of racism and antiracism in higher education are not new but have resurged in recent years (6–20). Scholars and administrators alike have focused attention on the structural ways in which racism operates in higher education, noting that racism is multilevel and multifaceted and, thus, that interventions must also be multilevel and multifaceted (6,21,22).

The American Public Health Association, the Council on Education for Public Health, and the Association for Schools and Programs of Public Health have each declared racism a public health crisis and taken steps to promote antiracism in the profession and support schools and programs of public health (SPPH) with the tools for antiracist transformation (Table 1) (23–28). These efforts demonstrate a clear trend toward SPPH being intentional about transforming into diverse, equity-minded, inclusive, and antiracist institutions.

Useful guidance for such efforts has been published by SPPH, other institutions of higher education, and health equity scholars (11,15,21,29–33). Despite this body of work, published evidence that documents or provides guidance for antiracist transformation within SPPH is scant. We help fill that gap by documenting our efforts at Berkeley Public Health (BPH). This article describes our process for leading antiracist change, discusses our successes and challenges, and provides recommendations for antiracist institutional change efforts at other SPPH.

Berkeley Public Health: the Local Context

Past successes and challenges

Social justice is a deeply rooted pillar of BPH, guiding our organizational mission, values, principles of community, and our ongoing diversity, equity, inclusion, and belonging (DEIB) efforts. Over the years, these efforts included hiring our first-ever director of diversity in 2005 which resulted, in part, from student advocacy and aligned with campuswide efforts to support DEIB at the local level (ie, schools and colleges) with demonstrated impacts in increasing underrepresented minorities in applicant pools and in matriculation; creating a diversity services office in 2005, which expanded into the Diversity, Respect, Equity, Action, Multiculturalism (DREAM) Office in 2015 with an explicit focus on inclusion and belonging, intensified efforts to increase diversity of the student body (recruitment, retention, and graduation), and consultation regarding admissions policies and improving faculty diversity; student-led town halls on racism, power, and privilege in 2015; creating the Diversity, Inclusion, Community, Equity Committee in 2015 — a voluntary collective of students, staff, faculty, and alumni addressing equity issues at BPH — which was the result of student activism and an outgrowth of the student-led town halls; conducting surveys to monitor BPH climate starting in 2015; developing new curricular competencies that address structural inequities in 2016 (eg, structural competence — critical thinking about real-time issues of structural competency, health inequity, and antiracism in public health practice and research); adding course evaluation questions on classroom climate and respectful student engagement starting in 2018; training faculty and staff on having courageous conversations about race, understanding and addressing racial microaggressions, and bystanderism (not intervening despite witnessing or being aware of a racist act) in 2019; and hiring a full-time Dean's Cabinet–level chief of DEIB (2021). These are tremendous successes. However, like many schools, we have faced challenges: for example, continued reports of microaggressions and other experiences that hinder inclusion, sense of belonging, and schoolwide ownership of DEIB.

A call to action

On June 9, 2020, Dean Michael Lu issued a statement condemning racism and all forms of White supremacy and declaring racism a significant determinant of health. The statement — drafted in collaboration with several faculty and staff, including those from underrepresented racial and ethnic minority groups — drew broad support across BPH constituencies and catalyzed the groundswell for creating a more equitable and inclusive school of public health. The resulting schoolwide advocacy for intensifying our institutional commitment to antiracist change aligned with the efforts of a large group of faculty, students, and staff already working on antiracist efforts. The "Solidarity Against Racism During Covid-19" group organized because of racist hate emails received by a faculty member who spoke nationally about the disproportionate harms of COVID-19 among racial and ethnic minorities. The group issued a call to action and organized around several efforts, including a collaboration between faculty and students to develop a BPH website highlighting evidence that documented the effects of structural racism on health. The objective of the website was to ensure that the BPH community itself understood these fundamentals and could turn to this resource in their own research, teaching, mentoring, and community and professional service.

In a follow-up to his June 9th statement and against a backdrop of already lively antiracism activities, Dean Lu created 4 workgroups: 1) building an antiracist curriculum; 2) antiracism and racial justice training for faculty and staff; 3) expansion of supports for underrepresented students, faculty, and staff; and 4) collabora-

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tion between finance and development to identify existing funds and generate additional resources to sustain BPH antiracism efforts. Each group was cochaired by a member of the Dean's Cabinet to ensure institution-level engagement and accountability (Table 2).

To ensure action at multiple levels, Dean Lu asked each division (eg, epidemiology, environmental health sciences) to consider what actions they might take to support the school's antiracism goals. We define racism as a *system* of structuring opportunity that confers unfair advantage and disadvantage by race across multiple levels, from structural and institutional policies, practices, and norms, including (control over) collective and individual discourses (34) — systems of thoughts, constructed knowledge, beliefs, attitudes, and communications that construct or govern interpretations of reality/truth — to individual beliefs, attitudes, and behavior. We further acknowledge that racism intersects with other forms of oppression to create unique intersectional risks and harms (35).

We faced a unique window of opportunity, and because of a confluence of factors, we were ready to meet the moment. One major factor was our new dean. Less than a year into his deanship, at a BPH faculty meeting in November 2019, Michael Lu named social inequality as one of the "most pressing issues of our time." He made it a focus of his leadership at BPH and 1 of 4 priority areas for the school. With the right leadership, the strong national, local, and disciplinary imperative to address structural racism as a public health issue, and an already activated community, we were primed for change.

ARC4JSTC: Planting the Seeds of Change

Phase 1: Coalition building

The initial burst of activities (summer 2020) was relatively uncoordinated; action was disaggregated at multiple levels, which risked inefficiency (eg, wasted human, time, and other resources) and burnout, impeding co-learning, and ultimately undermining long-term success. To address this concern, our executive associate dean (A.M.A.), also chair of ARC4JSTC, convened the cochairs of each workgroup, a division chair representative, several student representatives, the school's equity advisor, and the chief of curriculum and instruction to discuss a coordinated effort. This initial group grew organically, adding voices and perspectives that were missing from early discussions. We were deliberate about creating a steering committee that was as inclusive as possible while avoiding overlap to ensure efficiency. For example, it was essential to have a representative cross-section of various divisions (including the joint medical program), offices, committees, and operational roles; student (undergraduate and graduate), staff, faculty, and alumni representatives; registered student organizations; and racial and ethnic diversity as well as diversity in other forms of social identity; community representation; and dean's office representatives to ensure continued institutional commitment. Ex-officio members were also available to ensure alignment with relevant campus initiatives and support co-learning with other campus units; these individuals had operational roles needed for successful implementation (eg, BPH assistant dean of finance, BPH director of education operations, campuswide director of DEIB). After 6 months of sharing insights from different perspectives about organizational goals, strengths, challenges, opportunities, and potential threats, we had a 23-member steering committee that represented the knowledge and perspectives, skill sets, and operational areas integral to seeding change. We asked each committee member the following questions: 1) What future do you imagine for an antiracist BPH? 2) What do you believe is most important for us to keep in mind with this work moving forward? and 3) What will help you stay committed to this work moving forward? Responses were integrated into a set of guiding principles (Box).

Box. ARC4JSTC (Antiracist Community for Justice and Social Transformative Change) Action Team Guiding Principles, University of California, Berkeley, School of Public Health

1. Striving for a new identity as an antiracist institution — identified both internally and externally — is an ongoing journey, not a destination.
2. Leading for antiracist change means full integration and normalization of antiracist praxis.
3. Racism is structural — deeply entrenched into organizational policies, practices, and norms — therefore, antiracist efforts must also be structural.
4. Identifying and remediating institutional racism is a marathon, not a sprint; it requires educating (learning and unlearning), organizing, nurturing, and holding each other accountable for meaningful change.
5. Knowledge of racism, power, and privilege; deep understanding of marginalizing experiences; and both individual and collective action are all critical to antiracist transformation and are the foundation for developing an equity and social justice–oriented praxis.
6. The process of antiracist change will challenge deeply held beliefs about power and privilege and require confronting resistance at the individual, interpersonal, and institutional levels.
7. Perseverance will require acknowledging and celebrating progress along the way.
8. Antiracist praxis will be new for some and will sharpen growth edges for others; and will require balancing accountability, empathy, and compassion among all.
9. The antiracist changes we make today are an investment in our future identity (see first guiding principle).

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Phase 2: Creating a vision and strategy for change

Recognizing the need for project management, we enlisted the support of our campus Business Process Management Office. Their investment in supporting the university's goal of becoming an antiracist campus created a mutually beneficial partnership. We received 3 forms of support:

1. Project management — managing and organizing work, meeting timelines, coaching project sponsor and project chair, and tracking progress
2. Change management — creating a management structure to demonstrate the organization's commitment to change and creating a resistance management plan including coaching project leaders on communications and managing internal relationships
3. Survey design and testing — optimizing user experience via item formatting and ordering and managing alpha and beta testing.

Data collection

Given the need to align our strategies with the needs of our community (21,36), we collected various forms of data during summer and early fall 2020. Initial data collection included literature reviews on various topics: antiracism and antiracist praxis (19,21,31), antiracist and culturally responsive pedagogy (20,25), antiracism in institutions and in higher education (11,32), and examples of frameworks for antiracist change in organizations (28–30,36), including higher education (10,31,32). We conducted focus groups with faculty in each division and the joint medical program to assess their readiness for change and perceived challenges and opportunities for successful implementation. The executive associate dean and chief of curriculum and instruction used a semistructured focus group guide to facilitate faculty focus groups via Zoom. We conducted 7 focus groups, 1 for each of the 6 divisions and the joint medical program. Focus groups had 4 to 8 participants each. The participation rate was low (23%; 5 of 22) for the largest division because of scheduling challenges; participation ranged from 50% (4 of 8) to 89% (8 of 9) for other divisions. Faculty members used fictitious Zoom names to protect confidentiality, and transcripts were further de-identified by using letters or numbers to designate participants. Two former BPH students conducted transcription and thematic analysis. Student input was solicited via informal gatherings sponsored by the DREAM Office, the assistant dean of students, and the interim chief of DEIB. We also administered structured surveys to students, faculty, and staff and nonfaculty academics (eg, researchers, project scientists). Our schoolwide surveys assessed various factors, including racial literacy; bystanderism; motivation, readiness, confidence, and current practices related to antiracist pedagogy (in and outside the classroom); willingness to commit time to antiracist learning and the most desirable types of learning experiences; and perceptions of racial equity across organizational categories (eg, hiring and retention). Survey data collection was successful, particularly among our faculty (89% response rate; 141 of 159). We received 231 completed student surveys (21% response rate; 231 of 1,111), and 74 staff and nonfaculty academics completed surveys (69% response rate; 74 of 107). We also reviewed the past 5 years of BPH climate survey data to generate a snapshot of school climate. We used results from all data collection to inform program planning.

Project charters

Each workgroup then created a project charter that outlined short-, intermediate-, and long-term goals, objectives, strategies, and metrics for evaluating success. Informed by our data collection (ie, internal community needs assessment) and steering committee and project management discussions, our project structure changed from 4 workgroups (Table 2) to 4 population-specific project teams to ensure that the holistic needs of each constituency were considered: faculty development, curriculum, and pedagogy; student experience; workforce development; and community engagement. For example, for students, in addition to outreach, recruitment, networking, and mentoring, we examined other supports students may need and want to promote DEIB and ensure that students were thriving. For faculty, we considered supports needed to expand antiracist training throughout the BPH curriculum. We also developed a set of cross-cutting foundational teams whose work addressed core business practices and was critical to overall program success:

1. Business process and practice — faculty and staff recruitment policies and practices, purchasing practices
2. Data and evaluation — collection, analysis, and dissemination of data to support planning and evaluation efforts
3. Voice and visibility — improvement in understanding of the health consequences of racism and communicating the antiracism work being done in the school for all BPH community members
4. Change management – creation of an environment in which project management and change management converge to achieve organizational objectives.

Communicating the change vision

Committee members raised concerns about the term "steering committee" being hierarchical and antithetical to our goals of creating a more inclusive community. To foster community ownership of the work, we invited everyone in the school to provide recommendations for renaming the steering committee. We received 150 responses and found consensus on several terms and phrases, which resulted in a new name for the program and the steering committee: the Anti-racist Community for Justice and So-

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cial Transformative Change (ARC4JSTC) and the ARC4JSTC-Action Team (ARC4JSTC-AT), respectively.

In March 2021, the ARC4JSTC-AT conducted a listening tour to communicate and solicit feedback on the change vision and plan throughout the school. Feedback was overwhelmingly positive. In the interest of developing short-term wins to motivate continued engagement and growth, we prioritized activities that 1) would build internal capacity, 2) could be implemented quickly and with current resources, 3) would have high visibility (ie, to convey institutional commitment), and 4) would have recognizable and sustainable impact. After finalizing the plan, the ARC4JSTC-AT provided the dean with a budget request, met with campus groups and offices to communicate our plan for antiracist transformation, and secured additional funds and other in-kind support (ie, office of the executive vice chancellor and provost, People & Culture [staff services], private donors, a foundation grant, and a faculty climate pilot grant from the University of California Office of the President).

Phase 3: Project implementation

Data collection revealed several growth areas for the BPH community. The most obvious were racial literacy, bystanderism, and the skills and confidence to implement antiracist praxis. Previous climate survey data showed that although most survey respondents indicated experiencing BPH as welcoming (91%; 316 of 347), respectful (86%; 300 of 347), supportive (80%; 279 of 347), inclusive (78%; 272 of 347), and diverse (71%; 248 of 347), more than one-quarter of respondents reported perceived and experienced racial and other forms of bias and discrimination, most commonly caused by faculty.

Each project team undertook multiple projects (Table 3). Following is a description of 4 projects, one for each project team.

Antiracist Pedagogy Faculty Leadership Academy

In late spring and early summer 2021, BPH implemented its inaugural Antiracist Pedagogy Faculty Leadership Academy. The Academy was designed to follow up on an initial set of mandatory introductory racial literacy faculty workshops (100% participation, completed in fall 2020) for faculty interested in further developing their antiracist praxis and to create an early adopter group of antiracist champions to support ongoing curricular transformation. Part I (early summer) consists of five 2-hour didactic and active learning sessions focused on applying historical and contemporary, conceptual, and practical lenses to the subject of racism, antiracism, and antiracist pedagogy while developing an opportunity for collaborative learning and strategizing. Participants learn foundational theories and frameworks for understanding structural racism, particularly in higher education; connect this scholarship to their teaching through reflection and discussion with colleagues; create and adapt strategies to redesign their syllabus; and develop and practice pedagogic skills that foster inclusive classroom environments. Part II, "Implementing Your Antiracist Curriculum," consists of monthly Community of Practice Learning Laboratories during the fall and spring semesters. These sessions provide an opportunity for faculty to discuss their overall classroom environment, including events occurring in the classroom related to DEIB and racism and antiracism more generally, troubleshoot, and continue to work on developing antiracist pedagogy skills.

