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Racial Disparities in Cancer Care | Access to Care for Transgender Veterans | Hepatitis C Among US Veterans | Battling Tobacco Use at Home | [illegible] | How Might the Provision of Culturally Competent Services Be Enhanced for American Indian and Alaska Native Veterans? | Improving Trends in Gender Disparities | Suicidality Among Hispanic and African American Veterans Following Surgery

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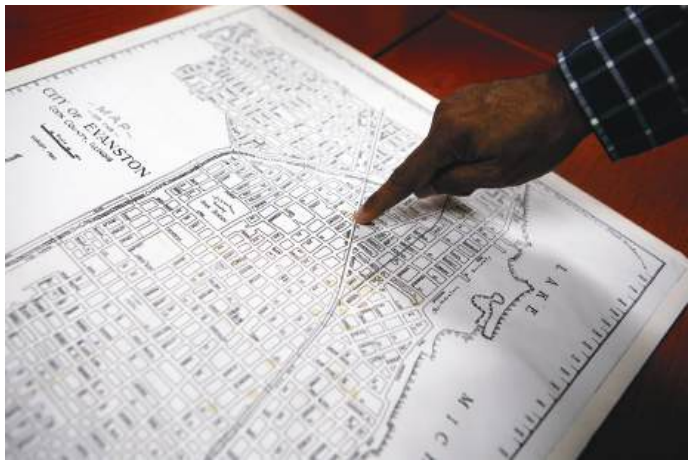

COVER: Community historian Morris "Dino" Robinson, who helped shape the Evanston's reparations initiative, points to the borders of the Fifth Ward, which was the area of Evanston the city's Black citizens were forced to move to due to redlining between 1919 and 1969, in Evanston, Illinois, United States, March 17, 2021.

Photo concept and selection by Aleisha Kropf. Photo by Eileen T. Meslar/ Reuters. Printed with permission.

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Structural Racism and Public Health

The enactment of racist laws, creation of discriminatory policies, and implementation of biased practices across the social, political, and economic spectrum to uphold White patriarchy has produced and sustained an interwoven and deeply embedded system of structural racism in the United States. This system of structural racism, established to maintain oppression over racialized and minoritized groups, continues to produce gross inequities across the board in access to education, social services, criminal justice, safe and healthy food and water, housing, employment, safe environments, and health care. These created inequities yield stark inequalities in physical and mental health and well-being for individuals and communities that are racialized and marginalized in the United States.

While the public and scientific discourse now clearly call out structural racism, there is much work yet to be done to dismantle the systems that keep it in place. Our work must evolve in the ways in which we study inequalities in health and well-being within and across racialized and marginalized groups. Quite simply, our public health enterprise cannot and should not simply stop at identifying inequalities in health status across racialized and marginalized groups (e.g., Black–White differences in a given health status outcome). Rather, we must strive to carefully consider and expose the underlying system as well as intersecting systems of structural racism that produce these inequalities.

What appears to be a simple and logical next step does present challenges. To understand how structural racism operates, we must have and employ frameworks that recognize and appropriately center structural racism as a fundamental driver of inequities in the social determinants of health. Again, a simple and, yet, not simple task. Understanding and acknowledging inequities in the social, political, and economic structures that produce unequal health status requires taking the time and doing the work of recognizing the discriminatory laws, policies, and practices that undergird these inequities.

Next, we must be able to link these findings to concrete approaches that dismantle the racist and discriminatory laws, policies, and practices driving inequities in the social determinants of health. This means providing actionable steps at local, state, and federal levels. Equally important is the work to dismantle the cultural and societal norms, attitudes, beliefs, and practices that support and perpetuate racist and discriminatory laws, policies, and practices. The latter involves working at the community and grassroots level and cannot be undervalued for its ability to influence change from the ground up—an especially important consideration given the current divisiveness on these issues in the United States.

The articles in this supplement offer frameworks for future research that center structurally racist laws, policies, and practices as the fundamental drivers of health inequities. There are also articles that provide empirical evidence to this effect. But this is only the beginning. We hope that this issue serves as a clarion call for public health researchers, practitioners, advocates, and policymakers who will dedicate themselves and their work to provide further evidence as well as insights on approaches to dismantling the laws, policies, and practices that uphold structural racism. The health and well-being of all the people in the United States, not just some, depend on it. AJPH

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15 Years Ago

Who's Using and Who's Doing Time: Incarceration, the War on Drugs, and Public Health

Persons of color compose 60% of the incarcerated population. In 1996, Blacks constituted 62.6% of drug offenders in state prisons. Nationwide, the rate of persons admitted to prison on drug charges for Black men is 13 times that for White men, and in 10 states, the rates are 26 to 57 times those for White men. People of color are not more likely to do drugs; Black men do not have an abnormal predilection for intoxication. They are, however, more likely to be arrested and prosecuted for their use. . . . The impact of the criminal justice system is evident in the Black and Latino communities in major cities who often suffer from underserved state and government assistance for education, health, and employment. Services that might prevent drug use are underfunded, and the budget for the war on drugs increases. . . . There are more than 2 million men and women serving sentences in United States prisons, nearly three quarters for nonviolent offenses. The unequal enforcement of the war on drugs serves to fuel our spiraling incarceration rates and the removal of men, women, and children from our communities.

From AJPH, *September 2008, Supplement 1, p. S177–S178*

97 Years Ago

The Health Problem of the Negro Child

. . . [T]he data at hand . . . indicate that there is no marked physical inferiority in the negro race. Under similar economic and social conditions, the negro infants are born and reared as safely as . . . white children. The excessive morbidity and mortality rates among negro infants are due to conditions which are a menace to the whole population, white and black alike.

From AJPH, *August 1026, p. 809*

Structural Racism and Health Inequities: Moving From Evidence to Action

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Ignoring structural racism as a core determinant of social inequities, political inequities, and economic inequities ignores its roles as a fundamental driver of the ongoing and stark health inequities racialized and marginalized communities face. The laws, policies, and practices that are manifestations of structural racism in the United States include policing policies and police violence, the War on Drugs, housing discrimination, mass incarceration, occupational inequities, and xenophobic immigration policies, to name a few of the most insidious forms of structural racism. In this issue of *AJPH*, we present a collection of (1) empirical articles providing evidence on how specific laws, policies, and practices related to the aforementioned topics have upheld and reified structural racism and, specifically, how they have shaped the health inequities pervasive in the United States; and (2) articles providing clear evidence of why researchers must center structural racism as a core determinant of health and health inequities.

POLICING AND POLICE VIOLENCE

Born out of "slave patrols" meant to uphold the institutions of slavery and human bondage, sharpened during the Reconstruction era by local militias formed to deny rights to freed persons who were enslaved, and codified by local and state Jim Crow laws, the modern-day policing system is rooted in the application of force and violence to maintain control. We can move across time to find further evidence—such as the violent policing of Native Americans and successive waves of immigrants—of how the policing system in the United States was established to maintain White supremacy and White power. Modern policing in major urban cities—including but not limited to New York, New York; Los Angeles, California; and Chicago, Illinois—have employed various stop-and-frisk policies as a means of proactive policing in high-crime areas. Across the board, the overwhelming number of police encounters under these programs were in neighborhoods with majority Black or Hispanic/Latino populations. The direct harms of these proactive policing policies were to those targeted for surveillance and arrest. Equally important are the indirect harms to community members, who may not have been directly targeted for surveillance but live with the stress and stigma of violence and control inflicted by proactive policing practices.

In this issue, Jahn et al. (p. S21) present findings that shed light on how structural racism as manifested by the harms perpetuated via proactive policing in communities of color affects preterm birth rates. Their findings demonstrate that exposure to high levels of neighborhood proactive policing creates environmental conditions associated with greater risk of preterm birth for Black persons. The public health implications of these finding cannot be ignored in the context of an enduring maternal and infant health crisis, both in the United States as a whole and in Louisiana, which consistently has one of the worst state-level rankings on maternal mortality (https://bit.ly/3DUhQ0j) fueled by Black–White disparities in maternal deaths.[1]

Alang et al. (p. S29) offer an equal parts insightful and powerful framework for analyzing four interrelated mechanisms driven by the intersection of racism and sexism that create a "unique axis of oppression" exposing women of color to police brutality. Viewed through the lens of gendered racism, researchers can employ this framework to examine how police brutality toward Black and Brown women creates vulnerabilities that, in turn, produce poor health outcomes. In particular, and relevant to the work of Jahn et al., the fourth mechanism proposed by Alang et al.—"burden of vicarious marginalization"—offers a way for future researchers to understand the complex and layered ways the direct and indirect experiences vis-à-vis knowledge of community police violence, police brutality, and police neglect make them more vulnerable to worse maternal and infant health outcomes.

Finally, recognizing the need to modernize and rehabilitate policing

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practices to undo the disproportionate harms inflicted on people and communities of color from police violence, Spolum et al. (p. S37) summarize several recommendations for successful community-based, alternative response programs in addition to policing. Such alternative response teams most frequently dispatch mental health specialists or emergency medical services to respond to mental health crises or other nonviolent and noncriminal emergencies, which is shown to reduce the use of lethal and, often, unlawful force. Most critically, deployment of these teams affirms our commitment to treating all persons in need and in crisis, irrespective of where they are or who they are, with dignity and respect as a fundamental human right.

RACISM AND THE WAR ON DRUGS

As the overdose crisis in the United States persists and overdose-related fatalities continue to mount, there are sharp increases in overdose mortality among Black people, Indigenous people, and other people of color (BIPOC). A July 2022 *Morbidity and Mortality Weekly Report* study reported that overall overdose deaths increased by 30% between 2019 and 2020 and that there was a 44% and 39% increase among non-Hispanic Black and American Indian or Alaska Native persons, respectively.[2]

Given the continuing rise in overdose fatalities, interventions to curb the overdose crisis have shifted from criminal and carceral approaches to treatment and rehabilitation. However, the implementation of both the punitive and harm reduction policy paradigms is overshadowed by racial/ethnic inequities. Mandatory minimum sentencing, such as the Rockefeller Drug Laws enacted in 1973 in New York City, required long prison terms for people convicted of a range of drug-related offenses. These laws, both in New York and across the country, were largely responsible for the dramatic rise of the prison–industrial complex and the racial disparities in the prison population. In the shift toward a harm reduction policy approach, Good Samaritan laws minimize the threat of legal action to anyone witnessing an overdose so they will be encouraged to seek immediate help. However, as Pamplin et al. (p. S43) note, these laws offer limited protection to individuals under community supervision, who are more often likely to be BIPOC and often rely on police discretion. Thus, these limited protections are less likely to be used by or to assist Black, Hispanic/Latino, and Indigenous persons.