For our inaugural Academy, we invited selected faculty members (N = 39) to maximize the number of students impacted and ensure faculty training for a cross-section of our programs and divisions. This included faculty from our core and breadth classes, leadership classes, interdisciplinary programs (doctor of public health core seminar, interdisciplinary master of public health core seminar, online master of public health classes, joint medical program), and graduate student instructor pedagogy course. We conducted surveys after each session to assess the effectiveness of the material and the instructor and a presurvey and postsurvey to assess the effectiveness of the Academy in supporting the development of antiracist pedagogy skills. Responses indicated that the Academy helped improve participants' perceived knowledge, skills, readiness, and confidence in a range of antiracist pedagogy practices. We also held a post-Academy listening session via Zoom and received helpful feedback for session logistics and for modifying our evaluation strategy, including the frequency of surveys. Participants indicated that completing a survey after each session was burdensome. Participant feedback was positive overall:

- "This training was essential and foundational."
- "Gave me space to be so much braver in my classes. It was almost like magic. This semester has been one of my most fulfilling semesters of teaching."

Antiracist and racial justice praxis graduate student elective

A new graduate student elective course teaches students how to develop an antiracist analysis of public health, present a set of antiracist public health tools, and build skills necessary for advancing an antiracist agenda in the field. The course consists of 4 competencies and multiple learning objectives (Table 4) and was approved by our Education Policy and Curriculum Committee. The course was initially offered in spring 2021 and is now offered each spring semester given the highly favorable ratings for instructor effectiveness, course effectiveness, and classroom climate: 6.9, 6.7, and 6.6 on a scale of 1 (low) to 7 (high), respectively.

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Antiracist training and community building for staff and nonfaculty academics

Our workforce development team created a work plan based on a series of planning and brainstorming sessions during the 2020–2021 academic year. As a result, a series of voluntary trainings and community building circles was held in collaboration with an outside vendor (race-work.com) and our campuswide Restorative Justice Center (Table 3). Community building circles were focused on setting the stage for some of the content that would be covered in the training. The circles helped us build trust, establish community agreements, and start to develop tools and skills for building empathy and responding to conflict in positive and transformative ways (36). We conducted a survey in December 2021 to solicit feedback from attendees. In addition to other questions, respondents were asked to assess their capabilities on a set of antiracist practices after the trainings, compared with before. Respondents reported feeling more motivated, ready, and confident to participate in antiracist practices after the fall 2021 trainings: 72%, 76% and 63%, respectively. Responses also indicated a strong motivation to make BPH more antiracist and the important role of community and trust building for enabling a sense of personal and collective responsibility. Results for spring 2022 were similar. Trainings have continued each semester, and additional planning is underway.

Community Advisory Board planning

The goal of the community engagement project team is to help ensure community voices are represented in BPH's decision making and efforts to become an antiracist institution. The initial project was to develop plans for a schoolwide community advisory board and to reimagine what community engagement can or should be. To ensure community voice during the planning process, we recruited 5 community members through an open call for applications to serve on the planning team, each receiving a $3,000 stipend for their participation. Planning is ongoing. Next steps are to ensure alignment with the vision of school leadership and other constituency groups (eg, students, faculty).

Empowering the BPH community for long-term change: shifting the culture

Three major projects are underway. The first is to develop a set of antiracist competencies, or habits of heart and mind (37) — instinctive ways of being and thinking — that we aspire to and that will help inform our ongoing planning. These competencies are intended to characterize how we want to "show up" as a school in relation to antiracism, racial equity, and equity more broadly. The foundational work has been completed — literature reviews, focus groups, and interviews — and a draft set of 3 competencies was developed and vetted among BPH groups. They are racial literacy, cultural humility, and collective responsibility. Our next step is developing a plan to operationalize them. For example, how might these competencies be operationalized to further inform our educational competencies and curriculum? How might they inform our pedagogic practice and course learning objectives? How might they inform continued faculty and staff development individually and collectively? The greatest impediment was pushback from some about the term "accountability," which was ultimately changed to "collective responsibility" to avoid a stalemate; although many students, faculty, staff, and the ARC4JSTC-AT felt "collective responsibility," although important, deflected personal responsibility.

Second, we are in the final stages of developing a bias reporting form. The form will provide an opportunity for anonymous reporting of bias and discrimination of any sort and will also be designed to capture examples of positive experiences. Our goals are to 1) monitor our progress (we expect the number of reports to decline over time as we become more antiracist) and 2) develop a library of cases that we can use as a resource for future trainings. Third, we are also in the final stages of seeking feedback on our new schoolwide DEIB plan. The plan includes a set of goals, objectives, and current and future strategies in 4 focus areas: teaching and learning, social impact, belonging, and infrastructure. Next steps are to develop a set of metrics to evaluate success. The plan rests on 2 pillars — antiracism and social justice — and aims to advance our efforts toward becoming an antiracist institution.

Lessons Learned and Recommendations

Our formal data collection activities and informal feedback from individual and group discussions and presentations of our work informed our understanding of some of the challenges of antiracist change. First is the importance of a resistance management plan. Antiracism is not a universally accepted concept (38) and, as discussed by the West Coast Public Health Antiracism Collaborative in biweekly meetings during 2021 (Table 3), the existence of structural and other forms of racism at SPPH is also not universally accepted. Hence, resistance is inevitable. Although there is no single approach to *doing* antiracism, there exists deep and well-tested knowledge on a plethora of practices for creating antiracist institutional change. Racial literacy (39) is paramount. Bringing in experts to achieve common understanding and start to build individual and collective critical consciousness is essential. Not doing so opens the door for misinformation and misunderstandings, which complicates achieving a unifying vision for any type of antiracist work. Furthermore, commitment to broad-scale change increases when motivation is intrinsic (40). Hence, the process of learning and *un*learning is critical to antiracist change efforts (21). Establishing a common understanding and common vision is also

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an essential component of establishing a resistance management plan. Establishing norms for open and honest communication is critical. Uplifting the lived experience of racial and ethnic minority populations as a source of information for understanding *how* racism operates is a necessary component of achieving shared understanding. White people will need to be receptive and respectful of the lived experience of their non-White colleagues (peers, students, teachers, administration). This is a question of epistemology: whose knowledge is valued and considered as valid data to help understand the phenomenon of interest? Experiential knowledge is a central tenet of critical race theory, as is understanding that an individual need not be overtly prejudiced or commit acts of prejudice for racism to flourish (31). Beverly Tatum's image of the moving walkway is illustrative (41). One need not be actively racist to promote or endorse racism (a system). Simply standing on the moving walkway and being a recipient of unearned privilege while others are on different walkways entirely is an endorsement of the status quo. Similarly, Jones' articulation of acts of commission and acts of omission illustrates the passive endorsement of status quo structural racism (42). Thus, it is essential to understand how racism is operating within the local context to inform targeted strategies (21,36).

Feelings of fear and guilt among White people and perceived hostility toward White people can create conflict and are well-known barriers in antiracist change efforts (36). Emotions are intrinsic to antiracist change. For historically marginalized groups, antiracist change is long overdue, whereas for many White people, it challenges an image of the self as liberal and caring and of the status quo as being neutral. It is also fraught with concerns about getting it right for fear of discomfort in and outside the classroom and of blame as one starts the bold *process* of change. Thus, psychological *un*safety is a necessary part of antiracist transformation (16,17,20,43), an inherently disruptive process (18).

Allies are also critical to resistance management and for building bridges and challenging the status quo (21). For example, it took White allies to speak up against the notion that antiracist praxis is not possible in methods classes for our resolution to include a statement of commitment to antiracist pedagogy on all BPH syllabi to be approved unanimously (Table 3). Identifying points of convergence and divergence in understanding will be key to having courageous conversations about race, which is essential for doing the hard work of exposing, confronting, and combatting racism. Having a solid evaluation plan up front is also an important aspect of resistance management. We found people eager to participate in trainings but reluctant to be held to account. Thus, an inclusive process to establish evaluation strategies and getting early buy-in is essential. However, recognizing points of conflict and continuing to pursue goals even in light of conflicting views will also be part of the process.

Second, institutional commitment and long-term investment is essential (21,36). Administrative leadership helps establish an initial sense of urgency, plays an important convening role in inducing enthusiasm for getting involved, articulates alignment with organizational goals, and demonstrates a high level of commitment to overall program success (44). Although we were successful in securing funds outside of BPH, a stable budget from BPH to underwrite the work was critical to planning. Additionally, having a multiyear budget also helped support long-range planning efforts. Although financial investment is important, a more comprehensive perspective in determining how various institutional resources (eg, financial, human) can be used to support program planning, implementation, and sustainability will ensure proper infrastructure to support the work. It is essential that those commitments be communicated broadly. Frequent communication to the broader school community also demonstrates institutional commitment and can become a vehicle for soliciting feedback and participation and helps create buy-in.

Third, ARC4JSTC-AT members expressed concerns about burnout as a result of taking on additional time, labor, and emotionally taxing activities while maintaining their regular scope of work. This resulted in a conflict between their desire to remain engaged and complete tasks in a timely manner and their capacity for taking on the additional workload. This was particularly important for staff and students, for whom "service" was not part of their regular responsibilities. For racial and ethnic minority faculty members, particularly those in predominantly White institutions, a strong body of work documents statistically significant associations of reported racial discrimination, vocational strain, and role overload with mental and physical health and well-being, research productivity, work strain, and an overall unwelcoming climate. Studies document substantial emotional labor among underrepresented minority faculty at predominantly White institutions due to the disproportionate burden of formal and often informal and invisible service (eg, student mentoring, peer mentoring) (45); and the disproportionate burden of DEIB work, particularly in predominantly White institutions, where racial microaggressions and other displays of racial bias and discrimination are rampant, making that work even more draining and distracting (46). Staff members who are members of racial or ethnic minority groups and other marginalized identities also experience the tax of providing disproportionate informal support to underrepresented minority and other marginalized students (47). Team members requested compensation for the additional workload or removal of other responsibilities to make room for the additional work effort. Considering how people will be compensated or otherwise credited for the work, or

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other strategies to reduce burnout, promote morale, and provide other supports is essential to maintaining the needed workforce and further demonstrating institutional commitment and appreciation of those involved.

Conclusions

Antiracism praxis uses a structural approach to identify and address how racism operates within systems, going above the level of the individual to address change at the institutional level (21). Both a process and an outcome (29), racism operates in higher education through policies, procedures, curriculum and pedagogy, hiring, retention, promotion, admissions, resource allocation, climate, and culture, producing outcomes that maintain historical patterns of inequities (8,9). SPPH have a moral, ethical, and disciplinary imperative to support training, research, and service activities that serve our collective mission to promote health and well-being for all. Ensuring our institutional health as a diverse, equity-minded, inclusive, and antiracist-striving organization is fundamental to those efforts. We described our process of developing an ARC4JSTC, discussed successes and challenges, and provided recommendations for antiracist transformation at other SPPH. Change management, project management, a strong guiding coalition, and engaged commitment from institutional leaders helped provide stability through our change process and have been essential to sustained action.

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Supplemental material, including the data collection instruments and results, evaluation reports for some of our antiracist change efforts, and more is available in an online appendix: https://github.com/AmandaDPerez/AAllen/blob/main/PCD-BPH/PCD-BPH-ARC4JSTC-Data-Appendix.pdf.

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Tables

Table 1. Support of Antiracist Transformation in Schools and Programs of Public Health at Leading Public Health Organizations

Year	Organization	Action
2015–2016	American Public Health Association (APHA)	Then-APHA President Camara Jones launched a national campaign against racism as the primary agenda of her presidency, raising awareness of racism as a root cause of racial health disparities (23).
2016	Council for Education in Public Health (CEPH)	CEPH developed a new foundational competency to ensure that racism would be addressed in the master of public health curriculum at all accredited schools and program of public health and students would be equipped to face the challenges of effective public health practice (24): "Discuss the means by which structural bias, social inequities and racism undermine health and create challenges to achieving health equity at organizational, community and societal levels."
2019	APHA	"Racism: Science & Tools for the Public Health Professional" was published by APHA (25), "designed to arm public health professionals with 1) knowledge about the relationship between racism and health; 2) tools to address racism; and 3) inspiration to pursue health equity."
2020	Centers for Disease Control and Prevention	Launched an updated 10 Essential Public Health Services (EPHS), intended as a framework for achieving health equity by protecting and promoting the health of *all people in all communities* (26). EPHS "seeks to remove systemic and structural barriers that have resulted in health inequities. Such barriers include poverty, racism, gender discrimination, ableism, and other forms of oppression."
2020	Association for Schools and Programs of Public Health (ASPPH)	Issued a statement of commitment to zero tolerance of harassment and discrimination in schools and programs of public health, including 5 tenets to help guide strategic action in SPPH (27): 1) antiharassment and anti-discrimination policies and trainings, 2) identifying and reporting harassment and discrimination, 3) protecting victims of harassment and discrimination, 4) communicating and transparency, and 5) shifting the culture.
2021	ASPPH	Issued a framework for dismantling racism and structural racism in academic public health, which includes a shared vision for academic public health as diverse, equitable, inclusive, and antiracist (28). They provide short, intermediate, and long-term goals as well as specific actions that SPPH can take toward fulfilling that charge.

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Table 2. Initial Charge for Antiracism Project Teams at the University of California, Berkeley, School of Public Health

Project team	Initial charge	Accountability team
Antiracist curriculum	Expand antiracist training (including addressing racism as a public health issue) throughout our curriculum; review our curriculum and identify opportunities to strengthen antiracism training throughout.	Executive associate dean, chief of curriculum and instruction, Education Policy and Curriculum Committee
Faculty and staff training	Mandatory implicit bias and antiracist training for all faculty and staff, similar to a voluntary "Beyond Diversity" training offered in 2019.	Chief operating officer and Diversity, Inclusion, Community, Equity (DICE) Committee
Recruitment and supports	Identify opportunities to expand outreach, recruitment, supports, networking, and mentoring for underrepresented minority students.	Assistant dean of students, interim chief of DEIB and the Diversity, Respect, Equity, Action, Multiculturalism (DREAM) Office
Diversity, equity, and inclusion (DEI) support	Develop plans for strengthening DEIB for underrepresented staff and faculty.	Dean, Faculty Council, Staff Advisory Council
Resources	Identify existing funds and generate additional resources to support and sustain Berkeley Public Health antiracism efforts; without additional resources and support, these efforts often fall on the DREAM Office, the DICE Committee and underrepresented faculty, staff, and students and are not sustainable.	Finance team and development team

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Table 3. Implementation Plan for Antiracist Community for Justice and Social Transformative Change (ARC4JSTC), University of California, Berkeley, School of Public Health (BPH)

Strategy	Project status
Foundational and baseline antiracism and racial equity trainings for faculty (mandatory): Develop foundational racial literacy for all BPH faculty. Includes discussion of White supremacy, axes of power and privilege, racial identity, stigma and implicit bias, and experiential skills-building in facilitating tense classroom conversations.	Completed
Antiracism and racial equity workshops for new students: Incorporate antiracist praxis training as part of new student orientation.	Ongoing (yearly)
Elective series of antiracism trainings and community building for staff and nonfaculty academics. 1) Elevation 2 Transformation (fall 2021): 1-day virtual seminar intended to develop a foundation and provide tools for talking about race both interracially and intraracially. Includes exercises to elevate racial consciousness, develop a deeper understanding of the impact of race, and gain clarity around the construct of Whiteness and its role in sustaining systemic racism; 2) Deeper Dive (fall 2021): An advanced 3-part series open to those who had completed 1 of 2 prior racial equity trainings (Courageous Conversations or Elevation 2 Transformation). Participants focus on deepening understanding of race and systemic racism by examining their organization/department's policies, practices, programs, structures, climate, and culture through an ongoing cycle of inquiry; 3) Leader of Leaders (spring 2022): A 4-part series where participants learn to recognize destructive patterns that maintain the status quo and gain the skills to create solutions and disrupt inequities personally, professionally, and organizationally.	Completed
Antiracist and Racial Justice Praxis graduate student elective: Cultivate student champions to develop an antiracist analysis of public health, present a set of antiracist public health tools, and build skills necessary for advancing an antiracist agenda within the field.	Ongoing (yearly)
Antiracist Pedagogy Faculty Leadership Academy: Develop a cohort of antiracist faculty champions/early adopters that will lead in curricular transformation (integrating antiracism and racial equity competencies into core curriculum and BPH leadership experiences) and serve as coaches/trainers for other BPH faculty.	Completed
Antiracist/racial equity community agreements on all BPH syllabi: Collaborate with Faculty Council to pass a resolution requiring a clear statement about commitment to antiracist and racial equity teaching practices. Includes language sample and resource guide.	Completed
Schoolwide antiracist and racial equity competencies: Develop a set of schoolwide and group-specific antiracist competencies to be implemented and operationalized schoolwide.	Implementation phase
Bias reporting form: Monitor incidents of bias (many of which currently go unreported based on climate survey data) and document positive examples of antiracist praxis to disrupt continued mistreatment, use as a resource for promoting effective antiracist praxis, and inform our ongoing antiracist efforts.	Implementation phase
Antiracism website: Make a public commitment to antiracism and track our progress and processes, including an entire section that provides scholarship on how racism impacts health.	Completed
Planning for a BPH Community Advisory Board, including funded positions for community advisors to support strategic planning efforts.	Ongoing
Antiracist procurement: BPH commitment to prioritize minority-owned business vendors and more generally promote practices within BPH and across campus using a DEIBJ (Diversity, Equity, Inclusion, Belonging, and Justice) lens for procurement activities.	Ongoing
Antiracist staff hiring protocols: Introduce DEIBJ assessment into the staff hiring process.	Completed
Create a standardized faculty search plan that incorporates DEIBJ best practices and is consistent with our goals to diversify the faculty (collaboration between administration, faculty, and students).	Completed
Strategic planning for integrating antiracist pedagogy throughout BPH: Develop DEIBJ goals, objectives, strategies, and metrics for evaluating short, intermediate, and long-term success; incorporate ARC4JSTC as central pillar.	Implementation phase
Identify existing human capital and curricular strengths/assets and limitations/liabilities to guide ongoing curricular planning and pedagogic transformation.	Planning phase
Establish and implement plan for ongoing antiracist/racial equity training for BPH faculty, staff/nonfaculty academics, and students.	Planning phase
West Coast Public Health Anti-racism Collaborative (WPH-ARC). Develop a collective of West Coast schools of public health actively engaged in antiracism efforts as a source of support for those engaged in this work and to identify opportunities for collaborative efforts to scale the impact of our individual efforts. Engaged schools: BPH; Portland State University; University of California, Los Angeles; University of California, San Diego; University of Washington.	Implementation phase

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Table 4. Antiracist and Racial Justice Praxis Graduate Course, University of California, Berkeley, School of Public Health (BPH)

Competency	Sample learning objectives
Distinguish the unique impact and history of White supremacy from other forms of oppression in the US, recognize how racism affects individuals and the field of public health, and analyze racial health disparities within the context of historical and current racism.	Understand the history of Whiteness and racism in the US and apply historical perspective when analyzing present-day racial challenges.
	Recognize the emotional impact of racism on behavior and develop new tools for emotional awareness and self-regulation.
	Analyze the role of racism and White supremacy in public health practice, programming, and research.
Apply antiracism principles to public health interventions, design new public health programs that address racism as a root cause, and modify existing programs to be more effective is addressing racism as an underlying cause of health inequities.	Describe the 4 components of an intervention that addresses racism as a root cause.
	Apply the racism-as-a-root-cause approach to develop antiracist programs and organizational strategic plans.
	Apply design thinking approach to develop antiracist interventions.
Cultivate transformative antiracist change by effectively engaging and empowering communities most impacted by racism, identifying institutional and legislative policies that will have an antiracist impact, and leveraging media and public communications tools to advance policy change.	Recognize the role of policy in antiracist change and understand how to use institutional and legislative policy to advance racial justice.
	Understand what effective community engagement and power-sharing is and describe key strategies to ensure high-quality community engagement.
	Learn how to leverage news media to create political pressure and advance political change.
Formally evaluate the racial impact of research and public health interventions, refine existing programs to integrate antiracist strategies, modify mainstream quality improvement tools so that they can measure antiracist impact, and sustain ongoing antiracism change within and beyond the field of public health.	Apply the racism-as-a-root-cause approach and racial equity impact assessment tools to assess racial impact of existing research programs and public health interventions.
	Leverage quality improvement tools to improve the antiracist impact of existing research programs and public health interventions.
	Apply communication skills to engage in effective racial dialogue.
	Assess personal positionality and associated risk in advancing antiracist organizational change.

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TOOLS FOR PUBLIC HEALTH PRACTICE

Institutional Reform to Promote Antiracism: A Tool for Developing an Organizational Equity Action and Accountability Plan

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PEER REVIEWED

Summary

What is already known on this topic?

Structural racism is embedded in various systems, including academic settings. Many academic institutions are focusing time and resources on diversity, equity, and inclusion work. The challenge is that few tools exist to help address structural racism and the systems in place that contribute to inequitable policies and practices.

What is added by this report?

This work provides a practical step-by-step process for developing a strategic plan to guide diversity, equity, inclusion, and antiracism efforts in academic settings.

What are the implications for public health practice?

Our tool can be adapted and used at other institutions and organizations to address structural racism and make sustainable and equitable changes.

Abstract

Racism is a public health problem. Systems, structures, policies, and practices perpetuate a culture built on racism. Institutional reform is needed to promote antiracism. This article describes 1) a tool used to develop an equity action and accountability plan (EAAP) that promotes antiracism in the Department of Health Behavior at the University of North Carolina at Chapel Hill's Gillings School of Global Public Health, 2) strategies that were developed, and 3) short-term outcomes and lessons learned. A study coordinator, not affiliated with the Department of Health Behavior, was hired to collect qualitative data that documented the lived experiences of students and alumni of color (ie, racial and ethnic minority students) over time in the department. Seeking action from faculty and departmental leadership, students engaged in collective organizing covered the department chair's office door with notes describing microaggressions, and visited faculty one-on-one to demand action. In response, 6 faculty members volunteered to form the Equity Task Force (ETF) to explicitly address students' concerns. The ETF identified priority areas for action based on 2 student-led reports, gathered resources from other institutions and the public health literature, and examined departmental policies and procedures. The ETF drafted the EAAP, solicited feedback, and revised it according to 6 priority strategies with actionable steps: 1) transform culture and climate, 2) enhance teaching, mentoring, and training, 3) revisit performance and evaluation of faculty and staff, 4) strengthen recruitment and retention of faculty of color, 5) increase transparency in student hiring practices and financial resources, and 6) improve equity-oriented research practices. This planning tool and process can be used by other institutions to achieve antiracist reform.

Introduction

Racism has been declared a public health crisis by hundreds of US communities (1). A call for action to address structural racism has been endorsed by major institutions charged with protecting and advancing the public's health, including the American Public Health Association (2), the Centers for Disease Control and Prevention (3), and the American Medical Association (4). Embedded in these endorsements and calls to action is the recognition that racism is a system that structures policies, institutions, interactions, and individual opportunities — and, therefore, are the drivers and determinants of health and health inequities — at all levels of the social ecological model (5–7). Although increasing attention is being paid by researchers and funders to interventions

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focused on structural racism as a determinant of health (8–10), the academic institutions that train public health professionals rarely have kept pace with the internal changes needed to address how the system of racism affects their own policies, structures, and practices (11,12). Reconceptualizing public health training — and the institutions that carry out this training — is essential to equip future practitioners and researchers with the skills and abilities to recognize racism and combat health inequities that stem from the effects and manifestations of structural racism (11,13–15). As a step in this direction, the Council on Education for Public Health recently revised its competencies to require all master of public health (MPH) students to "[d]iscuss the means by which structural bias, social inequities, and racism undermine health and create challenges to achieving health equity at organizational, community and systemic levels" (16). Despite this mandate from the accrediting body and increased understanding from within institutions that change needs to happen (17), there is little consensus about how to change policies and structures at schools of public health (18), a dearth of recommendations of how to train and equip faculty (19), and only a few examples of how some institutions have gone about revising their curricula and enhancing their environments with an antiracist lens (20). This article will share the process of developing a tool undertaken by a group of faculty members at the Gillings School of Global Public Health at the University of North Carolina at Chapel Hill (UNC) to generate actionable steps to promote antiracism and equitable change processes and procedures. This group offers this example and lessons learned to other institutions interested in pursuing a similar goal.

Institutional Context

Schools of public health are embedded in and influenced by the broader history and context of their universities. UNC has a specific history that continues to permeate campus life, even with its institutional-level efforts to promote diversity, equity, and inclusion (DEI), as exemplified by the initiatives underway through Gillings' Office of Inclusive Excellence.

Gillings has a history of activism and research that is focused on reducing inequities and advancing diversity and inclusion, and, in 2018, the school hired its first dean for inclusive excellence. The Office of Inclusive Excellence is a schoolwide office that has several full time staff who are dedicated to working to promote DEI at the school level through various trainings, workshops, and programs. In fall 2019, the school developed and adopted an Inclusive Excellence Action Plan with 6 strategic areas that focus on supporting and sustaining a diverse, equitable, and inclusive antiracist school community (21).

Although it is beyond the scope of this article to provide a thorough accounting of UNC's racialized history (which would necessarily include how UNC directly benefited from the labor of enslaved people and land stolen from Indigenous tribes) or Gillings students' efforts to address the effects of this history through its Minority Student Caucus established 40 years ago, recent events on campus provide critical insight into the context that spurred the initiatives described in this article. On August 20, 2018, the day before the academic year started, the confederate statue colloquially referred to as "Silent Sam" was toppled by activists. This event served as a flashpoint for conversations across the UNC campus that largely involved groups of students, staff, and faculty at odds with institutional leadership decisions about not just the statue, but larger issues of systemic racism. This was a culminating event that resulted from years of student activism, and although it had negative effects on student mental health (22), it also intensified the push for action and structural, not just symbolic, change.

With this resurgence of student activism around racial equity across campus, students in the Department of Health Behavior at UNC Gillings ramped up their efforts to address inequity in the department. One student group, the Equity Collective, launched a qualitative study of current and former MPH and PhD students of color in the department and shared their findings in a report in November 2019.

Department of Health Behavior faculty discussed the Equity Collective report's findings during its February 2020 faculty meeting. The report raised concerns about the curriculum that centered on Whiteness; the focus on racism as a construct divorced from the reality of students' lived experiences; defensiveness among faculty; and the lack of community or belonging felt by students of color in the department. From this discussion, faculty agreed a sustained effort was necessary to address the issues, rather than the ad hoc approaches attempted previously.

Steps Toward Developing an Equity Action and Accountability Plan (EAAP)

Step 1: Establish a team

Immediately after the meeting, 6 faculty members volunteered to work together to develop a plan to respond to the issues raised in the Equity Collective report. However, the department did not act quickly enough to communicate to students that steps had been taken to address their concerns. This lack of transparency and communication resulted in student frustration, and they organized themselves to bring immediate attention to their concerns and put forth strategies for change. On March 4, 2020, students covered

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the office door of the department's chair with Post-it notes (Figure), each one communicating a microaggression experienced by a student in the department. Students also organized a collective walkout of several classes and went door-to-door soliciting commitment from each faculty member to take antiracist training.

Figure. Signed Post-it notes documenting the experiences of microaggression among racial and ethnic minority students as a call to action, Department of Health Behavior, University of North Carolina Gillings School of Global Public Health, 2020. Students placed these notes on the door of the chair of the Department of Health Behavior to highlight their perceptions and lived experiences. This information became part of the input that was thematically organized by students and later incorporated in the Equity Action and Accountability Plan.

The next morning, faculty met in an emergency session to discuss ways to respond. The student action made clear the importance and urgency of the proposed work of the 6 faculty volunteers who met later that week to establish the Equity Task Force (ETF). The group (authors of this article) included 2 faculty of color (1 teaching track, 1 tenure track, both graduates of Gillings and 1 of the department), 1 tenured, and 3 assistant fixed-term professors (2 of whom have since been promoted to associate). The faculty brought varied perspectives and levels of prior involvement in antiracism and equity work, and all were fully committed to supporting students and working toward departmental change. The group convened once in person before the COVID-19 pandemic moved all school activities remotely; they met 2 hours each week during a year and a half to advance ideas for action. Described below are the process and outcomes of the work to shape a plan responsive to student demands, complementary to school-level plans developed by the Office of Inclusive Excellence, and with the potential to bring about real change in the Department of Health Behavior.

Step 2: Identify priorities

To begin, the ETF read the Equity Collective report and the table of themes compiled from the Post-it action and elevated items that were feasible to tackle and address at the departmental level. The ETF also consulted with university and Gillings leadership, reviewed the extant literature, sought out external resources and examples of institutional change and trainings, and listened carefully to ETF faculty of colors' own lived experiences within the department.

Step 3: Draft Equity Action and Accountability Plan (EAAP)

The ETF outlined initial themes and corresponding action steps in spring 2020. Throughout summer and early fall 2020, the ETF solicited input to incorporate diverse perspectives into the initial draft. The initial priority areas were 1) transform departmental culture and climate, 2) enhance teaching, mentoring, and training, 3) revisit performance and evaluation of faculty and staff, 4) strengthen recruitment and retention of faculty of color, 5) increase transparency in student hiring practices and financial resources, and 6) improve equity-oriented research practices. The ETF facilitated multiple listening and feedback sessions with MPH and PhD students and provided regular updates to faculty during previously scheduled monthly meetings and a facilitated discussion session with faculty to encourage in-depth feedback and input. The ETF held a meeting with administrative and research staff to garner feedback and identify elements missing from the recommendations that spoke to staff experiences in the department. A draft EAAP was circulated by the ETF in October 2020 via the department listserv and made publicly available on the website (23) to promote transparency and accountability.

Step 4: Incorporate input

After circulating the EAAP draft, the ETF held additional feedback sessions with 4 groups: 1) departmental faculty, 2) departmental administrative and research staff, 3) students from all the

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degree programs, and 4) people of color regardless of their role in the department. These meetings were focused on soliciting feedback on the content, prioritization of action steps, and plans for implementation of action steps.