REDLINING AND HOUSING SEGREGATION

The United States has a long and ugly history of housing policies and practices backed by the federal government, financial institutions, and local community and neighborhood groups—all with the singular goal of creating racially segregated neighborhoods. From laws codifying housing exclusion based on race/ethnicity to community groups establishing neighborhood norms identifying "desirable" and "not desirable" neighbors, segregation has shaped the US residential landscape as well as the unequal distribution of social, political, and economic resources. Racial/ethnic segregation in housing is yet another indicator of structural racism and a driver of underresourcing and disadvantaging communities of color across the United States. Medipanah et al. (p. S49) provide additional and important evidence on the legacy of redlining—a policy of cutting off low-income and racialized minority residents from housing loans during the first half of the 20th century—in the Detroit, Michigan, metropolitan area. Their findings demonstrate how historical disinvestment and concentrated disadvantage resulting from redlining in the Detroit metro area are associated with producing worse contemporary social determinants of health, in, for example, median income, employment, high school education, percentage children living above the poverty line, percentage health insurance coverage, commute travel times of less than 30 minutes, and diesel particulate matter exposure.

MASS INCARCERATION

Mass incarceration is not only a consequence of racially driven policing and policing policy but also the product of many failing systems that constitute the social determinants of health: inadequate education, a racist war on drugs policy, differential policing and police activity, inadequate affordable housing, insufficient social services, and grossly limited economic opportunities. Blankenship et al. (p. S58) weave together the epidemics of insufficient affordable housing and mass incarceration to direct our attention to how these two intersecting manifestations of structural racism reinforce and amplify one another to produce health inequities. To understand this intersection, one must understand that the impact of mass incarceration begins well before and extends well after a prison term is served. Mass incarceration is preceded by proactive policing that places BIPOC under greater surveillance and increased exposure to and interaction with police,

and, therefore, at greater risk for arrest and incarceration. And mass incarceration is followed by community supervision and parole as well as a criminal record that undermine the ability to access public housing, social services, and other supports that prevent recidivism.

OCCUPATIONAL AND ECONOMIC INEQUITIES

Yearby et al. (p. S65) specifically call for structural racism to be incorporated as a fundamental cause of health inequities and an underlying driver of the unequal distribution of the social determinants of health among minoritized and racialized groups. Importantly, their proposed model not only centers structural racism as manifested by inequitable employment and economic opportunities but also is applied to agricultural workers, an understudied and often ignored group whose health needs and health inequities are significant. This revised framework recognizes that the restrictions on employment opportunities for Black Americans and non-US citizens, both historically and currently, that have limited them to low-wage occupations (e.g., in the agricultural sector) are rooted in racist policies that continue to propel the economic marginalization of these groups. Although there is robust literature on the associations between employment status and income inequality as drivers of health inequities, few studies have acknowledged the structural racism and discrimination in the enactment of labor policies and practices that underly employment status and income inequality. Failure to do so ignores how these created inequities in employment status and income act as drivers of physical and mental health inequities.

IMMIGRATION POLICY AND XENOPHOBIA

The immigration and refugee crisis in the United States is yet another example of how racism, nativism, and fear dominate the immigration policy debate to create and sustain structurally racist policies that undermine a humanitarian response. Born out of xenophobia toward successive waves of immigrants, the immigration process—from visa requirements, immigration practices, and citizenship requirements—is geared toward maintaining control, dominance, and the political, economic, and social status quo of power for the White majority. Once in the United States, immigrants continue to face structurally racist policies that determine their ability to work, where they can live, the types of benefits they can receive, and the services they can use. As Cerda et al. (p. S72) note, failure to recognize the structurally racist policies that shape the immigrant and refugee experience pushes us backward to employing an individualistic model that views mental health inequities as shaped by individual-level determinants of health.

Finally, Young and Crookes (p. S16) call attention to addressing the intersectionality of racist experiences for immigrants of color, specifically for Black, Latino, and Asian immigrants, and how partnerships across multiple sectors can address the intersecting systems of structural racism.

MEASURING RACISM

There is well-established evidence of the effect of racism on health and how the psychosocial stress associated with it "gets under the skin" of racialized and minoritized groups in the United States to create health inequities. Moreover, the summarized articles underscore how current laws, policies, and practices affect the health of US racialized and minoritized groups. However, measures of racism are not always incorporated in our public health surveillance and monitoring systems to document how racism is embodied to affect health. White et al. (p. S80) show the deficiencies of our current monitoring systems in collecting, monitoring, tracking, and analyzing measures of individual racism and structural racism as well as how this lack of standard for racism surveillance hinders our ability to identify and dismantle the systemic racism affecting our ultimate goal of health equity for all.

FINAL THOUGHTS

Collectively, the articles in this supplement highlight many of the mechanisms through which structural racism manifests and acts to produce health inequities. But these are by no means all of the mechanisms. These articles show that to reduce—let alone end—the health inequities that we see today, we must acknowledge that structural racism is a fundamental driver of health inequities and call for law, policy, and practice changes to prevent, reduce, and eventually eradicate it. Most importantly, these articles provide concrete examples of how these changes could reduce health inequities and improve population health in the United States, especially for racialized and minoritized groups. AJPH

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Both authors conceptualized, drafted, and edited this editorial.

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Neither author has any conflicts of interest to report.

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The Contribution of Criminal Justice Systems to Reproductive Health Disparities

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See also Jahn et al., p. S21.

Racial inequities are deeply embedded in the fabric of the United States. Two areas where racial disparities are highly prevalent are in the criminal justice system and in reproductive health outcomes. The United States has the largest incarceration rate in the world and incarcerates Black persons at a rate of nearly five times that of White persons.[1] Millions of persons in the United States also experience contact with law enforcement each year, and Black individuals experience the bulk of unjust and aggressive police encounters. The National Academies of Science, Engineering, and Medicine recently concluded, "There are likely to be large racial disparities in the volume and nature of police–citizen encounters when police target high-risk people or high-risk places, as is common in many proactive policing programs."[2(p301)]

Unfortunately, the racial disparities that disadvantage Black persons in the United States are also present in reproductive health, which is perhaps most clearly seen in the Black–White gap in preterm births.[3] Scholars note that these disparities are "likely largely due to social and physical exposures that vary by race due to enduring inequity in [the] USA."[4(p934)] The role of racially patterned social stressors (e.g., proactive policing) as a contributor to the racial preterm birth gap has gone overlooked, necessitating research to better understand how criminal justice systems contribute to reproductive health disparities.

The study by Jahn et al. (p. S21) in this issue of *AJPH* forwards research at the intersection of criminal justice and public health in a rigorous analysis that illuminates the unambiguous racial disparities in reproductive health and proactive policing; their study also details how the two intersect. Using data from the New Orleans Police Department and state vital statistics, the authors geocoded records from every birth occurring in New Orleans, Louisiana, from 2018 to 2019 (n = 9102) and linked these records with census tract data on proactive police stops. The findings show that Black birthing persons experience preterm birth at a rate that is nearly twice as high as that of White birthing persons (15.8% vs 8.0%).

Black birthing persons are exposed to an annual average of 43.7 proactive police stops per 100 000 population compared with 30.7 stops on average in neighborhoods where White birthing persons reside. Most strikingly, the core findings detail that as levels of proactive policing in neighborhoods increase, the rate of preterm birth increases for Black birthing persons but actually slightly decreases for White birthing persons. Taken together, these findings demonstrate that policing operates in a blatantly different manner for Black than for White individuals.

The finding that proactive policing increases preterm birth among Black birthing persons clearly illustrates that in Black communities policing is failing to protect and serve the community. This work by Jahn et al. should stand as a clear message to public health scholars that it is imperative to rethink how policing operates in US neighborhoods and to work collaboratively with law enforcement partners toward a model of more equitable policing in Black communities.

This study must also be interpreted in the context of a new era of reproductive health laws in the wake of *Dobbs v. Jackson Women's Health Organization* (June 24, 2022). By barring access to abortion in nearly all circumstances, Louisiana recently enacted one of the most restrictive abortion bans in the country.[5] Among US states, Louisiana has the third highest preterm birth rate,[6] the highest prison rate,[7] and the second highest rate of Black imprisonment.[1] Louisiana also has deep-seated systemic racism in policing that has led to a consent decree for civil rights violations and other misconduct by the New Orleans Police Department.[8]

In an era when both criminal justice and reproductive health have emerged as core political issues at local, state, and national levels, this study serves as a blunt reminder that criminal justice

and reproductive health are intricately intertwined. The work of Jahn et al. demonstrates that the current state of criminal justice in Louisiana contributes to harming newborns' health. If policymakers in Louisiana care about the well-being of fetal life, then criminal justice reforms that ensure more equitable policing in Black communities should be at the forefront of policy agendas.

Jahn et al. highlight how criminal justice systems contribute to reproductive health disparities, and their findings point to areas where future research is needed. Currently, research on policing is largely divided into two major areas that are often studied independently. One area focuses on the potential crime reduction benefits attributed to policing; for example, does policing improve or save lives by deterring potential criminal offenders?[9] The other area, which is the focus of the work of Jahn et al., looks at the social and health consequences associated with policing; for example, does proactive policing harm the health of citizens or even cost lives?[10] Moving forward, researchers should be challenged to think about the "social ledger" of policing. In other words, what is the net return of policing on society once policing's positive and negative effects on communities and individuals have been taken into account.[11,12]

To better understand the impacts of policing, enhancing the criminal justice data infrastructure is key. Criminal justice data documenting police–citizen interactions is, unfortunately, lacking in quality. Jahn et al. put forth an impressive effort by linking a wide range of available data sources. Even so, the data from the New Orleans Police Department lacks critical information, including citizens' perspectives of the police encounter, where the stop occurred (e.g., on the streets, in a car, in a dwelling), basic demographic information about the officers and citizens involved, details about what occurred during the stop (e.g., physical or verbal aggression), how procedurally just or unjust the stop was, and how the interaction was resolved. Improving the quality and accessibility of data on police–citizen interactions is fundamental for future research to understand why these events pose a threat to health and what can be done to improve the nature of these interactions.