The ETF also distributed a confidential online survey to all faculty, staff, and students affiliated with the department. Of 36 survey respondents, 14 were students, 12 were faculty, 7 were staff, and 3 identified as "other." The survey assessed quantitative priority ratings of each of the draft action steps and included open-ended questions about whether any action steps were missing and whether participants had additional feedback on the draft action steps. The ETF then revised the EAAP based on feedback from the listening sessions and survey, before finalizing and distributing the EAAP in April 2021.

Step 5: Finalized EAAP

After completing this iterative process and incorporating extensive feedback from students, faculty, and staff, a revised EAAP was produced in April 2021 (23). The 6 strategy areas in the revised EAAP were the same as those in the first draft, indicating that the original priorities aligned with the needs in the department, but the prioritized action steps evolved based on Steps 2, 3, and 4. For example, under the "enhance teaching, mentoring, and training" priority area, 4 of the original action steps remained, but 2 new steps were added based on feedback and listening sessions.

Along with a basic description and rationale for each strategy, the EAAP included short-term (<1 year) and longer-term action steps, potential barriers for implementation, and an accountability section detailing who needs to be involved or consulted (Table 1). Because the EAAP is a living document, the ETF will continue to note actions achieved.

Step 6: Implement EAAP

After developing the EAAP, the ETF generated departmental and schoolwide resources to move prioritized strategies (eg, microaggressions, faculty strengthening and accountability, mentoring) into action.

Microaggressions. To address students' concerns about pervasive microaggressions, highlighted by the student Post-it action, the ETF collaborated with the Office of Student Affairs and Office of Inclusive Excellence to develop an equity-specific feedback system, Student Feedback and Equity Concerns (24). This system was incorporated into an existing general feedback section of the school's website to elicit equity concerns, including experiences of microaggression. Language describing the new system was added to the school's website and the template for schoolwide syllabi.

Faculty strengthening and accountability. One demand of the students' collective action was that all faculty participate in a 2-day intensive Racial Equity Institute (REI) (25) training designed to help individuals (and organizations) better understand and address racism and the institutional and structural forms that have been ingrained in society. The Department of Health Behavior chair made this training a requirement, and all faculty completed REI Phase 1 training. Staff members were also supported in attending. The ETF hired an MPH student who developed a guide, Anti-racist Planning Guide for Public Health Pedagogy (26), to equip faculty with skills, resources, language, knowledge, and practices to help them examine their syllabi and strengthen their antiracist teaching practices. As another way to build the skills and practice of our faculty, the ETF organized a faculty retreat in December 2020 focused on racial equity and inclusion, which is becoming an annual event. In addition to providing faculty with new antiracism knowledge and skills and the opportunity to self-reflect, the retreat was a catalyst for strengthening the Department of Health Behavior faculty community. Finally, to enhance faculty accountability, the ETF worked with department leadership to incorporate a question into performance evaluations to assess how each faculty member contributes to antiracism and inclusive excellence in their teaching, research, service, and practice. This question is now embedded in each faculty member's end-of-year evaluation with the department chair.

Student mentoring. The ETF also focused on student mentoring as a priority area. Two graduate students were hired to assist in enhancing the department's mentoring practices, especially for students of color. One student, a male student of color and coauthor of this article, conducted interviews with students and faculty and reviewed the literature to develop a set of key recommendations to improve the mentorship experience. Building on this work, a second student sought to dig deeper into the mentorship experiences of students of color to better support them and their mentors. She conducted faculty interviews and brainstorming sessions with students of color, which resulted in a presentation and development of 2 tools: 1) a list of strategies for effective mentorship of students of color, and 2) topic items for discussion throughout the student's graduate experience, both of which are now used in Department of Health Behavior to improve the overall experiences of students in mentorship. The 2 tools described here are available on the ETF website (26).

Step 7: Continued evolution

Developing the EAAP involved an intensive 18-month process for the 6 original ETF members and, given the importance of including new voices and garnering ownership across the faculty, the original ETF team proposed a different structure once the EAAP was launched. The ETF established Equity Action Teams (EATs)

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to carry out short-term steps for each strategy outlined in the EAAP. All faculty were provided with a description of each EAT and its associated strategies and were asked to indicate their top 3 choices. Using these rankings, the ETF, in collaboration with departmental leadership, assigned all faculty members to one EAT, balancing faculty diversity, team working dynamics (eg, power), and preferences. Each group also included one member of the ETF who served as a liaison between their EAT and the ETF. The ETF continued concurrently with the EATs.

Each EAT included 3 to 6 members, and its structure was decided by each group. A needs assessment was conducted by using a Qualtrics survey whereby each EAT developed questions to garner input and information needed to determine how best to carry out their action steps. Opportunities for individual EATs to report results and opportunities to seek additional faculty input took place during monthly faculty meetings throughout the academic year. Each group was tasked with completing their action steps by the end of the academic year and reporting back to the full faculty during the final faculty meeting of the school year, in May 2022. Example EAT accomplishments include the development of 1) a guide for more inclusive faculty hiring processes, 2) tips for incorporating inclusive practices in university service work, and 3) an outline of key equity-oriented research resources. Additionally, other departments at Gillings have DEI committees that are beginning to collaborate across departments and with the Office of Inclusive Excellence, which creates more continuity, efficiencies, and collectively supports efforts to advance equity, increase diversity, and cultivate an inclusive antiracist culture across the school.

Step 8: Moving forward

Based on the key accomplishments (Table 2) of the ETF and the EATs, next steps and action steps were determined as priority items for the 2022–2023 academic year. For examples, one identified priority was to increase faculty of color in Department of Health Behavior. The department incorporated a strategy recommended by the EAT to hire an equity advocate to work alongside the tenure track search committee and to assist with the development of equity criteria.

To elevate and reinforce the importance of the ETF, the committee shifted from a flat structure, in which all members had the same rank, to a hierarchal structure, in which a committee chair with salary coverage allocated by the department was selected to serve on both department and school leadership as the ETF's inclusive excellence representative. The ETF remains active and committed to the work, which is supported by the department chair. Three students were hired to join the ETF in September 2022 to ensure that student perspectives drive the work forward. This work is ongoing and ever evolving. The members of the ETF are committed to doing this work individually and collectively to advance and promote antiracism in the Department of Health Behavior and the school.

Additionally, the ETF has been identifying ways to monitor progress, with an ultimate goal of developing systematic evaluation. At the start of the 2022–2023 academic year, the new ETF chair engaged the task force in a discussion to identify key goals for the upcoming year, with each ETF serving as a lead or co-lead for at least one goal. Each ETF meeting begins with a check-in on progress toward each goal. Each summer, other department leaders (eg, chair, vice chair, program leads) identify key objectives and measurable results and report on their progress to the full faculty at the end of the academic year; beginning in 2023, the ETF will be asked to do this as well. The long-term goal is to track the experiences of students, faculty, and staff of color, as another indicator of progress. School administrators are in the process of launching a new schoolwide Gillings Inclusive Excellence Survey; examining Department of Health Behavior–specific results will allow the department to evaluate progress while leveraging what is planned to be an institutionalized data collection tool.

Lessons Learned and Recommendations

The context across campus, and the intensity and urgency brought by students in the department, served as a catalyzing focus for the ETF at the outset. Although the ETF's initial charge was to respond to the student-developed Equity Collective report, the student action made it clear they would have to elevate their actions and accountability for change.

The focus of this work is for all faculty, staff, and students. The ETF responded to the concerns that primarily affected students and faculty of color that were highlighted by a diverse student body, including White students. The objective of this article is to provide an example of a tool used to encourage department-wide self-reflective work and active participation in antiracist trainings and practices that support and advance equity. For example, we described the department chair mandate to attend racial equity training. The ETF and our department chair, faculty, and staff understand that work to change systems does not fall on students alone or on the shoulders of those who are marginalized and that everyone plays a role in advancing equity.

Overall, the EAAP tool provides a roadmap and a structure for action and accountability. The ETF did not intend for this tool to be evaluated. It was created quickly, yet intentionally, out of a sense of urgency. The ETF successfully moved short-term actions items

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forward and developed a plan for longer-term goals. The ETF also became an example for other Gillings departments and worked with school leadership to implement some highlighted action items (eg, microaggression feedback system).

Privacy and confidentiality were not a concern in sharing lessons learned because the ETF did not provide any descriptions of participants. Instead, the ETF outlined a process for equity planning, which includes some summarizing and referencing of publicly available reports posted on the Department of Health Behavior website.

Given what was learned through the process described here, we offer key takeaway points for other institutions implementing similar efforts to bring about change. First, responding in a timely manner and being open and transparent in communications are critical. After Department of Health Behavior's first misstep (not letting students know that the ETF was formed), the ETF provided frequent written and short updates to members of the department via a monthly newsletter and multiple in-person (on Zoom) listening and feedback sessions. Second, plans for action must be combined with measures of accountability. Third, it is essential to center the lived experiences of students and faculty of color as guideposts for change. Fourth, community members (eg, students, staff, and faculty) engaged through various methods (ie, listening sessions, surveys, and written or visual feedback) and multiple opportunities and time points throughout the process to identify needs, generate strategies, highlight gaps, prioritize action steps, and operationalize plans.

The iterative and transparent process at Gillings provided opportunities for all members of the department to be meaningfully (yet not burdensomely) involved. Students recognized the ETF's effort and responsiveness, which helped build trust as they witnessed and contributed to the beginning of change. Faculty appreciated gaining tangible strategies and tools to enhance their pedagogy. Staff felt valued as part of the process. Although the ETF has not yet evaluated the effect of the EAAP, there is boosted commitment and movement forward in the Department of Health Behavior.

The documentation and dissemination of this process is also a sign of the ETF's and the Department of Health Behavior's commitment to transparency and accountability to institutional reform to promote antiracism. The work and data collected for this article were reviewed by the Office of Human Research Ethics, which determined that this submission did not constitute human subjects research as defined under federal regulations [45 CFR 46.102 (e or l) and 21 CFR 56.102(c)(e)(l)] and did not require IRB approval. Instead, we outlined a process for equity planning, which includes some summarizing and referencing of publicly available reports that are on the Department of Health Behavior's website. In making this challenging and promising work public, the ETF hopes that the process will inspire other schools of public health to implement similar processes.

Acknowledgments

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To ensure diversity, equity, and inclusion were centered in this work, the authors represent various intersectional identities. One or more of the authors self-identifies as a member of an underrepresented racial and ethnic minority group in science. One or more of the authors of this article self-identifies as a member of the LGBTQ+ community. One or more of the authors are junior faculty. Additionally, the ETF worked to ensure racial, ethnic, and other types of diversity were represented in the recruitment of student, staff, and faculty participants.

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Tables

Table 1. The 6 Strategies of the Equity Action and Accountability Plan (EAAP) and Their Action Steps, Barriers, and Accountability Partners, Department of Health Behavior, University of North Carolina Gillings School of Global Public Health, 2021

Strategy	Rationale	Example action steps	Example barriers for implementation	Example accountability partners
Promote an inclusive, equitable, and antiracist culture and climate within our department.	BIPOC (black, Indigenous, and people of color) students have previously indicated not feeling supported. Enhancing the department culture and climate will help us train public health professionals who can do the same in their communities and workplaces.	Short-term: Use an equity lens to develop and disseminate a complete and accurate history of the department to students, staff, and faculty. Longer term: Develop and conduct climate surveys to assess changes over time.	Climate and power shifts in the department may be resisted by those who currently hold power.	Departmental leadership, perhaps special committee.
Boost critical reflection, training, and action among faculty to promote antiracism and equity in our teaching and mentoring.	To prepare equity-minded public health professionals, we must address equity gaps in our curriculum.	Short-term: Focus the department's 2020–2021 annual faculty retreat on antiracism teaching strategies and skill-building. Longer-term: Review faculty syllabi and master of public health and doctoral curricula to identify equity-related gaps.	Tight budgets limit resources for teaching-related training, technologies; faculty have limited time outside current responsibilities.	Departmental leadership will need to decide to undertake trainings, but faculty will each need to adapt teaching and mentoring.
Build antiracist and equity-focused work into the performance of expectations and reviews of faculty and staff.	Antiracist actions should be both required and recognized, and support, rather than hinder, professional advancement.	Short-term: Incorporate antiracist and equity-oriented work into faculty performance planning and evaluation. Longer term: Revise promotion and tenure expectations to incorporate antiracist and equity expectations.	Performance evaluation processes are conducted once per year, with limited time to discuss many facets of faculty and staff work.	Departmental supervisors, especially department chair.
Increase diversity of health behavior faculty by improving recruitment and retention of faculty of color.	Identified goals of students, staff, and faculty; diverse learning environment better trains students for a diverse workforce; publicized racial tensions on campus may present an opportunity.	Short-term: Update faculty job posting and hiring process (including where positions are posted, application requirements, and evaluation criteria). Longer term: Commit to hiring additional faculty whose primary research area is in antiracism and equity.	Faculty hiring has a long timeline, especially when budgets are tight, making this a slow-moving goal.	Department leadership, faculty hiring committees.
Increase transparency in hiring practices for students and how financial resources are distributed.	Students have reported that hiring practices lack transparency and may be driven by connections rather than a systematic process.	Short-term: Pilot a process for requiring interviews of top candidates for Department of Health Behavior research and teaching positions before hiring decisions are made. Longer term: Create a special student jobs section in the weekly department email.	Faculty may feel responsible to fund their own mentees or people with whom they are already working rather than implement a transparent process. Not all positions may be suited to the piloted processes.	Department chair, business manager, hiring supervisors.
Enhance equity-oriented research practices, including but not limited to hiring of research faculty and staff.	Research designed to improve the public's health must serve to dismantle inequitable structures to be successful.	Short-term: Create a repository of eligible diversity supplement grants, current research focused on inequities, examples of other health disparity research, funding opportunities for health	May require faculty time to learn and incorporate new methods; limited resources for supporting different approaches to grant writing and science.	In the short-term this can be tasked to a faculty committee, but in the long-term will require general faculty commitment, and resources for updating.

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Table 1. The 6 Strategies of the Equity Action and Accountability Plan (EAAP) and Their Action Steps, Barriers, and Accountability Partners, Department of Health Behavior, University of North Carolina Gillings School of Global Public Health, 2021

Strategy	Rationale	Example action steps	Example barriers for implementation	Example accountability partners
		disparity research and other resources. Longer term: Develop a set of best practices for incorporating an antiracismapproachinto research practice.		

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Table 2. Examples of the Equity Task Force and Equity Action Team's Key Accomplishments as of October 2022, Department of Health Behavior, University of North Carolina Gillings School of Global Public Health

Strategy	Objectives	Accomplishments	Date accomplished
Promote an inclusive, equitable, and antiracist culture and climate within our department.	Deepen faculty learning, strengthen our faculty community, and facilitate individual and collective skill-building.	A Department of Health Behavior faculty retreat in 2020 focused on antiracism teaching strategies and skill-building and was very productive and well-received, laying a foundation for ongoing exchange and skill-building.	December 2020
	Track and address microaggressions and bias-related incidents that affect Gillings students.	Supported creation and implementation of new schoolwide Student Feedback and Equity Concerns system to include fields specific to microaggressions and bias-related incidents with the Office of Student Affairs, Office of Inclusive Excellence and Human Resources.	March 2021
Boost critical reflection, training, and action among faculty to promote antiracism and equity in our teaching and mentoring.	Identify and promote opportunities for department-wide training to deepen faculty learning, strengthen our faculty community, and facilitate individual and collective skill-building.	The Department of Health Behavior implemented a new departmental policy requiring all current and incoming faculty to complete a 2-day Phase 1 Racial Equity Institute Training. Additionally, the Gillings School of Global Public Health instituted a requirement of 8 hours of equity-oriented training per year.	May 2021
	Support antiracist pedagogy and practice in public health training and education programs, including our own programs.	In summer 2020 and spring 2021, an MPH student completed a practicum with the Equity Task Force and Office of Inclusive Excellence that involved creating a guide designed to push faculty and teaching staff to examine their teaching practices and reflect on how racism, systems of power, and positionality frame our teaching. The guide was shared at the Department of Health Behavior faculty retreat and is used by the Office of Inclusive Excellence to pilot test course reviews.	Guide completed spring 2021
	Review mentoring practices, structures, and processes to better center the needs of BIPOC students and draft recommendations and guidelines that incorporate student input and best practices from the field.	In spring 2021 a first year MPH student worked with the Equity Task Force as a student-based tuition research assistant to amass resources and draft recommendations and guidelines to help the department strengthen, refine, and/or restructure its student mentoring practices. In the summer of 2021, a first-year student in the Health Equity, Social Justice, and Human Rights (EQUITY) concentration conducted her practicum with the Equity Task Force to continue this work on mentoring as well as other related tasks.	Spring and summer 2021
Build antiracist and equity-focused work into the performance of expectations and reviews of faculty and staff.	Incorporate antiracist and equity-oriented work into faculty performance planning and evaluation.	Included a question in the end-of-year faculty meeting form asking faculty to identify antiracist and equity actions taken as part of their research, teaching, and/or service during the last year. This question serves as a starting point for a discussion about ways each faculty member can continue to foster antiracism and equity-oriented research, teaching, and service.	Piloted in summer 2021, required as of summer 2022
	Encourage faculty to incorporate strategies for enhancing diversity, equity, and inclusion as part of their existing service work.	All faculty volunteered and worked on one Equity Action Team for 1 academic year to undertake tasks resulting from the recommendations in the Equity Action and Accountability Plan. Faculty on the Service Equity Action Team developed a tip sheet that provides guidance on how to enhance diversity, equity, and inclusion in current service work and made recommendations to the department to review how service work is distributed and recognized.	Completed August 2022
Increase diversity of health behavior faculty by improving recruitment and retention of faculty of color.	Update faculty job posting and hiring process. Increase transparency and communication about faculty hiring processes.	Faculty on the Faculty Hiring Equity Action Team created a hiring report with a summary of challenges in the department and recommendations for promoting equity in hiring practices.	Completed August 2022
		An equity advocate was hired as part of the search	October 2022

Abbreviations: MPH, master of public health.

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Table 2. Examples of the Equity Task Force and Equity Action Team's Key Accomplishments as of October 2022, Department of Health Behavior, University of North Carolina Gillings School of Global Public Health

Strategy	Objectives	Accomplishments	Date accomplished
		committees for hiring. All committee members are required to take specific training, including training on implicit bias. Faculty job postings in the department will now require a diversity, equity, and inclusion statement.	
Increase transparency in hiring practices for students and how financial resources are distributed.	Increase the number of open searches available to students, recommend Department of Health Behavior student positions (ie, those that are funded by the department or by grants of which an Department of Health Behavior faculty member is principal investigator) are advertised with 1) a detailed job description, 2) requirements and preferences of applicants, and 3) an application and hiring process and timeline, as possible. Distribute the postings widely via departmental listservs and weekly newsletter.	The Department of Health Behavior now consolidates student job opportunities and widely advertises through weekly departmental emails. The Equity Task Force encourages faculty to post and advertise positions at the start of each semester. The department has also initiated an annual student funding presentation and discussion for students.	Started spring 2020, ongoing
	Pilot a process for requiring interviews of top candidates for Department of Health Behavior student-based tuition–funded and teacher assistant positions before hiring decisions are made.	The department now requires interviews as part of the hiring process for research and teaching assistantships that are funded by the Department of Health Behavior, when there are multiple applicants.	Piloted in 2020, required as of 2021
Enhance equity-oriented research practices, including but not limited to hiring of research faculty and staff	Promote equity in staff hiring.	Faculty on the Staff Hiring Equity Action Team created a staff hiring report that outlines recommendations that aim to 1) promote inclusive recruitment of diverse candidates and 2) encourage inclusive and equitable candidate screening, interview, and selection processes.	Completed August 2022

Abbreviations: MPH, master of public health.

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TOOLS FOR PUBLIC HEALTH PRACTICE

Training Medical Students to Recognize, Understand, and Mitigate the Impact of Racism in a Service-Learning Course

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PEER REVIEWED

Summary

What is already known on this topic?

People of racial and ethnic minorities have historically received less access to quality health services, which leads to health inequities; racism is a major contributor to these inequities.

What is added by this report?

Although many institutions offer service-learning courses designed to train community-oriented future physicians, few provide a required, year-long competency-based course aimed at addressing the social determinants of health, particularly racism, through collaborations with communities of color.

What are the implications for public health practice?

Medical education plays an important role in teaching how racism affects access to and delivery of quality health care to medically underserved communities and recognizing the structures that facilitate ongoing racism in our health care system.

Abstract

The Morehouse School of Medicine's Community Health Course (CHC) trains first-year medical students to work with people of racial and ethnic minorities and economically and medically disadvantaged communities. This service-learning course includes the *diagnosis/assessment* of the health of a community and the development, implementation, and evaluation of a *plan* to improve some aspect of the community's health. The CHC teaches about the impact of racism on the health of communities through lectures, educational games, and videos focused on social determinants of health, cultural competence, and effective community engagement. Students complete small group assessments, interventions, and service activities at assigned sites. This pedagogical approach integrates the Association of Medical Colleges' Diversity, Equity, and Inclusion competencies and engages many community partners.

The course's strengths include a multidisciplinary faculty, a culturally and educationally diverse student body, and community partners with varied backgrounds and resources. Opportunities exist for collaborations with other degree programs to sustain and increase the impact of community interventions and link this community-based educational activity to clinical training years.

Course evaluations, exams, and short essays assess students' awareness of racism and the extent to which unconscious bias affects students' completion and interpretation of community assessment data and their engagement with community partners.

Background and Rationale

The Institute of Medicine's landmark report *Unequal Treatment* (1) concluded that "racial and ethnic minorities experience a lower quality of health services and are less likely to receive even routine medical procedures than are White Americans" (1). This report also posited that many health disparities were the result of biases and stereotypes that occur during clinical encounters, not just social determinants (1). We use the definition of racism by Dr Camara P. Jones, one of the report's authors: **"**Racism is a system of structuring opportunity and assigning value based on the social interpretation of how one looks that unfairly disadvantages some individuals and communities, unfairly advantages other individuals and communities, and saps the strength of the whole society" (2). Health care providers with limited interaction with minority populations may exhibit some nuanced negative behaviors because of stereotypes about the lifestyle or health behaviors of their

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Black and Brown patients. These stereotypes may influence providers' quality of care. In turn, patients' health decisions might be in response to the clinician's and staff's behavior or past mistreatment during medical encounters. The issues identified in *Unequal Treatment* led to 21 recommendations for improvement in medical care financing, allocation of care, and the cross-cultural training of health care providers, yet the problems persist. The life expectancy of Black Americans is still 5 years fewer than that of White Americans (3). The Centers for Disease Control and Prevention estimated that in 2019, there were 70,000 premature deaths among Blacks from treatable chronic diseases. (4). This is an increase from the 1985 Secretary's Task Force on Black and Minority Health, which estimated 60,000 excess deaths of Blacks versus Whites. This report was a major driving force for identifying solutions to health disparities and advancing health equity in the US (5). The COVID-19 pandemic both revealed and exacerbated the health disparities and health care inequities between Black and White Americans (6).

Medical academic centers and professional health organizations, including the American Medical Association, have examined their practices and developed policies to dismantle racism. They have begun to use an equity lens in hiring practices and created offices of diversity, equity, and inclusion (DEI). Additionally, anti-racism education and training of students in the health professions are recommended.

The Morehouse School of Medicine (MSM) Department of Community Health and Preventive Medicine introduced its Community Health Course (CHC) in 1998 (7). The purpose of the course is to use service-learning to train first-year medical (MD1) students to become community-oriented physicians who will provide care for diverse populations. CHC also provides instruction on ways to recognize and address racism as one of the social determinants of health (SDOH) to achieve optimal community health and health equity. This innovative course reflects the mission of MSM to provide MD1 students with the tools, skills, and self-efficacy to work comfortably with populations with which they may have had no previous experience. Further, CHC provides learners with a knowledge base of health promotion and disease prevention and control, as well as skills of community engagement, during the 2 semesters with their community partners. Competencies for the course include those outlined by the American Association of Medical Colleges (AAMC) under the domains of DEI (8). Students interact with communities and observe the reality of SDOH, including substandard housing, lack of sidewalks and transportation, and food insecurity. These examples of structural racism as a social determinant come clearly into view.

Although systemic and structural racism are often used interchangeably, each has a slightly different meaning. Systemic racism refers to entire systems, be they health care, economic, educational, or legal and includes the structures that support and maintain the systems' race-based attributes. Systemic racism includes structural racism, which refers to the role of the structures (laws, policies, institutional practices, and entrenched norms) that support the systems (9,10). For example, historically, decisions about where major highways were constructed resulted in the destruction of communities of color, including schools and businesses. Communities that are in the shadow of these highways have higher rates of noise and air pollution and illnesses like asthma (11).

Lisa Howley, PhD, AAMC senior director of strategic initiatives and partnerships noted, "In 2018, only 40% of medical schools reported teaching about racial disparities" (12). Additionally, although SDOH have been viewed as a primary driver of health-related inequities, SDOH medical education curricular approaches have at their core under-resourcing and cultural competence instead of systems, practices, and policies that foster a focus on content rather than skills development (13–17). Thus, evolving instruction to structural-based competency in medical education is critical and produces a more substantive approach to addressing health inequities (16) — the express intent of the CHC (17,18).

The onset of the COVID-19 pandemic in 2020, intersecting with the high-profile murders of Ahmaud Arbery, Breonna Taylor, George Floyd, and others, brought to focus the roles that systemic and structural racism can play in the health outcomes of individuals and communities (19). Following these events, many publications were generated on conscious and unconscious bias in medicine and health care and recommendations on how to tackle it (19–22). Responses to the Black Lives Matter movement in the medical community include required training and continuing education among staff in medical schools and businesses and the creation of DEI offices to provide oversight and accountability. Educating medical students earlier in their training, as they are developing their ideas of what kind of physicians they will be, is imperative. Our CHC has been doing this for nearly 25 years.

The objective of this article is to describe how the CHC integrates AAMC DEI competencies into the curriculum for first-year medical students to teach the impact of racism on the health of communities and equip future physicians with skills to develop interventions to improve health outcomes.

Course Overview

The CHC is a required first-year course for medical students that provides an interactive service-learning approach to teaching medical students about the impact of racism on the health of a com-

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munity. Assessment and co-development of sustainable interventions are components.

Learners can begin to address their biases and stereotypical thinking of Black and other minority populations. Learners also address preconceived ideas in a learning environment of diverse peers who identify with populations of similar racial and ethnic backgrounds.

Faculty and Medical Student Participants

The CHC has 25 multidisciplinary faculty consisting of physicians, nurses, health educators, public health researchers, and behavioral scientists. These faculty have devoted their careers to clinical, educational, and research endeavors that advance health equity among racial minorities and underserved populations. Faculty are provided the professional development and resources needed to reinforce course concepts and provide culturally informed instruction.

This year's MD1 class comprises 126 racially diverse students who are divided into 12 learning communities. The MD1 class is representative of the MSM MD Program student population, which is 75% Black.

Community Partners

Each learning community is assigned to 1 community partner site. Sites are recruited at the recommendation of the CHC faculty or by the invitation of community organizations. The CHC seeks organizations that support MSM's mission of serving underserved communities, have staff with the time and interest to act as site liaisons, and have available space for the weekly small group meetings. Partner sites do not receive compensation for participating in the course; however, each student group receives a budget ($500 in the 2023 academic year) that is used to support community activities and provide participant incentives. Current community partners include pre-K and K-12 schools, after-school programs, independent senior living facilities, church outreach services, and a refugee social service agency in predominantly communities of color. Figure 1 illustrates the yearly timeline of the CHC engagement with its community partners. Most of the partner sites are located in Atlanta, which is divided into Neighborhood Planning Units (NPUs). NPUs were established in Atlanta to provide residents the opportunity to serve in an advisory capacity with the city government (22). Of the 5 NPU partnering sites, 82% to 93% of residents are African American (Figure 2).

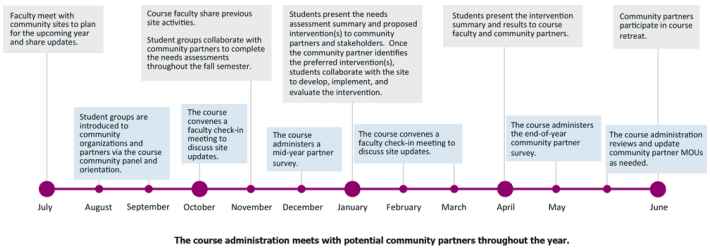

Figure 1. Morehouse School of Medicine Community Health Course, yearly community partner engagement timeline. Abbreviation: MOU, memorandum of understanding.

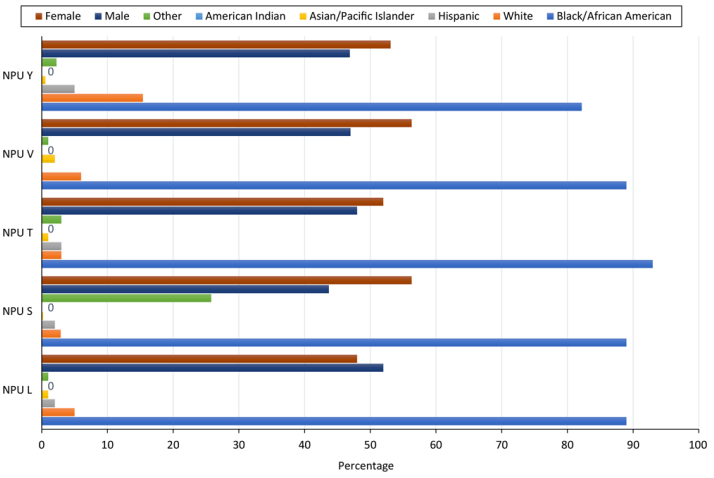

Figure 2. Morehouse School of Medicine Community Health Course, data on race and sex of community partners. Abbreviation: NPU, neighborhood planning unit.