Jahn et al. focus on the contribution of proactive policing to Black–White health reproductive health disparities in a major metropolitan city. Considering the profound racial disparities in criminal justice and reproductive health, this is undoubtedly a vital focus. Moving forward, research must also consider whether proactive policing negatively affects other racial and ethnic minority groups in the United States, including Hispanic and Native American persons. Relatedly, most existing research on the social consequences of policing focuses on urban areas. However, research on the health impacts of policing in rural communities is likewise an important area of future inquiry.

With their novel findings pertaining to the contribution of proactive policing to racial reproductive health disparities, Jahn et al. offer a novel look at the ongoing crisis that criminal justice systems present to the health of Black communities, as well as an important reminder that there is much about the consequences of criminal justice systems that is still not fully understood. These findings offer a clear call to the public health community that to ensure the health of the next generation of children, it is paramount to act toward more equitable policing. Improving police–community relations is good policy overall, but as Jahn et al. have shown us, it may also be good reproductive health policy. AJPH

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The Impact of Racism, Class, and Criminal Justice on Women's Distress and Health: A Reinforcing Cycle of Social Disadvantage

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See also Alang et al., p. S29.

The intersection of racism, classism, gender discrimination, and criminal justice involvement in the United States continues to manifest syndemic inequalities. In their work, Alang et al. (p. S29) describe police brutality and the adverse outcomes produced in women's lives over time. Drawing on seminal work on intersectionality and public health,[1,2] Alang et al. argue for in-depth consideration of how gender and racism influence police brutality and the impact of interactions with the police on the health and well-being of racialized women. Personal and vicarious witnessing of police brutality and other adverse criminal justice contacts has been shown to affect women and Black individuals.[3,4] Moreover, Black and Latina women are significantly more likely to fear police brutality than White women, and this anticipatory fear is linked with depressed moods.[5] Furthermore, evidence suggests that even having a family member incarcerated during a woman's childhood is associated with a higher likelihood of depressed mood in adulthood.[5]

The interaction between the criminal justice system and racial minority status is complex, as evidenced by results on the impact of a partner's incarceration on racially minoritized women and consequences for their own life. In the case of Black women, evidence suggests that partner incarceration is linked with substance use.[6] Although the mechanisms through which partner incarceration leads to drug use need further exploration, the knitted relationship between gender and race can lead to heightened vulnerability and inequality.[6] Moreover, fear of harassment from police reduces access to syringe service programs and other harm reduction programs among racialized people who use drugs and may contribute to rising overdoses and fear of overdoses among minoritized groups, contributing to health disparities.[7–9]

Although minoritization based on race and sex complicates health and social equity, the impact of adverse criminal justice contacts on women receives less attention than the impact on racialized men, eliciting calls for gender-inclusive racial justice initiatives.[1] Notwithstanding criminal justice–related cases of physical and sexual exploitation of women, few studies have quantified the prevalence and magnitude of such incidents.

Research by Cottler et al.[10] showed that among a sample of 318 women involved in the criminal justice system, 25% reported police sexual misconduct. Of these women, 96% reported having sex with an on-duty officer, 77% reported repeated exchanges, and 31% reported being raped by police.[10] In a study by Stringer et al., a smaller yet sizable percentage of women involved in the criminal justice system (14%) reported police sexual misconduct, significantly increasing depression and posttraumatic stress disorder among victims.[11] An especially vulnerable group of women are those who engage in sex work, have a history of multiple arrests, and are affected by the syndemic nature of substance use and poverty, as they may be coerced into sexual activities in exchange for favors from police officers.[10–12] The few studies quantifying adverse criminal justice outcomes and participant insights gain validation with US Department of Justice reports and the never-ending stream of media stories.[13,14]

The lack of measurement of these issues in large, representative samples limits our understanding of the impact of adverse criminal justice contacts on women's health. In a brief descriptive analysis, we used data from the 2016 to 2019 National Survey on Drug Use and Health (n = 65 184) to further highlight the effects of racism, gender, class, and criminal justice on women's health and well-being. We explored the impact of ever being booked in prison (a measure of criminal justice involvement)

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among White and Black women and how the disparities observed in the initial measure transformed when poverty status (a proxy for social class) was incorporated into the analysis.

Panel A of Figure 1 shows that Black women who had been booked in prison reported worse health than any other group. They were followed by White women who had been booked and Black women who had never been booked. Interestingly, White women who had contact with the criminal justice system reported poor or fair self-reported health at levels closer to those of Black women who did not have contact with the criminal justice system than White women who reported no contact. The patterns observed in Figure 1 underscore how racial minority status and criminal justice involvement adversely affect health. White women who had never been booked in prison reported lower levels of poor or fair self-reported health than the other groups included in the analysis.

We also explored the association between self-reported health and racial minority status, class, and criminal justice involvement categories (Figure A, available as a supplement to the online version of this article at https://ajph.org). Disparities in self-reported health status were more evident and magnified when income level was considered. We acknowledge the various measurement issues arising from self-reported health, but it is still one of the most widely collected and used health outcomes and is associated with physiological dysregulation, other adverse health outcomes, and mortality.[15,16]

Panel B of Figure 1 shows corresponding trends for serious psychological distress. The descriptive analysis showed that White women who had been booked in prison reported worse serious psychological distress than the other groups. They were followed by Black women who had been booked in prison and White women who had not been booked. Black women who had never been booked in prison reported serious psychological distress at lower levels than the other groups assessed included in the study. When income level was considered, this pattern shifted. The odds of meeting the threshold for serious psychological distress were lower among White women who had never been booked and who lived above the poverty threshold than among most of the other groups. The only exception

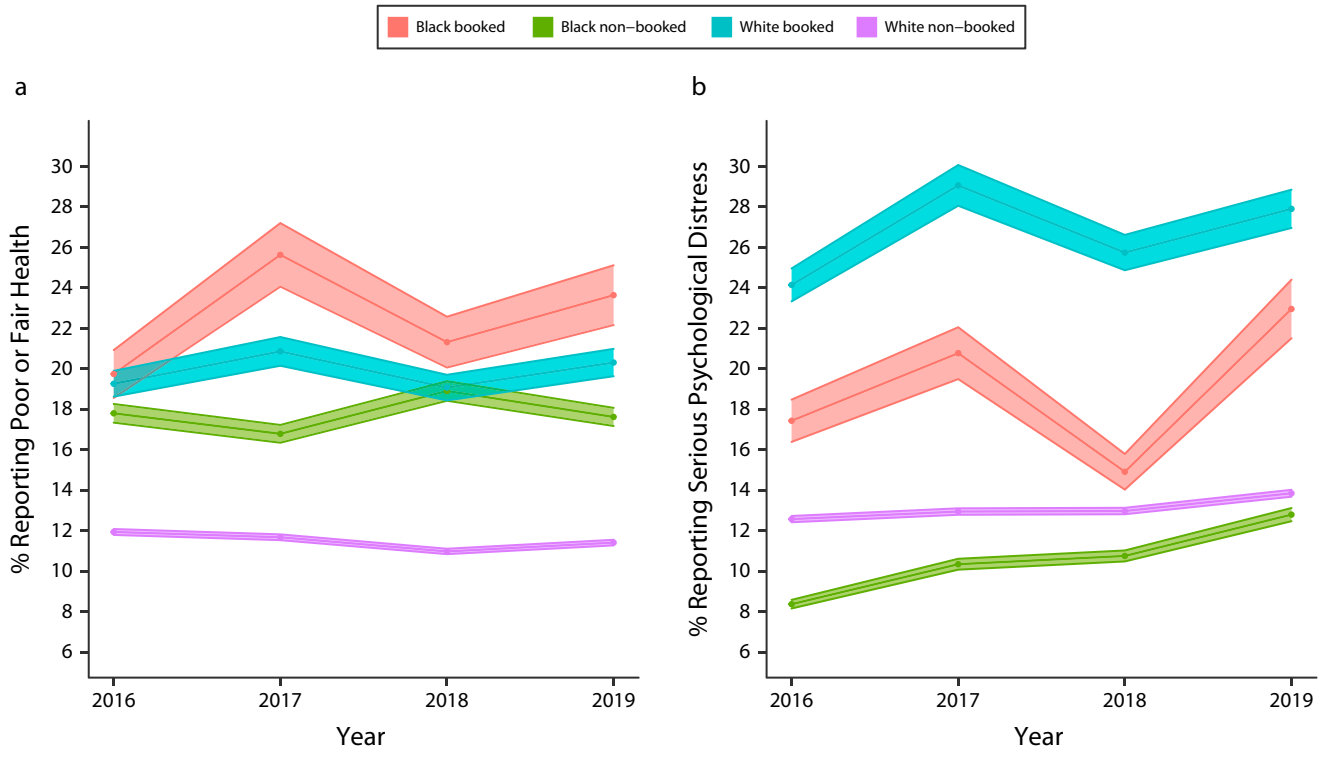

FIGURE 1— Differences in (a) Poor or Fair Health and (b) Serious Psychological Distress Between White and Black Women According to Whether They Had Ever Been Booked in Prison: United States, 2016–2019

Note. The analysis evaluated women aged 18 years or older.
Source. National Survey of Drug Use and Health, 2016–2019.

was Black women who had not been booked and lived above the poverty threshold (Figure A).