CHC Overview

Philosophy

To help first-year medical students appreciate the similarities of "treating" individual patients and communities, a parallel is made using the clinical SOAP (Subjective, Objective, Assessment, and Plan) model (23). Akin to collecting subjective and observational data on patients, the same is collected on communities. This information is useful for assessment and diagnosis and creating a plan for treatment much like the diagnosis or assessment of the health of a community and the development and implementation of a (treatment) plan to improve some aspect of the community's health — thus viewing the "community as patient" (18). Descriptions of the course and its curriculum components have been published previously (7,17,18).

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Curriculum

Each semester begins with an orientation and a series of large group sessions that provide foundational concepts on SDOH, cultural awareness and sensitivity, effective community engagement, community assessment, and intervention planning and evaluation. These topics are essential to preparing students to effectively engage and collaborate with their communities, with special emphasis given to teaching students to adopt a culturally aware and community-centered approach. Short essays challenge students to self-assess any biases about the community site and the surrounding NPU and to understand how SDOH, specifically racism, affect their community site and their interactions with their assigned community. Exams test students' knowledge and application of the content presented in the large group sessions, and required readings include cultural awareness and sensitivity, effective community engagement, community assessment, and intervention planning and evaluation.

Process

The students, in collaboration with their site contacts and with guidance from course faculty, complete a windshield survey, key informant interviews, focus groups, and optional surveys, collecting subjective and observational data to formulate a community assessment and develop an intervention. MSM students gain an appreciation of social determinants beyond biology while spending time in observation, interaction, and reviewing relevant literature about communities with similar demographics. A timeline of these activities is described in Table 1. Additionally, site representatives and community partners are important resources in understanding the assigned communities, interpreting key data during the assessments, and in developing interventions. Additionally, partner sites can use the assessment data collected by students in their efforts to pursue funding opportunities and other resources for their communities.

Community partners also provide feedback through yearly surveys that assess students' interactions with the community populations and site members and the effectiveness of their assessments, service activities, and intervention projects. The Likert scale survey questions include the following:

- Communication between me and the faculty leader(s) was effective.
- Communication with the students was effective.
- The students were well-prepared for the work they did with my community.
- The student community health assessments accurately reflect the community.
- The student projects addressed the most important needs of the community.
- As a result of taking part in this course, the health of my community has improved.
- Overall, the relationship between my site and this course has been valuable.

These surveys indicate whether the CHC community partners find the collaboration beneficial to the health of their organizations and communities. This feedback is crucial and informs the education, assessment, intervention, and engagement activities each year.

Outcome

The student and community co-developed interventions designed to mitigate the negative impact of systemic and structural racism on the health outcomes of minority populations have included:

- Assisting low-income housing residents by developing a community garden to address nutrition needs
- Obtaining lockers for homeless shelter residents to provide more privacy
- Raising funds for bus passes for transportation to and from jobs for homeless women
- Collaborating with residents at a senior independent living facility to advocate for and maintain a traffic light and crosswalk for independence and safety
- Providing lists of local resources for childcare, housing and employment, and health assistance
- Supplementing after-school programs with health education, tutoring, and mentorship

To ensure the sustainability of these efforts, students provide summaries of their activities each year to share with subsequent classes. Throughout the CHC curriculum are clearly enumerated competencies to build anti-racism awareness and capacity among health professionals. Table 2 maps the CHC skills-based objectives with the AAMC DEI competencies, course activities, and evaluation metrics.

Course Summary

The CHC has several notable strengths, weaknesses, opportunities, and threats (SWOT) in teaching first-year medical students to mitigate the impacts of racism on communities of color. These should be considered for similar course or experience development, implementation, and evaluation.

Strengths include involving a diverse, multidisciplinary, and multi-ethnic faculty, medical student body, and community that contribute to formal and informal learning and skills-building to address the impact of racism on a community's health. Interwoven throughout CHC is the philosophy of "community as patient" and the AAMC DEI competencies that map course object-

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ives with activities and ensure bidirectional evaluation that is beneficial to both learners and the community. A weakness of medical school instruction on racism is that knowledge and awareness can be increased, yet many factors, such as the medical school schedule, time allotted in the community, and lack of resources, may preclude a thorough assessment of the impact of racism on community health and the development of robust mitigation strategies. Medical student longitudinal rotations in the community with a commensurate evaluation of impact, as well as a commitment to sustainable interventions, are plausible solutions. Opportunities exist for collaborations with other degree programs and professionals, such as the Physician Assistant and Master of Public Health students and the Satcher Health Leadership Institute fellows, to sustain and increase the impact of community interventions. Indeed, interprofessional education is widely supported and fosters training and preparation to address racism in health and health care. Opportunity also exists to bolster the evaluation of student and course outcomes. The greatest threat to CHC is the finite community sites for which growing numbers of health professions students and degree programs seek opportunities for training. Related is the need to establish long-standing, meaningful partnerships to assess and mitigate the impact of racism. To address this, a memorandum of understanding for long-term partnerships should be established among a directory or resource list of "preferred partners." While the effects of racism on health inequities increase, additional training is needed for health professionals to contribute to solutions.

Implications and Next Steps

The long-term success of the course is attributed to its focus on addressing the impacts of SDOH, the long-time tenure of most of its faculty, the continued collaboration with community partners, and the support of MSM. CHC has also scaled up and evolved to accommodate increased class sizes, expanded its reach in the surrounding communities, and diversified its community partnerships to serve other vulnerable populations (ie, refugees, asylum seekers, and victims of torture). Additionally, CHC has been adopted by several of MSM's graduate and residency programs (24–27), thereby expanding the efforts of MSM to address racism and other SDOH through various educational activities. Medical schools' curricula could be modified to include more longitudinal community-based educational offerings. Institutions could also replicate the individual course components such as the large group lectures; small group activities via in-person, online, or flipped classroom formats; and reflective short essays. For example, the course converted its curriculum to an online format during the COVID-19 pandemic.

As CHC continues to evolve, we look forward to continuing to develop this important course, educating about racism and health inequities and developing a workforce that incorporates not only the practices and principles of community health but also advances health equity practice by addressing the needs of racially marginalized communities and others disproportionately affected by poor health and health care.

Conclusion

Medical education can play an active role in mitigating racism and its resulting health inequities. It is important to train medical students to understand the effects of racism on the access to and delivery of quality health care and that medically underserved communities are particularly vulnerable to these effects. Medical students should also recognize the structures that facilitate ongoing racism in our health care system and be made aware of their roles and responsibilities as health care providers in this context. Medical education curricula must continue to encourage students' self-examination and awareness of their own biases and educate them on effective strategies for advocating for disenfranchised communities and patients.

The application of AAMC DEI competencies in the education and training of first-year medical students serves as a useful guide for medical school curricula to address the impact of racism on health care disparities in the US. When developing and implementing such curricula, it is also imperative to involve and include the perspectives of communities most impacted by racism.

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Tables

Table 1. Timeline of Students' Course Activities, Community Health Course, Morehouse School of Medicine[a]

Timing	Activity
Pre-course	CHC orientation
Weeks 1 and 2	Students participate in large group lectures, panel discussions, and games to learn course concepts and key assessment methods.
Week 3	Students complete windshield surveys of surrounding community of the community partner sites, review previous year's project summaries, are introduced to community site representatives, and complete their first short essay assignment.
Weeks 4–6	Students begin community service activities requested by community partner sites, plan and complete key informant interviews, and complete their second short essay assignment.
Weeks 7–9	Students complete community service activities, complete key informant interviews, take fall CHC exam, and complete their third short essay assignment.
Weeks 10–12	Students complete community service activities, plan and complete focus groups and optional survey, collect NPU and community data, and complete their fourth short essay assignment.
Weeks 13 and 14	Students complete community service activities, conclude community assessments and data collection, present draft fall presentation to community site representatives for feedback, and complete fall semester project summaries.
Week 15	Students present assessment summary and proposed intervention.
Spring semester	
Week 1	Students participate in large group lectures and activities to learn key intervention and evaluation planning processes.
Weeks 2–4	Students return to community sites to resume their community engagement activities, plan intervention activities, take the CHC exam, and complete their fifth short essay assignment.
Week 5	Students complete community service activities and start the community site-approved intervention projects.
Weeks 6–11	Students complete community service activities, complete and evaluate community site-approved intervention projects, and complete their sixth and seventh short essay assignments.
Week 12	Students conclude community site activities and say goodbye to community site members.
Week 13	Students present draft spring oral presentations and complete spring semester project summaries.
Week 14	Students present intervention summaries

Abbreviations: CHC, Community Health Course; NPU, neighborhood planning unit.
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Table 2. Community Health Course Learning Objectives, Activities, and Evaluations Mapped to AAMC Diversity, Equity, and Inclusion Competencies

Skill type	Relevant AAMC DEI competency	Activity	Evaluation
Assessment			
Define social determinants of health	4a. Identifies systems of power, privilege, and oppression and their impacts on health outcomes (eg, white privilege, racism, sexism, heterosexism, ableism, religious oppression)	Large group lecture; small group activities; SDOH game	Exam questions; post-game discussion
Demonstrate the ability to complete a community assessment	2a. Demonstrates the value of diversity by incorporating dimensions of diversity in the patient's health assessment and treatment plan	Small group activities	Presentation; short essay; exam questions
Use data from local, state, and federal agencies to identify a health problem	5a. Describes how stratification (eg, by race/ethnicity, primary language, socioeconomic status, LGBTQ identification) of quality measures can allow for the identification of health care disparities.	Small group activities	Group presentation
Community Engagement			
Demonstrate the ability to work effectively in a community setting	3a. Describes the value of working in an interprofessional team, including patients, to identify and address social risk factors influencing health (eg, food security, housing, utilities, transportation)	Small group activities	Faculty evaluation; short essays; group presentation
Demonstrate respect for addressing social determinants of health	3a. Describes the value of working in an interprofessional team, including patients, to identify and address social risk factors influencing health (eg, food security, housing, utilities, transportation)	Small group activities	Faculty evaluation; short essays; group presentation
Demonstrate sensitivity during interactions with community members	1a. Articulates how one's own identities, power, and privileges (eg, professional hierarchy, culture, class, gender) influence interactions with patients, families, communities, and members of the health care team	Small group activities	Faculty evaluation; short essays; group presentation
Communicate effectively with those of different backgrounds, including peers, faculty, and community members	1b. Seeks and acts upon feedback regarding how one's own identities, power, and privileges influence patients, families, communities, and members of the health care team	Small group activities	Faculty evaluation; short essays; group presentation
Planning and Evaluation			
Articulate the intersection between community, public, and individual health	11a. Identifies and, if appropriate, refers patients to relevant community resources that promote health equity and improve the health of local communities and populations	Large group lecture; small group activities	Exam questions
Identify and describe the components of community intervention planning, evaluation, and implementation	2a. Demonstrates the value of diversity by incorporating dimensions of diversity in the patient's health assessment and treatment plan	Large group lecture; small group activities	Exam questions; group presentation; faculty evaluation
Effectively communicate and collaborate with community members to plan and evaluate interventions	6a. Demonstrates the practice of cultural humility and, when appropriate, provides culturally relevant resources to their patients	Small group activities	Faculty evaluation; community partner survey

Abbreviations: AAMC, American Association of Medical Colleges; LGBTQ, lesbian, gay, bisexual, transgender, and queer; SDOH, social determinants of health.

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TOOLS FOR PUBLIC HEALTH PRACTICE

A Collaborative Approach to Address Racism in a Community–Academic Partnership

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PEER REVIEWED

Summary

What is already known on this topic?

Racism has permeated public health research and academia, and academic research centers and partner communities play an important role in creating more equitable outcomes for all those involved in research endeavors.

What is added by this report?

Our report describes a collaborative process that academic research centers and community partners may adapt to address institutional racism and embed anti-racism, equity, and justice into their operations and structures.

What are the implications for public health practice?

Creating antiracist research structures, collaboratively with community partners, has the potential to promote health equity and improve research relevance, translation, and impact. This report highlights a strategy for others to transform their practice toward meaningful change.

Abstract

The HERCULES Exposome Research Center at Emory University uses an exposome approach to study the environment's effect on health and community well-being. HERCULES is guided by a Stakeholder Advisory Board (SAB) that includes representatives of neighborhoods, nonprofit organizations, government agencies, and academic institutions in the Atlanta metropolitan region. This region (and the SAB) has a large proportion of Black residents, many of whom live in areas experiencing environmental injustices. Historic and current racial injustices in Atlanta and public health research made it imperative to initiate dialogue and implement actions to address racism and power dynamics that may impact research and partnerships between affected communities and our institution.

After initial discussion, the HERCULES Community Engagement Core and SAB members formed a workgroup to develop an internal anti-racism process. The workgroup drafted an Anti-Racism Commitment, hosted a Racism and Equity Dialogue Series, and initiated a strategic planning process to implement the resulting recommendations, which fell into the following categories: antiracist guidance/policies and recommendations for research, community engagement, and the department. Center leadership and the SAB were engaged throughout the iterative process.

This deliberate and ongoing process allows HERCULES to identify and begin implementing action items that go beyond a written proclamation to address racialized power imbalances and systemic inequities. HERCULES is committed to working collaboratively to earn community trust while addressing systemic issues, recognizing that these are essential to forming research partnerships that address health inequities.

Background

The American Public Health Association named racism as a public health crisis in 2020 (1). To address racism in a lasting way, public health research needs to be viewed through a critical lens that strengthens and promotes racial equity. Racism has long permeated science and public health research (2). For example, Black and American Indian communities have been the subjects of research, often without their knowing consent, such as the US Syphilis Study at Tuskegee and the genetic research among the Havasupai Tribe (3,4). Historically, research institutions have engaged with communities in an extractive manner, taking knowledge and data and giving little in return (5,6). Academic institutions, including Emory University, have begun to acknowledge their long history of racism (7), including barriers to entry for racial and ethnic minority groups (8). There is also a need to increase the number of scholars of color (9,10) and incorporate anti-racism into the insti-

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tution (11), the curricula (12), and, specifically, into environmental health science and community-engaged research (8,9,13). In response to a renewed national awakening to racialized injustices, the HERCULES Exposome Research Center's (HERCULES) Community Engagement Core (CEC) and Stakeholder Advisory Board (SAB) initiated a process to identify and address racism in HERCULES' practices.

HERCULES is an environmental health research center at Emory University funded by the National Institute of Environmental Health Sciences to support exposome research, with the goal of capturing the totality of environmental exposures across the lifespan to better understand the environment's contribution to health and disease, including chronic disease (14–16). Situated within the Rollins School of Public Health, HERCULES has 77 members who are faculty from across the school and university; one-third are Environmental Health faculty. The Center helps its members incorporate the exposome into their research by providing support in data science, targeted and untargeted chemical analysis, pilot project funding, and community engagement (Figure 1). Community engagement is integral to many federally funded research centers, often with dedicated cores like the HERCULES CEC (17–19). The HERCULES CEC has built a long-term and committed relationship with its SAB, both formed as part of the Center in 2011, with several original members still serving today. The active 29-member SAB includes representatives of community groups and organizations (n = 17), government agencies (n = 8), and other academic institutions (n = 4) who are focused on environmental health and justice issues in the Atlanta metropolitan region. Community members are compensated for their time, knowledge, and unique perspectives. The SAB oversees and provides community perspectives to CEC activities, offers connections to the local community, and provides critical guidance to HERCULES toward fulfilling its mission to improve exposome science and environmental health and justice in the Atlanta metropolitan region.