These results add quantification to some of Alang et al.'s arguments and corroborate previous research on the negative impact of adverse criminal justice contacts on psychological health.[5] Mattingly et al.[3] found that, among a large sample of racially/ethnically diverse young adults in California, distress regarding police brutality rose from 2017 to 2020, with Hispanic and Black individuals having the highest distress. Distress over police brutality was linked with substance use in racialized groups. Overall, the constant exposure to police brutality on media channels and physical witnessing of these incidents by racialized communities, along with personal police contact, produce vicarious and collective trauma.[4,17] There is a disproportionate police presence in racialized communities, making anticipatory fear of adverse criminal justice contacts pronounced.[4,5]

In recent years, the constant stream of media stories and videos of police brutality victims and adverse criminal justice outcomes has illuminated pervasive racism in the United States, leading to calls for reformation within the criminal justice system. Research by Reingle et al.[18] showed that every increase in police academy graduating class size was linked with a 9% increase in the odds of discharge for police sexual misconduct, and having a graduating class above 35 was associated with more than four times the odds of discharges than smaller classes. These results imply that solutions to adverse criminal justice contacts may include limiting police academy class sizes and instituting steady hiring practices, rather than intensive hiring periods, to ensure proper training of all members. Alang et al. note that "power and the benefits of power are what keep oppressive systems in place." Acknowledging and addressing the effects of these intersectional social factors will be key to improving women's health. AJPH

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A. A. Jones conceptualized the study, advised on the operationalization of measures, and wrote the article. A. R. Santos-Lozada performed the data analysis, produced the data visualizations, and assisted in the writing process.

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Dismantling Structural Racism by Advancing Immigrant Health

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See also Cerda et al., p. S72.

In "Strategies for Naming and Addressing Structural Racism in Immigrant Mental Health," Cerda et al. (p. S72) make a critical call to bring a structural racism framework into efforts to promote immigrants' mental health. Mounting public health research shows that structures and systems of racism are associated with poor health, yet there have been limited applications of a structural racism framework to immigrant health research or practice.[1] As Cerda et al. highlight, structural racism can harm immigrants' health through processes such as policies, workplace conditions, and treatment in mental health service settings. Building on the work of Cerda et al., we discuss how the US immigration system shapes and is shaped by structural racism. We offer recommendations for dismantling structural racism by going to the sources of racial power in research and practice, addressing the intersecting systems that harm health, and advancing antiracist multisectoral partnerships.

STRUCTURAL RACISM THROUGH IMMIGRATION POLICY

Although immigration policy often uses verbiage devoid of race and has been studied on a separate axis from other forms of structural racism,[2] US policy history reinforces that federal immigration policy and other nonfederal immigrant-related policies[3] are mechanisms of structural racism. The US immigration system has been shaped by xenophobic and racist attitudes and has served as a tool of racial control.[4] Immigration policies directly shape the racial composition of the nation and have contributed to the maintenance of a White-dominant society.[5] In some cases, immigration policy has been an explicit manifestation of racist objectives, such as denial of entry into the United States for targeted groups. For example, the Chinese Exclusion Acts of the late-19th century and the Immigration Act of 1924 barred admission to individuals based on their race and country of origin.[6] More recently, the series of "Muslim Ban" executive orders, beginning in 2017 and repealed in 2021, established country of origin–based exclusions rooted in Islamophobia, largely targeting Middle Eastern and African countries (bit.ly/3hxBgAu).

Racist objectives have also been less overt in the immigration system, instead manifesting through concepts of citizenship (e.g., legal and social belonging), safety and criminality, terrorism and national security, and economic contribution and group deservingness. Citizenship policies determining immigrants' legal status produce subordinate social positions for noncitizens of color, bolster the nation's racial hierarchy, and maintain White political and economic power.[7] For example, the Bracero Program, which employed guest workers from Mexico to fill labor shortages, was terminated in 1964 when Mexican laborers were no longer needed and were viewed as an economic threat to a predominantly White, citizen workforce.[5] Its ending caused cross-border workers to be categorized as "illegal," resulting in a recategorization of Mexican guest workers as "illegal immigrants" undeserving of political or economic benefits.[5] The Personal Responsibility and Work Opportunity Reconciliation Act of 1996, which was aimed at welfare reform, established a five-year waiting period for those who were newly arrived and were predominantly Latinx (a gender-inclusive term we use to describe the population of people born in Latin America or of Latin American background) and Asian documented immigrants to be qualified for nonemergency Medicaid services.[8] The Illegal Immigration Reform and Immigrant Responsibility Act (IIRIRA) of 1996 invoked fears about crime and immigrant criminality to authorize collaboration between immigration authorities and local law enforcement and to expand the list of criminal offenses that are grounds for deportation.

Beyond systems explicitly related to migration and citizenship, societal and policy responses to immigrants provide justification for racist policies in other areas: the economic scapegoating of immigrants justifies the curtailment of public benefits, myths of noncitizen voter fraud justify voting restrictions, and

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concerns about illegal drug trafficking justify punitive domestic drug policies. Immigration policies are the product of racialized attitudes regarding immigrant "legality" and deservingness as well as "color-blind" approaches that reinforce racial/ethnic inequities. Consequently, immigration policies serve as legally and socially acceptable means to exclude individuals seemingly based on legal status while actually reinforcing other mechanisms of structural racism.

GOING TO THE SOURCES OF RACIAL POWER

In addressing immigration policy as a mechanism of structural racism, it is critical to go beyond immigrant populations themselves and examine the root sources of racial inequality. The US system of racial hierarchy is created by the power of a White-dominant society.[7] Despite having different histories of migration and trajectories of racialization in the United States, immigrants are "linked by a shared experience of US government oppression."[9(p51)] The public health field should continue to shift its unit of analysis from a focus on racial/ethnic categories to the structures and systems that are the source of power, racialization, and racial inequities.[10]

When racial/ethnic categories are used to measure racial/ethnic health inequities, they serve as proxies of racism and experiences of individuals' racialized positions.[10] This may obscure variations within groups and implicitly reinforce the idea that intrinsic group differences, rather than structures and systems, determine how racism harms health. The public health field can move beyond racial/ethnic categories to measure racialized experiences and inequalities in immigrant populations (bit.ly/3G62VmG). For example, a recent study looked at the types of immigration enforcement that Latinx and Asian immigrants experience (e.g., being racially profiled, being deported or knowing someone who was).[11] Not surprisingly, the two groups were found to have distinct patterns of exposure to racialized enforcement encounters, with Latinxs experiencing the greatest extent of enforcement. Yet, the relationship between enforcement encounters and mental health was the same for both groups: each additional enforcement encounter was associated with increased psychological distress for both Latinx and Asian immigrants. Although groups may experience distinct patterns of racialization, it is these experiences of racial discrimination—not intrinsic group differences—that likely drive outcomes. Researchers can shift from solely using racial/ethnic categories to measuring systems, institutions, and manifestations of racism (e.g., enforcement, labor exploitation); practitioners can shift from developing interventions tailored solely to specific racial/ethnic groups to those tailored to address trauma and other harms from racial exclusions (e.g., affected by deportation or workplace abuses).

Public health researchers have begun to shift the focus to systems of racism by measuring immigration policies. As Cerda et al. note, there is a growing body of evidence that anti-immigrant policies are associated with worse immigrant health outcomes.[12] Expanding this level of examination and developing policy interventions are central to dismantling structural racism and can involve incorporating other types of public policies that perpetuate structural racism. For example, a recent policy scan identified racism-related state policies that may influence health, including mandatory minimum sentencing laws, stand your ground laws, and voting restrictions.[13] Public health researchers can examine additional structures and systems, such as the labor laws that produce weak worker and financial protections for immigrants. Practitioners and advocates can support policy change efforts that address both immigration- and nonimmigration-related policy change. Through these actions, the public health field can study and intervene in policies and institutions perpetuating racial/ethnic health inequities.

ADDRESSING INTERSECTING SYSTEMS

Cerda et al. highlight that improving immigrant health is critical for improving the health of all populations in the United States. Similarly, addressing the mechanisms of structural racism that affect immigrants of color is critical to dismantling structural racism for their US-born children and people of color broadly. Although we agree with Cerda et al. that it is important to address the needs of Latinx and Asian immigrants, a structural racism framework brings needed attention to other immigrant groups because it focuses on intersecting systems, institutions, and practices and how they reinforce one another to harm health.[14] Historical and present mechanisms of structural racism that may seem unique to immigrants (e.g., immigrant policies) work in conjunction with the mechanisms related to other social determinants of health, such as housing, reproductive justice, mass incarceration, and economic inequality. Addressing structural racism mechanisms related to immigrants can contribute to strategies to dismantle these other systems of structural racism.[15]

We provide a few brief, nonexhaustive examples of the intersectional experiences of a range of immigrants of color:

- Undocumented Latinx immigrants experiencing homelessness are uniquely vulnerable to mental health challenges. In a report from Los Angeles County, California, a region with high rates of homelessness, unhoused Latinx individuals were the least likely to receive public benefits compared with other racial/ethnic groups because of factors such as their legal status.[16] Approaching their mental health service needs from a structural racism framework requires that we address racially exclusionary housing policies, labor exploitation and precarious employment, and citizenship policies that intersect to produce housing instability and limit options to obtain mental health services.
- Although women across the United States contend with abortion restrictions, undocumented women of color living along the US–Mexico border face an additional hurdle to obtaining an abortion: the direct threat of immigration enforcement. The region is dotted with multiple Border Patrol stations, where racial profiling is routine. Whether in California, which continues to allow abortions, or in Texas, which now prohibits it, undocumented women face detection and apprehension if they travel by road to obtain an abortion.[17] Their risks of psychological distress stem from the intersections of sexist, antiabortion policies, citizenship policy, enforcement policies, and racial-profiling practices.
- Black immigrants are at heightened risk of traumatic encounters with law enforcement and being caught in the US deportation dragnet. Stop-and-identify and stop-and-frisk policies, which allow law enforcement to stop and interrogate individuals, have a disproportionate effect on Black, Latinx, and Black-Latinx citizens and noncitizens because of racial discrimination in policing.[13] Studies have shown a link between neighborhood stop-and-frisk encounters and psychological distress.[18] Black immigrants are more likely to be detained and deported because of a criminal conviction, not immigration violations, than are non-Black immigrants.[19] Intersecting policing, criminal-legal, and immigration enforcement policies as well as racially discriminatory police practices have produced distinct vulnerabilities among Black immigrants.
- Asylum seekers face threats to their mental health because of premigration or migration trauma and stress from the extreme precariousness of being granted protected status by the US government. Yet, although all individuals in danger are deserving of human rights, US immigration policy has favored some groups over others. Ukrainian and Syrian refugees have been welcomed as a response to devastating wars overseas. By contrast, asylum seekers from Venezuela and other countries arriving at the southern border have been treated as political pawns in actions akin to the treatment of Black individuals during the Reverse Freedom Rides in the 1960s (bit.ly/3G1PpQV). Haitian asylum seekers were violently turned away by mounted Border Patrol at the Rio Grande in Texas (bit.ly/3tgz4Ae), and others have been denied entry under Title 42, a law from the 1940s that was reactivated for the COVID-19 pandemic.
- Long-term harms of systemic racial exclusion are evident among Asian immigrants. For example, Southeast Asian youth refugees who arrived in the United States in the 1970s and 1980s were settled in communities that had long faced overpolicing and disinvestment in employment, education, and health resources. They and their families received little mental health support to process the traumas of US-caused wars.[20] As a result, some of these youths engaged in criminal activity and were incarcerated. Today, despite being lawful permanent residents and completing their prison sentences, under IIRIRA, the US government has proactively sought to remove thousands of these refugees from the United States.[20]

These examples highlight that expanding the public health and social services safety net for immigrants is necessary but not sufficient. For example, as Cerda et al. note, worker protections may be ineffective if undocumented immigrants are threatened by employer retaliation. If policy changes are made in only one domain (e.g., mental health care), it will not be enough to dismantle structural racism. Policies that decriminalize immigrants, for example, by providing them with driver's licenses or limiting local law enforcement's collaboration with immigration authorities, may lower unmet medical needs for some populations, such as the children of immigrants.[21] Other strategies can include working to repeal laws such as IIRIRA, advocating to end policies of anti-Black racism (e.g., stop-and-identify, voting restrictions), establishing affordable housing and renter protections, and supporting the

long-time reproductive justice efforts of women of color.

ANTIRACIST MULTISECTORAL PARTNERSHIPS

Multisectoral partnerships that change multiple systems are necessary to address the embedded, intersecting systems of structural racism.[15] This requires public health to partner with other sectors, such as housing, reproductive justice, and community investment. As Cerda et al. note, immigrant communities must be key partners in such efforts. Public health researchers and practitioners can partner with and support community organizations that may not be explicitly health care focused but that are engaged in dismantling structural racism. Immigrant-led and -serving organizations have been piecing together community support and funding for a long time to meet the needs of those not served by the US safety net. Supporting and collaborating with immigrant-led organizations that incorporate a structural racism framework into their work, such as Black Alliance for Just Immigration (https://baji.org) and the California Immigrant Youth Justice Alliance (https://ciyja.org), can advance community-centered advocacy, interventions, and policy change that are informed by a deep understanding of the source of racial inequities and the strategies needed to achieve equity.

In working with partners, it is critical that we also examine and address the patterns of racism that are closest to us, being mindful of our own power and prejudices and how they influence our research questions, interventions, and relationships. Health care and social welfare leaders, policies, and programs in the United States have contributed to structural racism. Some public health programs created segregated and unequal services and reinforced racially coded concepts of the deservingness of different groups.[22] Interventions that have placed the responsibility for change on immigrants do not address the "fundamental" causes of racism and ultimately reinforce racial health inequities.[23] Scholars and practitioners from immigrant communities and communities of color should (and need support to) be leaders in addressing structural racism in our field.

The work of dismantling structural racism also needs to happen across social (e.g., familial networks, peer networks) and cultural (e.g., houses of worship, cultural organizations) settings where people organize socially and politically. As Latina public health scholars, one White and one Black, our experiences reflect that racism, racial inequalities, and colorism are present in Latin America, not just in the United States, even if the dynamics differ between countries. We are mindful of how racism is perpetuated by the structures and attitudes in these settings. Furthermore, as non-Asian women, we know that we do not have the expertise to speak of the diverse experiences of Asian immigrants and need to build multiracial partnerships to advance racial equity.

As research on structural racism and its effects on health continues to advance, the structural racism framework is a vital tool for informing immigrant health research, policies and interventions, and partnerships. When immigrant health is examined through a structural racism framework, it becomes evident that policies, practices, and attitudes related to immigration are manifestations of structural racism. Addressing the mechanisms of structural racism in immigrant health can contribute to strategies to dismantle the many other systems of structural racism. AJPH

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Neighborhood Proactive Policing and Racial Inequities in Preterm Birth in New Orleans, 2018–2019

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See also Testa, p. S10.

Objectives. To measure neighborhood exposure to proactive policing as a manifestation of structural racism and its association with preterm birth.

Methods. We linked all birth records in New Orleans, Louisiana (n = 9102), with annual census tract rates of proactive police stops using data from the New Orleans Police Department (2018–2019). We fit multilevel Poisson models predicting preterm birth across quintiles of stop rates, controlling for several individual- and tract-level covariates.

Results. Nearly 20% of Black versus 8% of White birthing people lived in neighborhoods with the highest rates of proactive police stops. Fully adjusted models among Black birthing people suggest the prevalence of preterm birth in the neighborhoods with the highest proactive policing rates was 1.41 times that of neighborhoods with the lowest rates (95% confidence interval = 1.04, 1.93), but associations among White birthing people were not statistically significant.

Conclusions. Taken together with previous research, high rates of proactive policing likely contribute to Black–White inequities in reproductive health.

Public Health Implications. Proactive policing is widely implemented to deter violence, but alternative strategies without police should be considered to prevent potential adverse health consequences.
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Proactive policing is widely implemented in urban contexts and involves stopping and searching individuals and surveilling communities.[1] Although there are several definitions for this type of police activity, it is broadly characterized by pursuing a suspect not as a result of a citizen request but rather because of officer discretion.[1,2] Proactive stops can occur frequently and are often intentionally concentrated in specific, disproportionately Black, neighborhoods, contributing to racial inequities in arrests.[2,3] Proactive policing, therefore, perpetuates structural racism in the criminal legal system and is rooted in legacies of racist neighborhood disinvestment and dispossession.[2,4]

Residents and scholars have critiqued proactive policing and the ways it harms Black communities and serves as a chronic stressor to residents.[3,5–8] A growing body of research suggests that the public health implications of proactive policing extend beyond individuals directly involved in police stops.[7,9] Living in a neighborhood with high levels of proactive policing could contribute to racialized hypervigilance and chronic stress, particularly for Black caregivers concerned for their own and their family's well-being and safety from police violence.[10–12] The impact of living in a neighborhood with high levels of police contact on adolescent and adult mental health has been explored in several studies.[7,12–14] However, to our knowledge, fewer studies have examined health effects of proactive policing during pregnancy,[11] a life-course period in which individuals are particularly at risk for deleterious effects of stressful residential contexts.[15]

Previous research has also identified related neighborhood-level manifestations of structural racism including historical redlining and persistent neighborhood disinvestment and racial

inequities in perinatal health and adverse birth outcomes.[16–18] These and other factors including gentrification have dictated where Black people live and controlled the flow of material goods and resources into or out of certain communities, contributing to racially disparate policing practices.[2,17,19]

Preterm birth is a leading cause of infant mortality,[20] and, nationally, the racial inequity in preterm birth persists with rates 1.5 times higher among Black infants compared with White infants.[21] This racialized patterning is mirrored in New Orleans, Louisiana—a majority Black city—where the preterm birth rate is consistently 2-fold higher among Black residents compared with White residents.[22] Over a number of years, the US Department of Justice documented a persistent pattern of frequent and racially biased police stops in New Orleans, with evidence of harassment and disrespectful treatment of Black and lesbian, gay, bisexual, and transgender individuals during police stops.[23] This report prompted a federal consent decree to address unconstitutional police conduct in New Orleans that is ongoing and began in 2013.[23] Federal investigations have identified unconstitutional patterns of police stops in several other US cities including Newark, NJ[24]; Los Angeles, CA; Ferguson, MO; and Baltimore, MD.[25]

Our study thus had 2 aims: first, to examine whether New Orleanians who lived in neighborhoods with more frequent proactive police stops during their pregnancy were at increased risk of preterm birth and, second, to assess the degree to which neighborhood police stops might contribute to the Black–White racial inequity in preterm birth. We hypothesized that living in a neighborhood where people are frequently stopped or searched by police operates as chronic stressor to pregnant people, and Black pregnant people in particular, that increases the risk of preterm birth.

METHODS

We conducted this secondary, multilevel, cross-sectional study with publicly available data from the New Orleans Police Department and state vital statistics data. We geocoded birth records for every birth occurring in New Orleans from 2018 to 2019 (n = 9102) to identify Federal Information Processing System codes for census tract of residence. We identified cases of preterm birth as those occurring at less than 37 weeks gestation and excluded 12 births missing gestational age. The vital statistics data do not include information on gender identity, and we therefore use gender-inclusive language when discussing attributes of the birthing parent in our study population. We also hypothesized that any contextual effects of proactive policing would similarly impact the pregnancies of cisgender women and transgender and gender-nonconforming people.

Exposure Measures

We constructed our neighborhood proactive policing variable by using publicly available field interview data from the New Orleans Police Department (2018–2019). We considered proactive stops to be those classified by police as because of a "suspicious person" or "suspicious vehicle." We calculated annual rates of average daily census tract total and proactive police stops per 100 000 residents by using census tract population denominator data from the 5-Year American Community Survey (ACS 2015–2019) and categorized these rates into quintiles. We similarly calculated rates of Black and White total and proactive stops to examine racially concordant associations with preterm birth for Black and White birthing people, respectively. Sample size limited our ability to assess additional racial/ethnic groups. We merged rates of total and proactive police stops to birth records by census tract Federal Information Processing System code.

Additional Covariates

Birth records also contained data on several important individual-level variables that are known to be associated with preterm birth and neighborhood mobility, including age (continuous years), highest level of educational attainment at the time of birth (< 9th grade, 9th–12th grade no diploma, high-school diploma or general educational development (GED), some college, associate degree, bachelor's degree, master's degree, doctorate or professional degree), and whether the birth was financed by Medicaid. Our effect modification analyses used birthing person race and ethnicity as self-reported on the birth certificate (non-Hispanic White, Black, American Indian/Alaska Native, Asian, Native Hawaiian or other Pacific Islander, multiracial, other race, Hispanic).