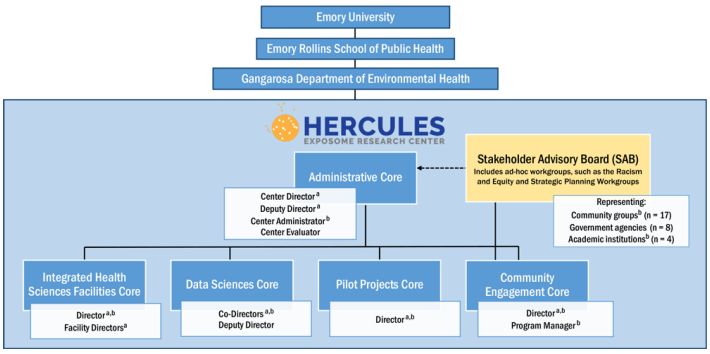

Figure 1. HERCULES organizational chart. Footnote a indicates members of the HERCULES Leadership team. Footnote b indicates members of the Center Anti-Racism Workgroup.

The Atlanta metropolitan region is one of the largest metropolitan areas in the southeastern US, including 11 counties and over 6 million people. Most residents are people of color (56%), predominantly Black residents (33%), which is more than double the proportion of the US Black population (12%) (20,21), and HERCULES SAB members reflect this diversity. This diverse region faces myriad environmental injustices that impact residents' health. The region has the nation's largest racial wealth gap (22), ranks near last in upward intergenerational mobility (23), and has outdated infrastructure, including a combined stormwater/sewer system that contributes to excess flooding and sewer overflows (24–27). Atlanta's pollution sources are predominantly located in areas with a large population of color (28,29) that also face high levels of poverty, limited access to healthy foods and transportation, and higher rates of asthma and breast cancer (28–32), resulting in part from racist policies like redlining (32,33), highway placement, transit boundaries, and urban renewal projects that continue to displace, fragment, and isolate Black neighborhoods, maintaining Atlanta's historic segregation (34–36).

Racism has been linked to chronic disease outcomes (32,37–39), and some have posited that the exposome concept should include exposures such as racism (40,41). Also, Emory University and HERCULES researchers are predominantly White, and Emory University has a history of slavery and dispossession (42), reinforcing the need to address systemic and institutional racism (10). A 2015 focus group with SAB members indicated that community-based SAB members lacked trust in Emory, expressed distrust of the university's motives, perceived it to be a school for the privileged, and believed that research results are not always communicated back to communities. However, the same focus group indicated high levels of trust for CEC staff due to their reliability and follow-through. As such, it was imperative for the CEC to maintain that trust by initiating dialogue and implementing actions to address racism and power dynamics that could harm our

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partnerships, research, and impact. Academic research centers like HERCULES have the potential to affect faculty, students, and the surrounding community negatively or positively, by either continuing extractive research practices or engaging in collaborative, anti-racist research that pursues racial and health equity. The long history of racism cannot be overcome by passive means, but must instead be directed by anti-racist practices.

Anti-racism is the active practice of identifying and opposing racism and supporting policies that reduce racial inequity (43). While others have noted the need to incorporate anti-racism into academic curricula (12), anti-racist practices must be incorporated beyond the classroom and throughout the institution and, when possible, should be developed with the involvement of community partners. Academic research centers need to adopt anti-racist practices as a prerequisite to create more equitable research and power sharing for all those involved in research endeavors (44). HERCULES and its SAB have initiated this anti-racist transformation in the HERCULES program, and we share our process here so that others may apply it in their efforts to dismantle racism in their institutions and partnerships.

The HERCULES Anti-Racism Process: From Dialogue to Action

The SAB and CEC initiated an ongoing anti-racism process within HERCULES in July 2020. We describe this process in detail, with the timeline depicted in Figure 2.

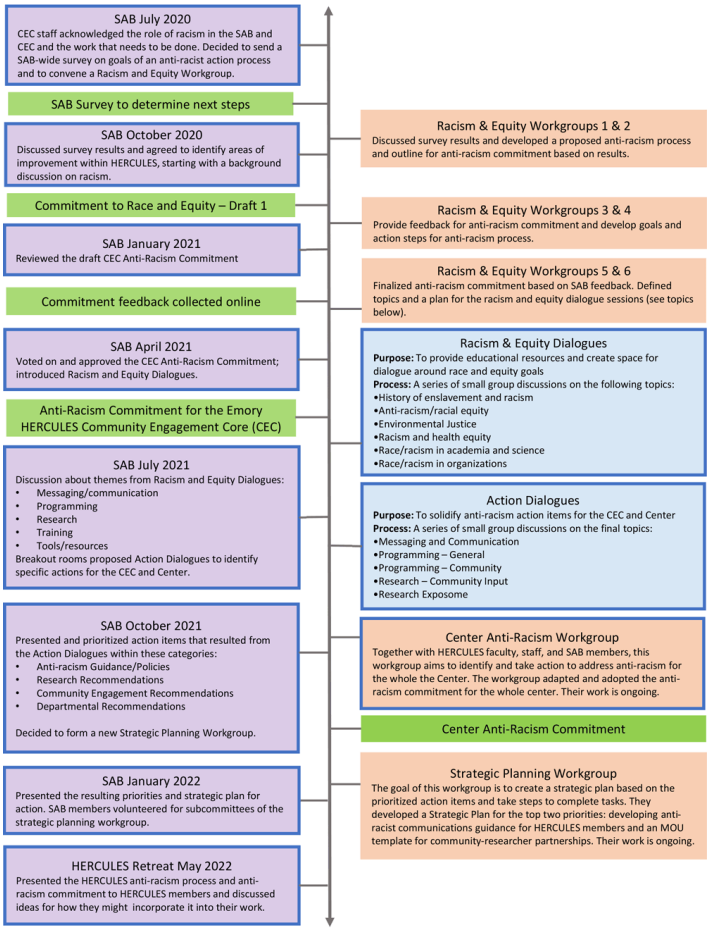

Figure 2. HERCULES pathway to addressing racism and equity. Purple boxes indicate a HERCULES Meeting (SAB or Retreat). Peach boxes indicate a Work Group, blue boxes indicate a Dialogue Session, and green boxes indicate an Output. Blue outlines indicate participation from HERCULES leadership and/or faculty. Abbreviations: CEC, Community Engagement Core; MOU, memorandum of understanding; SAB, Stakeholder Advisory Board.

Initial SAB input and survey

The first step was to acknowledge the role of racism within HERCULES, the CEC, and the SAB and determine whether and how the SAB wanted to move forward with an anti-racism process. To do this, we initiated the discussion at a quarterly SAB meeting, which led to the recommendation that we hold dedicated discussions about racism and equity, possibly with a facilitator. We followed up with a survey to the SAB to determine next steps, including how these discussions should be structured, the topics (anti-racism broadly, institutional racism, and/or bias within HERCULES), and who should be included in these discussions (n = 21, 72% response rate). Discussion topic ratings were closely ranked, the top being to discuss racial and ethnic bias within HERCULES

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(n = 11). Respondents described their goals for the discussions, with many wanting to improve HERCULES processes and operations, and to include background and education around racism, anti-racism, and institutional bias specific to public health. Most SAB members felt that these initial discussions should include the full SAB (n = 15, 71%), CEC staff (n = 17, 81%), and HERCULES leadership (Center Director [n = 15, 71%] and core leaders [range, 9–13, 43%–62% across core leads]). To complete these steps, 4 SAB members volunteered to form the Racism and Equity Workgroup to provide additional guidance on this effort. During the initial workgroup meetings, we discussed the survey results, brainstormed ideas for an anti-racism process, and drafted language and values to include in an anti-racism commitment.

Anti-Racism Commitment for the CEC

Building from the language and values emphasized by workgroup members, the CEC staff developed a first draft of the CEC's Anti-Racism Commitment. During the following 6 months we received and incorporated feedback through an iterative process between CEC staff, the workgroup, and the SAB. The final Commitment was approved by the full SAB during a quarterly meeting.

Racism and equity dialogues

Using the SAB survey results, the workgroup decided the dialogues' goal was to identify areas of improvement within HERCULES policies and operations and to provide background and education of the history and systems of racism so that all participants (SAB members and HERCULES leadership) worked from a shared foundation, context, and language. Meanwhile, outside facilitators were in high demand, with limited availability and high fees. As such, the workgroup decided to host educational discussions internally, with SAB members and HERCULES leadership volunteering to facilitate. The idea of a book club approach emerged at an SAB meeting: small group discussions, with a list of resources around a certain topic.

The workgroup further refined plans for the dialogues to spark discussions around racism and equity while providing a foundation to identify priorities to address within HERCULES. Reflecting on the survey results and HERCULES' mission, the workgroup used a brainstorming process to identify 6 main topics that provided a historical background on racism and covered how racism specifically impacts community partnerships, public health, and research (Figure 2). Workgroup members and CEC staff gathered resources (eg, news articles, journal articles, videos, podcasts, presentations) for each topic in a shared online document. SAB members and HERCULES leadership were invited and registered for dialogue sessions. Some topics had more than one session due to the level of interest, and individuals could sign up for as many sessions as they wanted.

Nine sessions of virtual dialogues were conducted and attended by 28 people (including 5 members of HERCULES leadership); 8 were facilitated by SAB members, one by a member of HERCULES leadership. Per feedback received on the SAB input survey and because each session was only an hour, sessions were limited to 8 participants, not including CEC staff, to make sure there was time for every participant's voice to be heard. Before each session, participants were asked to read, listen to, or watch at least 1 resource from the discussion topic resource list and to come prepared to discuss it. Volunteer facilitators guided sessions using a facilitation guide co-developed by CEC staff and the workgroup, and a CEC staff member attended to take notes and participate when appropriate. As conversations about racism and discrimination can be psychologically demanding, each session started with an introduction activity to help participants pause to think about how they were feeling and consider their intention for participating in the conversation. We provided participants with a feelings wheel (45) and asked them to share 1 to 2 words for 1) how they were feeling and 2) their intention for the session, along with their name and organization. We then reviewed our 9 community agreements (46–48) to help establish ground rules and create an inclusive and respectful space for the conversation. Next, each person provided a brief overview and key takeaway of the resource they reviewed (eg, "What was something you found the most interesting or didn't know before?"). The group then discussed "How does this relate to something you have seen or experienced with the SAB/CEC/HERCULES?" and determined recommendations and takeaways to report back to the SAB (eg, "We want HERCULES to know or consider this. . . ."). These dialogues provided a space for HERCULES leadership and SAB members to talk together about these tough issues while generating rich ideas for areas of improvement and change within the SAB, CEC, and HERCULES to dismantle racism and promote equity.

Action dialogues

Following the dialogues, CEC staff reviewed the notes, compiled a list of recommendations, and identified 5 common themes (Figure 2). The time from starting the process through presenting the common themes was 1 year. During the meeting, we asked members to self-select into breakout groups to identify specific action items regarding communication, programming, and research. (The other topics were specific recommendations that didn't require further discussion.) In each topic-specific breakout group, SAB members agreed on which recommendations they wanted to implement and brainstormed next steps, including who would do it, how, and

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when. After the breakout discussions, the SAB decided we needed more time to answer these questions and recommended that we schedule another round of dialogues: action dialogues.

The purpose of the action dialogues was to solidify action items associated with specific topics (Figure 2). CEC staff helped facilitate these discussions, with a member of HERCULES leadership participating in each to ensure that they were aware of and involved in the recommended actions.

CEC staff reviewed all the notes from the action dialogues and identified 4 main categories with 4 or 5 specific recommendations each. Primary categories included anti-racism guidance/policies, research recommendations, community engagement recommendations, and departmental recommendations. We presented these action items at an SAB meeting, where SAB members rated each action on a 5-point scale from lowest to highest priority (n = 19) (Table 1). Four SAB members volunteered for a strategic planning workgroup to move these priorities forward.

Ongoing Work

Strategic Planning Workgroup

The Strategic Planning Workgroup developed a plan to implement the top 2 priority recommendations: 1) developing anti-racist messaging/communication guidance and 2) creating a standard memorandum of understanding (MOU) for community–researcher partnerships (Table 1). The third highest priority item, to incorporate racism into exposome science, was referred to the Center Anti-Racism Workgroup.

Center Anti-Racism Workgroup

After participating in the CEC's dialogue series, HERCULES leadership determined that they needed to form a Center-level workgroup to implement some of the SAB recommendations and also identify other actions required at the Center level. Center leadership and SAB members comprise the Center Anti-Racism Workgroup (Figure 1). Its first task was to modify the CEC's Anti-Racism Commitment to apply to the whole Center. Although Center Workgroup members agreed that the CEC Commitment could largely be adopted as-is by the full Center, they identified areas to expand to include the full purview of the Center, such as its influence over Center-level recruitment and mentorship and its members, faculty representing all departments within the School of Public Health and many across the university. The finalized HERCULES Anti-Racism Commitment is posted on the HERCULES website (49) and was shared at the 2022 HERCULES Retreat, with a discussion between SAB members and HERCULES faculty about how to apply the commitment in their work.

The Center workgroup is now working on a recommendation that emerged from both the action dialogues and the retreat discussion: to host training/seminars for faculty and others to learn about how to incorporate race and racism into exposome science.

Evaluation

We have monitoring mechanisms built into this process to track our work and report on progress and accomplishments at our quarterly SAB meetings and in funder progress reports. Here, we report on a process evaluation assessing the implementation and short-term outcomes of this ongoing collaborative process. Using document review and a mixed-methods participant survey co-designed by our SAB member co-authors, we report on the initiative's implementation and participation, accomplishments and short-term outcomes, and participants' attitudes and satisfaction with the process (50,51). Together, these provide a basis for assessing the strengths and weaknesses of the process thus far.

Accomplishments

To date, the process has produced several tangible outcomes. First, the Anti-Racism Commitment guides HERCULES in its mission to improve environmental health in the metropolitan Atlanta area. A major part of the commitment is to build equity into all procedures, programs, and activities, such as our purchasing and procurement practices, publications and publishing practices, funding criteria, and evaluation activities. For example, we intentionally purchased event supplies from a local Black-owned business (March 2022) and amplified scholars of color within our citations in a publication (April 2022) (10,52,53), just 2 actions to share power.

Second, HERCULES leadership has demonstrated its continued investment throughout this process. They participated in the dialogue sessions, provided feedback for the CEC Anti-Racism Commitment, adapted and adopted it for the full Center, and established a Center Anti-Racism Workgroup.