To address neighborhood differences in other contextual drivers of adverse birth outcomes and proactive policing, we used census tract data from the ACS. Census tract measures included quintiles of the following: percentage of working-age unemployed adults, percentage with less than high-school education, percentage of households with child poverty, and population density per square mile. We additionally

adjusted for an annual rate of 911 calls related to violence (i.e., aggravated assault and battery, rape, homicide, armed robbery) using public data from the New Orleans Police Department.

Statistical Analyses

To assess our study's first aim, to determine whether New Orleanians who lived in neighborhoods with higher rates of proactive police stops were at increased risk of preterm birth, we first examined the rates of proactive police stops across term and preterm births, along with our other individual and census tract–level variables (Table 1). We then mapped the census-tract rates of proactive police stops for 2018 and 2019 (Figure 1), as well as census-tract prevalence of preterm birth.

We fit multilevel Poisson models with tract-level random intercepts and robust standard errors to estimate risk or prevalence ratios for preterm birth across quintiles of neighborhood proactive stops.[26] We stratified our models across birthing person race and ethnicity to assess whether proactive policing as a manifestation of anti-Black structural racism was more strongly associated with preterm birth among Black birthing people. We additionally examined associations between total police stops and preterm birth to determine whether our findings for proactive stops were reflective of a broad relationship between neighborhood policing and preterm birth (Table 2). All models adjust for age, education, Medicaid status, and year, and tract-level unemployment, education, poverty, population density, and rate of 911 calls for violence. Birth records were geocoded in ArcGIS Pro 2.9.0 (Esri, Redlands, CA), and all statistical analyses, mapping, and visualizations were done in R version 4.2.1 (R Foundation for Statistical Computing, Vienna, Austria).

To examine our study's second aim, to assess the degree to which neighborhood police stops exacerbate racial inequities in preterm birth, we used the method described by Ward et al.[27] that considers the prevalence of the exposure and outcome across groups as well as the relationship between exposure and outcome across groups. To do so, we fit an interaction model to test for effect modification by race and ethnicity and plotted the racial differences in the predicted prevalence of preterm birth across racial groups, as well as the proportion of births in the lowest and highest quintiles of neighborhood proactive police stops (Figure 2). Because of sample size limitations, we only present results for Black and White individuals.

As a sensitivity analysis, we removed census tracts in the French Quarter, which is a largely nonresidential area that we observed had very high levels of police stops. We reconstructed quintile measures of annual rates of total and proactive police stops removing the French Quarter to evaluate bias in our main estimates. We repeated our main models using these measures, excluding births in the French Quarter (Figure C, available as a supplement to the online version of this article at https://ajph.org).

RESULTS

There were 9102 births in New Orleans during 2018 to 2019, of which 1190 (13%) were preterm. There was a large Black–White racial gap in preterm birth with prevalences of 15.8% among Black people and 8.0% among White people. This racial inequity is also meaningful on the absolute scale; there were 841 Black preterm births and 197 White preterm births. Those who had preterm births were less likely to have attained greater than a bachelor's degree and more likely to have had their birth financed by Medicaid compared with those who had full-term births (Table 1).

There were notable differences in the neighborhood rate of police stops across Black and White birthing people. Black birthing people (n = 4485; 58.4% of births) were exposed to an annual average of 43.7 proactive stops per 100 000 population occurring in their neighborhood of residence, compared with 30.7 stops, on average, in neighborhoods where White birthing people (n = 2458; 26.9% of births) lived. The neighborhood contexts in which Black and White birthing people resided also differed in their percentage of residents with less than high-school education (Black mean = 17.9%; White mean = 7.7%), households with child poverty (Black mean = 41.9%; White mean = 15.4%), and unemployment (Black mean = 10.7%; White mean = 5.5%). The maps displayed in Figure 1 show that the concentration of neighborhood proactive policing was largely consistent across both years included in our analysis. Police stops were highest in neighborhoods with larger proportions of Black residents including Central City and parts of the West Bank.

Fully adjusted models among Black birthing people suggest that the prevalence of preterm birth in neighborhoods with the highest rates of proactive policing was 1.41 times that of neighborhoods with the lowest rates (quintile [Q] 5 vs Q1; 95% confidence interval [CI] = 1.04, 1.93). The associations between Black preterm births and quintiles of neighborhood proactive police stops showed a monotonic increasing pattern with the strength of the

TABLE 1— Individual- and Neighborhood-Level Characteristics of All Term and Preterm Births: New Orleans, LA, 2018–2019

Characteristic	Total (n = 9102), No. (%) or Mean ±SD	Preterm Births[a] (n = 1190), No. (%) or Mean ±SD	Term Births[a] (n = 7900), No. (%) or Mean ±SD
Individual level			
Race/ethnicity			
Non-Hispanic White	2458 (27.01)	197 (16.55)	2260 (28.61)
Non-Hispanic Black	5334 (58.60)	841 (70.67)	4485 (56.77)
American Indian/Alaska Native	39 (0.43)	3 (0.25)	36 (0.46)
Asian and Pacific Islander	188 (2.07)	27 (2.27)	170 (2.15)
Multiracial	86 (0.94)	14 (1.18)	77 (0.97)
Other race	53 (0.58)	104 (8.74)	39 (0.49)
Hispanic	920 (10.11)	4 (0.34)	814 (10.30)
Missing	24 (0.26)	0	19 (0.24)
Age at birth,[a] y	29.21 ±5.92	29.59 ±6.06	29.15 ±5.89
Education at birth			
< 9th grade	201 (2.21)	25 (2.10)	175 (2.22)
9th–12th grade, no diploma	955 (10.49)	140 (11.76)	813 (10.29)
High school or GED	2593 (28.49)	399 (33.53)	2193 (27.76)
Some college	1555 (17.08)	208 (17.48)	1345 (17.03)
Associates degree	418 (4.59)	52 (4.37)	366 (4.63)
Bachelor's degree	1636 (17.97)	172 (14.45)	1463 (18.52)
Master's degree	981 (10.78)	102 (8.57)	878 (11.11)
> master's degree	579 (6.36)	53 (4.45)	526 (6.66)
Missing	184 (2.02)	39 (3.28)	141 (1.78)
Census tract level			
Neighborhood stop rate[b]	40.81 ±59.17	44.39 ±61.31	40.18 ±58.73
Q1 (0–11.0)	2167 (23.81)	253 (21.26)	1913 (24.22)
Q2 (11.0–20.1)	1961 (21.54)	237 (19.92)	1723 (21.81)
Q3 (20.1–32.8)	1772 (19.47)	235 (19.75)	1534 (19.42)
Q4 (32.8–57.2)	1729 (19.00)	233 (19.58)	1496 (18.94)
Q5 (> 57.2)	1473 (16.18)	232 (19.50)	1234 (15.62)
Proactive stop rate[b]	3.58 ±6.67	3.80 ±6.17	3.53 ±6.69
Q1 (0–0.8)	1810 (19.89)	193 (16.22)	1616 (20.46)
Q2 (0.8–1.4)	2125 (23.35)	263 (22.10)	1861 (23.56)
Q3 (1.4–2.3)	1897 (20.84)	246 (20.67)	1649 (20.87)
Q4 (2.3–4.9)	1811 (19.90)	257 (21.60)	1551 (19.63)
Q5 (> 4.9)	1459 (16.03)	231 (19.41)	1223 (15.48)
% unemployment	9.06 ±5.72	9.95 ±6.11	8.93 ±5.65
% < high school	14.94 ±9.58	16.30 ±9.36	14.73 ±9.60
% child poverty	33.53 ±23.99	37.40 ±23.42	32.93 ±24.02
Rate of violence-related calls to police[b]	3.56 ±4.29	3.97 ±4.56	3.49 ±4.24

Note. GED = general educational development; Q = quintile.

[a]There were no missing values for age at birth, and we excluded 12 births missing gestational age.

[b]Annual census tract rates of police stops were calculated as the average daily number of stops per 100 000 population. Proactive stops were classified as those because of a "suspicious person" or "suspicious vehicle." Quintiles of proactive stops were constructed using the distribution of neighborhood stops for 2018 and 2019.

FIGURE 1— Census Tract Rates of Proactive Police Stops in (a) 2018 and (b) 2019: New Orleans, LA

Note. Annual census tract rates of proactive police stops were calculated as the average daily number of stops because of "suspicious person" or "suspicious vehicle" per 100 000 population. Quintiles of proactive stops were constructed using the distribution of neighborhood stops for 2018–2019.

association increasing at higher quintiles of neighborhood proactive policing, although CIs comparing rates in the lowest quintile to the second and third quintiles crossed the null (Table 2, covariate estimates in Table A, available as a supplement to the online version of this article at https://ajph.org).

By contrast, we observed a monotonic decreasing trend in the association between proactive policing rates and preterm births to White people, and CIs for all point estimates included the null (Table 2). When we additionally examined the risk of preterm birth across quintiles of total police stops, we observed similar monotonic increasing and decreasing patterns among Black and White people, respectively, although these associations were not statistically significant (Table 2). The diverging Black–White patterns were largely masked in models among birthing people of all racial and ethnic groups, which showed slight increases

TABLE 2— Preterm Births Associated With Census Tract Total and Proactive Police Stops Stratified by Non-Hispanic Black and White Race and Ethnicity: New Orleans, LA, 2018–2019

Neighborhood Police Stop Rate	All Births, ARR (95% CI)	Black Births, ARR (95% CI)	White Births, ARR (95% CI)
Proactive stops			
Q1 (0–0.8; Ref.)	1	1	1
Q2 (0.8–1.4)	1.06 (0.87, 1.29)	1.07 (0.83, 1.39)	0.98 (0.65, 1.49)
Q3 (1.4–2.3)	1.05 (0.85, 1.28)	1.10 (0.84, 1.43)	0.92 (0.58, 1.47)
Q4 (2.3–4.9)	1.15 (0.93, 1.42)	1.25 (0.95, 1.63)	0.85 (0.53, 1.36)
Q5 (>4.9)	1.24 (0.97, 1.59)	1.41 (1.04, 1.93)	0.74 (0.33, 1.66)
Total stops			
Q1 (0–11.0; Ref.)	1	1	1
Q2 (11.0–20.1)	0.98 (0.81, 1.19)	0.88 (0.69, 1.13)	1.44 (0.92, 2.27)
Q3 (20.1–32.8)	1.05 (0.87, 1.27)	1.01 (0.79, 1.28)	1.36 (0.84, 2.19)
Q4 (32.8–57.2)	1.03 (0.84, 1.27)	1.08 (0.83, 1.40)	1.14 (0.67, 1.94)
Q5 (>57.2)	1.14 (0.89, 1.45)	1.18 (0.87, 1.60)	1.09 (0.54, 2.21)

Note. ARR = adjusted risk ratio; CI = confidence interval; Q = quintile. Annual census tract rates of police stops were calculated as the average daily number of stops per 100 000 population. Proactive stops were classified as those because of a "suspicious person" or "suspicious vehicle." Quintiles of proactive stops were constructed using the distribution of neighborhood stops for 2018 and 2019. Estimates are from multilevel Poisson models with census tract random intercepts and robust SEs that adjusted for age, education, Medicaid status, year, and tract-level unemployment, education, poverty, population density, and rate of calls to police for violence. Covariate ARRs and 95% CIs are available in Table A (available as a supplement to the online version of this article at https://ajph.org).

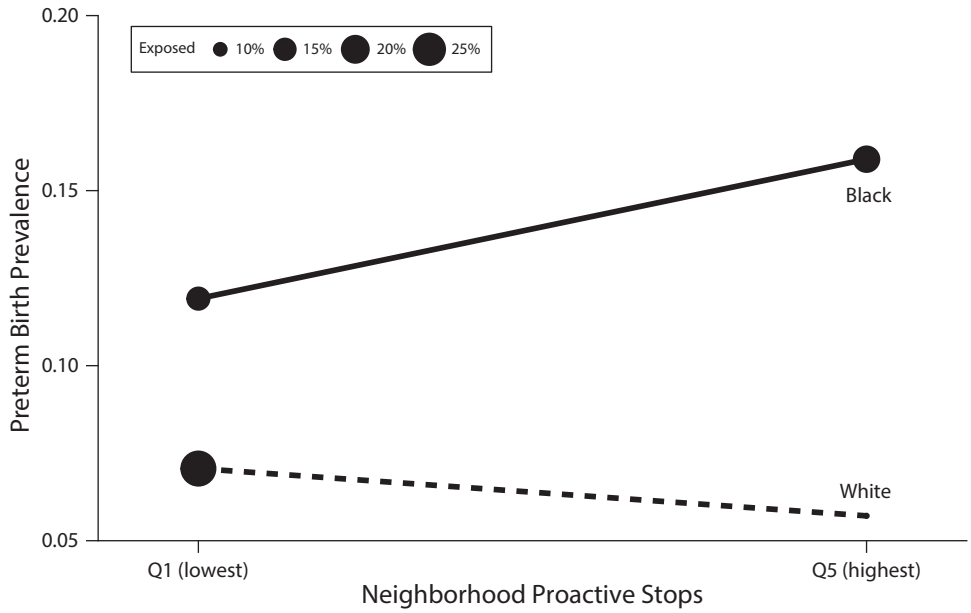

FIGURE 2— Prevalence of Preterm Birth Among Black and White Individuals Across Levels of Census Tract Police Stops: New Orleans, LA, 2018–2019

Note. Q = quintile. Circles in this figure are scaled by the percentage of births that were exposed to low and high neighborhood proactive police stops within each racial/ethnic group.

in the association between preterm birth and quintiles of neighborhood proactive police stops, although point estimates were more attenuated compared with models among Black individuals alone, and all CIs included the null (Table 2). These results were unchanged in our sensitivity analysis that excluded stops and births in the French Quarter (Figure C, available as a supplement to the online version of this article at https://ajph.org).

We also tested for racially concordant associations using neighborhood rates of total and proactive police stops of Black and White people in models stratified by birthing person race and ethnicity. Neighborhood rates of total and proactive stops of Black people were not significantly associated with preterm birth in the full sample or among Black or White birthing people, with the exception that White birthing people living in neighborhoods with the second-lowest versus lowest rates of stops of Black people had an increased risk of preterm birth (Q2 vs Q1 risk ratio = 2.00; 95% CI = 1.10, 3.68; Figure A, available as a supplement to the online version of this article at https://ajph.org). Neighborhood rates of total and proactive stops of White people were also not significantly associated with preterm birth overall or among Black or White birthing people (Figure B, available as a supplement to the online version of this article at https://ajph.org).

We next assessed the degree to which neighborhood proactive police stops contributed to racial inequities in preterm birth. Our model that interacted race and ethnicity with proactive stop rates suggested that its association with preterm birth did not vary significantly across race and ethnicity. However, when we considered the unequal prevalence of the exposure and outcome across race and ethnicity, we did find evidence of a meaningful racial disparity (Figure 2). Whereas 19.2% of Black birthing people lived in neighborhoods with the highest rates of proactive police stops, only 8.4% of White birthing people lived in these areas (Q5). Similarly, 29.1% of White and 16.0% of Black birthing people resided in neighborhoods with the lowest rates of proactive police stops (Q1). Marginal risk of preterm birth was approximately 3 times higher among Black compared with White birthing people at both the highest levels of exposure (Q5 Black = 0.15 [95% CI = 0.08, 0.28]; Q5 White = 0.05 [95% CI = 0.03, 0.11]), and elevated at the lowest levels of exposure (Q1 Black = 0.11 [95% CI = 0.06, 0.21]; Q1 White = 0.07 [95% CI = 0.04, 0.13]).

DISCUSSION

Our study documents elevated risk of preterm birth among Black birthing people who resided in neighborhoods with frequent proactive police stops in New Orleans. Given the overrepresentation

of Black birthing people in neighborhoods that are subject to high rates of potentially harmful[11,28] proactive policing, this exposure likely widens the Black–White racial inequity in preterm birth. By contrast, we did not observe a positive association among White birthing people, further suggesting that neighborhood proactive policing serves as a racialized contextual stressor for Black people specifically. In addition to potential impacts on community health equity, proactive policing is an important source of racial inequities in the broader criminal legal system.[29]

Limited research has evaluated neighborhood policing as a determinant of adverse birth outcomes. A recent study in one US city (Minneapolis, MN) found a 100% increase in odds of preterm birth for US-born Black birthing people living in neighborhoods with a disproportionate number of police incident reports.[11] In addition, previous research evaluating immigration enforcement, which may similarly operate as a racialized contextual stressor, found a rise in low birth weight infants born to Latina women after compared with before an immigration raid.[15] Other studies on nearby exposure to fatal police violence have documented associations with preterm birth,[28] pregnancy loss,[30] and depressive symptoms among pregnant people.[10] Future work must address the mechanisms linking aggressive policing practices with adverse birth outcomes. Mental health effects of police stops may be a critical component of these pathways, although limited extant research shows mixed results for women.[7,13,31,32]

Our study linked unique sources of administrative data on police stops and birth records to provide a comprehensive picture of the exposure and outcome in New Orleans. However, most cities do not make data on police stops publicly available, or only do so only after legal action or civil rights investigations. For research that evaluates these kinds of police actions to progress, municipalities need to collect and maintain comprehensive data on stop-and-search incidents and procedures and allow researchers to access these data.

Limitations

While they are uniquely available, the administrative data used in this analysis also impose a few limitations that should be noted. First, the police stop and birth certificate data were only able to be linked at the neighborhood level, so we were unable to individually identify birthing people who were stopped by police. Second, our cross-sectional analysis is only able to examine police stops that occurred in the year of birth, not prepregnancy exposure to police stops, and cumulative life-course exposure may be more relevant for adverse birth outcomes. Third, given that our data on police stops are collected by police, we do not have data on the nature of these stops from the perspective of residents, and more unjust, frequent, and aggressive police stops are likely to have a greater impact on community health.[32,33] Lastly, the stop data used in this study only include encounters reported by New Orleans police and, therefore, underestimate total exposure that could also include unreported stops as well as stops by state or private police forces.

Public Health Implications

Our findings linking neighborhood proactive police stops with preterm births in New Orleans are consequential in a political moment when cities across the country are reevaluating the role and scale of policing in response to movements for racial justice, including Black Lives Matter, as well as ongoing scholarship documenting the harms of proactive policing.[3,8,9] The federal consent decree aimed at addressing unconstitutional police conduct in New Orleans has been in place since 2013; however, it may not be having the intended impact if considered within the context of our study findings. Local policy officials in New Orleans and elsewhere must weigh potential negative health impacts and inequities of proactive policing with limited evidence that these strategies prevent criminalized behaviors[1,34] and consider alternative strategies to reduce violence without police.[35] In the midst of an ongoing Black perinatal health crisis,[17] moreover, there is an urgent need to understand and address the ways that structural racism gives rise to racial inequities in reproductive health, including the potential role of proactive policing. AJPH

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J. L. Jahn and M. Wallace designed the study and analytical strategy. J. L. Jahn completed the statistical analyses, conducted data visualization, and led article writing. All authors helped to interpret the findings, as well as prepare and edit the article.

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CONFLICTS OF INTEREST

The authors have no conflicts of interest to disclose.

HUMAN PARTICIPANT PROTECTION

The Tulane University institutional review board approved use of vital statistics data.

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Mechanisms Connecting Police Brutality, Intersectionality, and Women's Health Over the Life Course

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See also Jones and Santos-Lozada, p. S13.

Police brutality harms women. Structural racism and structural sexism expose women of color to police brutality through 4 interrelated mechanisms: (1) desecration of Black womanhood, (2) criminalization of communities of color, (3) hypersexualization of Black and Brown women, and (4) vicarious marginalization.

We analyze intersectionality as a framework for understanding racial and gender determinants of police brutality, arguing that public health research and policy must consider how complex intersections of these determinants and their contextual specificities shape the impact of police brutality on the health of racially minoritized women.