Third, our process created a living list of specific, prioritized action items for the CEC and Center to address, being carried forward by the Strategic Planning Workgroup and the Center Anti-Racism Workgroup (Table 1). This work reaches beyond the Center given that HERCULES members represent all departments in the School of Public Health, including the Chair of the Gangarosa Department of Environmental Health. Additionally, the HERCULES director serves as the Executive Associate Dean for Faculty Affairs and Research Strategy and 3 core leads serve on their department's Diversity, Equity and Inclusion Committee.

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Participant attitudes

We solicited feedback about the HERCULES anti-racism process from the SAB and leadership via a survey that inquired about their perceptions, satisfaction, and concerns. Twenty-four people responded to the survey, 19 SAB members (65.5%) and 5 members of HERCULES leadership (62.5%). Respondents rated the importance of 5 process activities (Table 2). Overall, 90% of respondents felt that the activities were important or very important to the process. One SAB Workgroup member wrote that the process was "the best I had participated in compared with other[s] that did it too quickly and in less depth and commitment." SAB members rated the SAB/Center Workgroups and the Anti-Racism Commitment most important (100% and 92%, respectively). Center leadership unanimously rated 3 of the 5 activities as "important" or "very important." All respondents from the HERCULES leadership team and about 90% of SAB respondents felt that the process had been a good use of their time and CEC staff time (Table 3). Seventy-nine percent of respondents stated that the process was either successful or very successful, while 21% chose neutral (Table 3).

The survey also asked respondents about their concerns. A common theme that emerged was the need to implement the identified action items and the necessity to continue work in the area. One SAB member wrote, "Too early to [assess] whether the process has been successful to address racism as that is a longer-term goal, but this is definitely a huge step in the right direction." Another concern was about the amount of information and complexity of the topic. For example, one SAB Workgroup member wrote, "I was feeling overloaded with information and not much time to process during most calls. However, HERCULES staff helped with that . . . there were many recaps and HERCULES staff could repeat, slow down, go over material upon request." These survey results helped us reflect on the strengths and weaknesses of this process.

Strengths and weaknesses

The HERCULES anti-racism process has several strengths. It is a collaborative, in-depth, iterative, transparent process. Steps evolve with input from SAB members, Center leadership, and CEC staff. Everyone serves as an equal partner in the process, and this model of self-guided learning and sharing was a cost-effective, socially distanced option, given the COVID-19 pandemic and the high demand for facilitators. The process encourages active engagement of all participants, enlisting community and academic members alike as learners and educators to share resources, observations, ideas, and recommendations (54). Active engagement throughout the process results in greater buy-in and potentially more immediate implementation, further facilitated by the inclusion of Center leadership in all stages of the process. This full inclusion also means everyone is aware of and begins to practice what we commit to doing collectively, so translation and implementation are more certain to permeate and guide processes and procedures (55,56).

One of the long-term goals of the process is to inform and create change in the Center's operations which could transcend to university and community operations. Having intentional action as a metric of success increases the possibility of embedded changes (54). In addition, this process, built for members by members, remains deliberate and ongoing, with continuous feedback allowing participants to engage in various ways according to their comfort levels, desired level of engagement, and knowledge about racism and anti-racism, building trust and commitment between participants, in the work itself, and the Center's direction (57).

The process also has challenges. It started over 2 years ago, proceeds slowly, and has no end point, which could result in attrition of participants over time. However, CEC staff regularly provide an overview of past activities and progress when needed. Another challenge could result from HERCULES leadership being fully engaged in every stage of the work, with power differentials potentially adversely influencing how transparently participants engage (56). However, the CEC is guided by community-based participatory principles (5) where power dynamics are considered and intentionally mitigated to reduce this effect. To this end, the initial survey let the SAB guide the development of the process, asking if they wanted Center leadership to participate. The follow-up survey did not indicate any resulting concerns from leadership's participation.

Conclusion

The structure, history, and trust within the HERCULES SAB as well as the nationwide attention being given to the topic has enabled us to embark on a process to address systemic racism within our institution and partnerships. We acknowledge the institutionalized barriers that exist, including that HERCULES is part of a predominantly White institution in a city with a large proportion of Black residents and historical and ongoing environmental injustices. The ongoing, iterative work to become an anti-racist, multicultural organization must be grounded in trust, earning community willingness to develop mutually beneficial, long-term collaborative partnerships and then co-planning and implementing an intentional, transparent process together as respected partners and colleagues. The anti-racism process described here can serve as a roadmap for others in their efforts to dismantle racism within their institutions and partnerships.

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Tables

Table 1. HERCULES Stakeholder Advisory Board Anti-Racism Action Items, by Category and Ranking[a]

Action item	Priority ranking
Anti-racism guidance/policies	
Messaging/communication guidance for HERCULES members' publications, presentations, etc	1st
MOU template for community–researcher partnerships	1st
Guidance document for scientists to use when developing research projects	2nd
Develop and implement training on all guidance	2nd
Research recommendations	
Incorporating race/racism into exposome research methods	1st
Support HERCULES junior scientists of color	2nd
Provide ongoing training for HERCULES researchers about anti-racism and community engagement	2nd
Recommendations specific to HERCULES Pilot Program	4th
Community engagement recommendations	
Showcase the work of community grantees to facilitate collective action and networking with researchers and local communities	2nd
Create an advocacy training program for community grantees	3rd
Implement structures to ensure student projects follow anti-racism and best practices in community engagement	4th
Coordinate an Atlanta-wide, community-engaged research ethics forum	5th
Design multifaceted youth engagement program	5th
Departmental recommendations	
Re-examine faculty promotion and tenure	3rd

Abbreviation: MOU, memorandum of understanding.
[a] This table is meant to serve as an example of the action items that resulted from our year-long process. Each action item is a brief description of the detailed discussions and decisions that were made.

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Table 2. Activity Participation and Importance Rating From HERCULES Stakeholder Advisory Board and Leadership (N = 24)

Activity	No. of participants in activity	Participant rating, no. (%)[a]					No. of missing participants
		Not important	Less important	Neutral	Important	Very important	
HERCULES stakeholder advisory board members (n = 19, response rate 65.5%)							
Anti-racism discussions at SAB meetings	13	0	1 (7)	2 (13)	2 (13)	10 (67)	4
Workgroup (SAB or center)	9	0	0	0	4 (33)	8 (67)	7
Small group dialogue sessions	11	0	0	2 (15)	4 (31)	7 (54)	6
Anti-racism commitment	9	0	1 (8)	0	2 (17)	9 (75)	7
Anti-racism discussion at HERCULES retreat	7	0	1 (8)	1 (8)	1 (8)	9 (75)	7
HERCULES leadership (n = 5, response rate 62.5%)							
Anti-racism discussions at SAB meetings	3	0	0	0	1 (25)	3 (75)	1
Workgroup (SAB or center)	3	0	0	0	1 (25)	3 (75)	1
Small group dialogue sessions	4	0	0	0	2 (40)	3 (60)	0
Anti-racism commitment	4	0	1 (20)	0	0	4 (80)	0
Anti-racism discussion at HERCULES retreat	3	0	0	1 (20)	1 (20)	3 (60)	0

Abbreviation: SAB, stakeholder advisory board.
[a] Denominator for % in each column is the total number of respondents for that question, not activity participation. Total number of respondents is calculated by summing the number of responses for “not important,” “less important,” “neutral,” “important,” and “very important” categories.

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Table 3. Overall Reflection from HERCULES Stakeholder Advisory Board and Leadership (N = 24)

Reflection question	Strongly disagree, n (%)[a]	Disagree, n (%)	Neutral, n (%)	Agree, n (%)	Strongly agree, n (%)
Has this process been a valuable use of your time?					
SAB	0	0	2 (10)	4 (21)	13 (68)
Leadership	0	0	0	2 (40)	3 (60)
Has this process been a valuable use of our staff time?					
SAB	0	0	2 (10)	3 (16)	14 (74)
Leadership	0	0	0	1 (20)	4 (80)
Reflection question	**Not at all successful, n (%)[b]**	**Slightly successful, n (%)**	**Neutral, n (%)**	**Successful, n (%)**	**Very successful, n (%)**
How successful do you think this process has been at addressing race and racism in HERCULES and the work we do?					
SAB	0	0	4 (21)	8 (42)	7 (37)
Leadership	0	0	1 (20)	2 (40)	2 (40)

Abbreviation: SAB, stakeholder advisory board.
[a] Total number of respondents is calculated by adding up the number of responses for "strongly disagree," "disagree," "neutral," "agree," and "strongly agree" categories.
[b] Denominator for % in each column is the total number of respondents, not participants. Total number of respondents is calculated by adding up the number of responses for "not at all successful," "slightly successful," "neutral," "successful," and "very successful" categories.

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ESSAY

Multilayer Solutions to Inequities During the COVID-19 Pandemic

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PEER REVIEWED

At first glance, the Michigan Executive Directive No. 2020–7 is impressive and forward thinking. I initially lauded the executive directive that mandatory implicit bias training be required of all licensed health professionals. As stated in the order, "The COVID-19 pandemic has illustrated, with brutal proof, the persistence of racial disparities in our society . . . because of the prevalence of what is sometimes called *implicit bias*: thoughts and feelings that, by definition, often exist outside of conscious awareness, and therefore are difficult to control" (1). However, upon reading the directive in full, I noticed a theme that was important but too narrowly focused on me and my fellow health care professionals. It is not solely *our* bias in taking care of patients with COVID-19 that created the racial disparities or a surge in COVID-19–related deaths; interpersonal bias *and* structural implicit bias, in addition to discrimination, laid the foundation for the devastating statistics seen throughout Michigan and the United States.

As a critical care registered nurse in Detroit, Michigan, I was practicing in one of the epicenters of the pandemic and in the state with peak cases in March 2020. My coworkers and I take pride in providing excellent care to anyone who comes through our hospital doors, regardless of race or ethnicity. We have chosen to work for years in Detroit, whose demographics show that Black Americans comprise 78.3% of the population, while the overall population of Black Americans in the US is 12.8% (2,3). I agree that our "selfless and courageous service" was instrumental in preventing more lives from being lost (1). While it is undeniable that implicit bias has contributed to interpersonal bias that affects health outcomes, social determinants of health (SDOH) are also a part of why these patients were primarily at high risk for COVID-19.

SDOH, as defined by the Centers for Disease Control and Prevention (CDC), are the "wider set of forces and systems shaping the conditions of daily life that affect health outcomes" (4). Some examples of SDOH include safe housing, transportation, access to health care, environmental aspects such as polluted air and water, access to healthy food, options for physical activity, education, job opportunities, and many more. SDOH affect predisease conditions that increase risk of transmission of communicable diseases, conditions that increase risk of poor outcomes, and postdisease conditions that affect long-term outcomes (5). SDOH are key areas for research because, according to Behavioral Risk Factor Surveillance System data from 2017–2019, people who report experiencing 1 adverse SDOH have 1.6 increased odds of self-rated fair or poor health (6). The more social inequities one experiences, the greater the odds: those who report experiencing 4 or more adverse SDOH have 5.3 increased odds of self-reporting fair or poor health compared with those who report zero (6). In addition to reporting fair or poor physical health, those who experience 1 or more adverse SDOH have higher odds of reporting poor mental health days (6). The total burden of risk due to adverse SDOH is a significant predictor of health, beyond the influence of demographic characteristics alone (6).

Structural racism has contributed to the effects of SDOH and health inequity by reinforcing discriminatory beliefs in racial and ethnic minority populations. Historically, most studies have prioritized studying interpersonal racial and ethnic discrimination, with less focus on exploring the health effects of structural racism (7). Concentration on structural racism rather than interpersonal bias is crucial to improve health equity and ameliorate population health (7).

To address health outcomes further complicated by structural racism, a multilayer approach is needed among racial and ethnic minority populations. Racism is a structure — health care professionals can help to tear down this structure that contributes to health disparities, even if it must be demolished one brick at a time. While a multilayer method needs to address all SDOH, this essay highlights 2 contemporary conceptual models to provide a framework to advance future research in various health-related

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disciplines: the Assessing Community Engagement (ACE) Conceptual Model (8) and the housing and health disparities conceptual model (9).

Housing Security

Care delivery bias was only one of many factors of structural and social determinants of health contributing to the racial and ethnic disparities during the COVID-19 pandemic in the US (5). Housing access is of concern for increased risk and risk of poor outcomes in the hospital and in the long term (5). The housing and health disparities conceptual model can be used to address health outcomes caused by structural inequalities through 4 pillars: cost, conditions, consistency, and context (9). Cost represents affordability, conditions encompass the adequacy of the physical environment, consistency describes residential stability and the ability of residents to remain in their home for as long as they wish, and context characterizes the surrounding health-relevant neighborhood resources (9). Mediating and moderating factors of structural inequality include differential vulnerability due to chronic stress, ability to acquire resources that promote health, differential vulnerability across the lifespan, and health behaviors that contribute to comorbid conditions such as smoking and lack of physical activity (9). When people are exposed to these factors, a multiplying cumulative exposure leads to poor health outcomes such as chronic and infectious disease. Addressing structural inequality and discrimination through cost, conditions, consistency, and context of housing can lead to improved health outcomes in, for example, chronic disease and maternal health (9). Disciplines including public health, nursing, social work, and medicine can implement this conceptual model to develop interventions in specific identified populations across all levels of health care. Additionally, screening tools based on these 4 pillars of housing equity need to be developed for use in hospital systems, outpatient clinics, and public health settings, allowing for increased awareness and connection to necessary social services and improved housing outcomes in patients served in that area. Addressing housing as a determinant of health equity can lead people to a healthier life.

Community and Patient Engagement

The ACE Conceptual Model represents a guiding framework to use community engagement to drive the US toward health equity through systems modification (8). Community engagement is at the core of the conceptual model; changing health equity and systems can only happen through community engagement (8). According to this model, improving health care programs and policies requires that solutions come directly from the community (8). It is key that health care institutions, and health professionals working in those institutions, have a mutually shared goal surrounding the community's needs. Medical mistrust may present itself further if the health care system implements changes in community health without having those crucial conversations. It is our job as health care professionals to listen to our patients and their families to hear what their needs are and to bring about that change within the health care system to serve the community at large. Once shared goals are identified, measurable actions should be taken to meet those goals, reassessed often, and adjusted if needed. Research is needed to identify tools to measure these goals and to develop implementation programs within neighborhoods. Moreover, intervention within community health should come from a place of true caring, instead of simply "checking off a box" for community engagement. To have a thriving community, measurable and attainable mutual goals must exist between health care systems and the communities they serve to achieve health equity through transformed systems of health.

Conclusion

As a critical care nurse, I see some of the most acute patients in the hospital system, observing how their everyday lives have affected their health outcomes. As health care professionals, we must not forget that the patients and families we serve come from the community and then go back to the community once they leave us. No matter where we are in a person's health care journey, it is our job to advocate for their health. The structural bias and racism that racial and ethnic minority patients endure every day is inexcusable. Health care professionals must address this issue by improving our own policies surrounding health equity. This essay has provided 2 conceptual frameworks with which to guide future research to address health inequities through housing and community engagement. Additionally, I encourage fellow health professionals to move forward with a larger conversation surrounding racial and ethnic minority health and share what we observe in our everyday practice to advance how we care for our patients.

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