We recommend that public health scholars (1) measure and analyze multiple sources of vulnerability to police brutality, (2) consider policies and interventions within the contexts of intersecting statuses, (3) center life course experiences of marginalized women, and (4) assess and make Whiteness visible. People who hold racial and gender power—who benefit from racist and sexist systems—must relinquish power and reject these benefits. Power and the benefits of power are what keep oppressive systems such as racism, sexism, and police brutality in place. (*Am J Public Health*. 2023;113(S1):S29–S36. https://doi.org/10.2105/AJPH.2022.307064)

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Police brutality is a social determinant of health, causing mortality, morbidity, and disability.[1,2] Police brutality also extends to police neglect and words, policies, and actions that dehumanize, intimidate, and cause physical, psychological, and sexual harm.[1,3] Police brutality can be experienced directly through personal contact with the police, vicariously through witnessing or hearing about police actions in the media or within one's kin and social networks, and ecologically through living, working, or attending schools in heavily policed neighborhoods.[2,4]

Exposure to and health consequences of police brutality are not equally distributed. Racially minoritized communities are disproportionately exposed to police brutality, significantly increasing mortality rates and elevating odds of physical and psychological problems.[2] Even though most of the research focuses on male victims of police brutality,[5] Black and other women and gender-nonconforming people of color are significantly harmed, and their experiences rendered invisible.[6] Intersectionality behooves us to analyze beyond the racism of police brutality.

We examine how intersecting systems of racism and sexism expose racially minoritized women to police brutality. We also discuss the relevance of applying an intersectionality framework in research that examines the health impacts of police brutality and in the development of policies to eliminate this form of structural violence that harms women of color.

We use "women of color" to refer to Black women and other racially minoritized women who are not racialized as White. We understand that anti-Blackness is at the center of structural racism and police brutality[7] and that, even within the heterogeneous category of "women of color," Black women experience anti-Black racism perpetrated and sustained by other women of color.[8] However, our analysis focuses on the experiences of women of color to acknowledge the complex reality that we are all victims of the White

supremacy that makes structural racism possible, and we can be complicit in each other's oppression. We simultaneously center the experiences of Black women and incorporate how other women of color, especially Indigenous women and Latinas, are racialized and gendered in ways that disproportionately expose them to police brutality.

POLICE BRUTALITY, RACISM, AND SEXISM

Police brutality is not new. Colonizers who settled in what is now known as New England appointed constables to police and murder Indigenous Peoples, ensuring control over seized lands.[9] During the antebellum era, White men of various social classes were deputized by the law to surveil, whip, arrest, shoot, and lynch enslaved and freed Black persons.[10] Moreover, law enforcement officers encouraged the beatings and killings of (perceived) Mexicans who were considered trespassers. Law enforcement officers often secured victims, enabling White mobs to murder them.[11] That Black and Brown communities continue to be disproportionately exposed to police brutality[2] tells us that policing is a tool of White supremacy and racial domination. Indeed, contemporary evidence that being White protects from police brutality[12] also demonstrates that the system of policing has remained unchanged.

Police brutality is the most enduring form of structural racism.[13] We define structural racism as the universe of historical and contemporary factors that operate across multiple systems and institutions to foster racial oppression by providing power, privileges, and resources to people who are White at the expense of others who are not White.[14] As a form of structural racism, police brutality is sustained by many systems. It influences processes, expectations, and outcomes across other systems in ways that continue to disadvantage racially minoritized communities.

Police brutality is also sustained by structural sexism, and it shapes people's experiences and life chances by gender.[5] We define sexism as a cumulative array of factors that operate across institutions to ensure male supremacy at the expense of women and gender-nonconforming persons.[15] Structural sexism is characterized by pervasive and "systematic gender inequality in power and resources—at the macro, meso, and micro levels of the gender system."[15(p487)] Gender inequities disproportionately expose women to police neglect and to sexual harassment by police.[5,16] These inequities foster entitlement to and sexualization of women's bodies by both the police and the public. Women's claims of and worries about police brutality, as well as their demands to the police, are easily dismissed because of systematic deprioritization of their needs.[17]

GENDERED RACISM AND POLICE BRUTALITY

Gendered racism refers to a distinct form of structural racism that is perpetuated and experienced along gender lines.[18] This concept was introduced specifically to highlight how the racial oppression of Black women is structured by racist perceptions of gender that are mediated by institutional and interpersonal actions.[18] For women not racialized as White, gendered racism encompasses and extends beyond the separate and additive effects of structural racism and structural sexism. It recognizes that (1) racism harms women of color like it does men of color, (2) sexism harms women of color like it does White women, and (3) a third phenomenon—a hybrid of racism and sexism—emerges as a unique axis of oppression that harms women of color in multiplicative ways. Gendered racism draws from Black feminist and womanist frameworks that emphasize intersectionality—how ideologies, structures, and systems of oppression intersect with each other to reproduce new axes of oppression.[19–21]

Intersectionality is a theoretical framework to analyze the interconnected nature of systemic oppression.[21] It examines power dynamics within and between groups and makes visible the interlocking, distinct, multiplicative, and evolving ways that policies and practices impact individuals and groups based on their relationship to power.[21,22] Intersectionality calls attention to how the needs and experiences of Black women are ignored by White feminist movements and by antiracist movements that predominantly center the experiences of Black men, underscoring that racism and sexism are inextricably linked in their influence on the life chances of Black women. This analysis is scarce within the literature about the public health impacts of police brutality.

Even though other systems of inequality shape the health of Black women, such as social class, cis-heteronormativity, citizenship, and disability, to name a few, we examine 2 main systems and their impact on police brutality: racism (race) and sexism (gender). We focus on the intersection of racism and sexism because public health discourse on police brutality often centers victims as men, especially Black men. This further makes invisible the multiple ways by which Black and other women of color

are harmed by police violence. Given limited national data on how police brutality impacts Black women specifically, our analyses of mechanisms through which intersecting systems of racism and sexism expose them to police brutality over the life course can help inform research and policy, including data collection, analyses, and implementation of interventions. These 4 interrelated mechanisms include (1) desecration of Black womanhood, (2) criminalization of communities of color, (3) hypersexualization of Black and Brown women, and (4) vicarious marginalization (Figure 1).

Desecration of Black Womanhood

Womanhood is typically perceived as White. Black women are often dehumanized and perceived as outside of the category of "woman."[23] Desecration of Black womanhood describes how Black women are held in opposition to the White supremacist ideal of White women as the exemplar of womanhood. White women are perceived as pure, righteous, and worthy of protection and dignity, and their sanctification occurs at the expense of Black women. For example, during the first wave of incarceration of women in the late 1800s, Black women were disproportionately arrested and imprisoned.[24] Like Black men, they were considered aggressive.[24] Unlike White women, they were rarely perceived to have been sufficiently punished, or to have suffered enough. They were not perceived as having the "feminine" qualities ascribed to womanhood, qualities that merited patriarchal protection—submissiveness, fragility, and soft-spokenness. Black women were imprisoned alongside men. In contrast, reformatories were opened to house

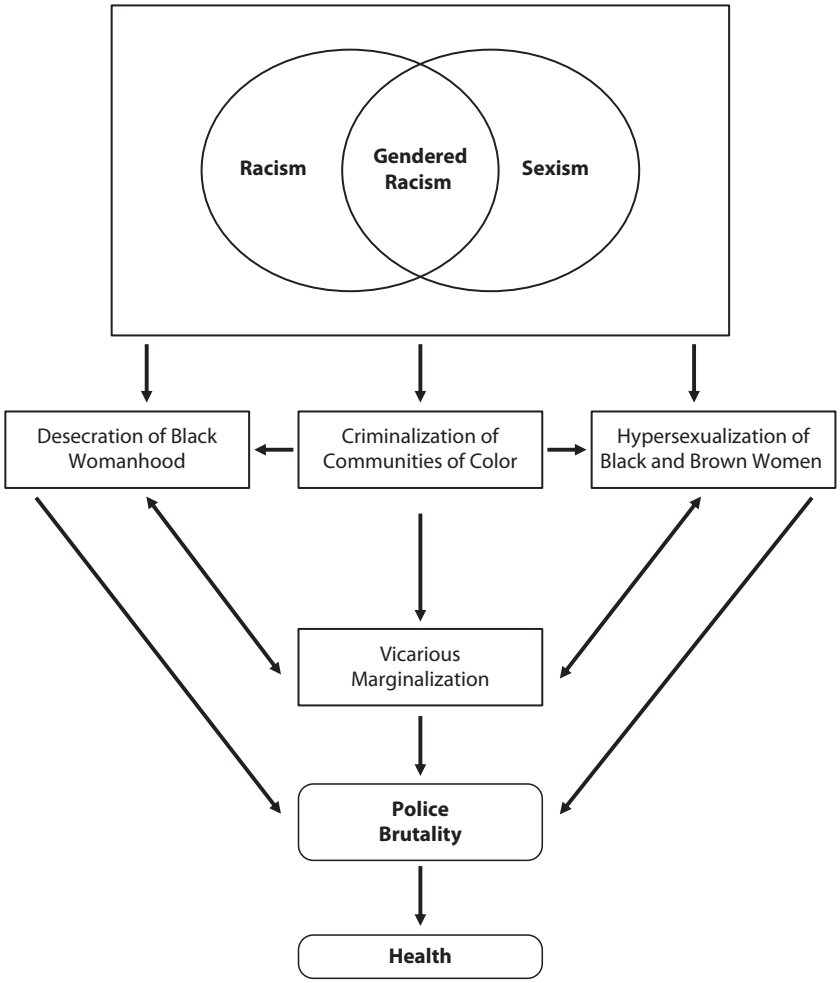

FIGURE 1— Four Interrelated Mechanisms Connecting Gendered Racism and Police Brutality

White women who were perceived to need moral reform and protection from the bad influence of Black women and from dangerous Black men.[24]

Indeed, this dehumanization goes as far back as the time of slavery. Black women were chattel: nonpeople.[23] They were treated as tools for wealth accumulation through grueling labor they were forced to perform and through childbearing: the children they bore and loved were also considered chattel. They were forced to literally (routinely through rape) reproduce the labor force.[23] Because of gendered racism, even after the formal abolition of slavery in the 19th century, Black women continue to be dehumanized, viewed as disposable, inherently threatening, and not worthy of defense.[21,23]

Today, Black women and Latinas report higher rates of police brutality in the forms of physical police violence, psychological intimidation, and police neglect, compared with non-Latina White women.[25] Black and Indigenous women have disproportionately greater risk of being killed at the hands of police, a rate more than twice that of White women.[26] In gendered racialized dynamics, White men and police officers serve as "protectors" of normative White womanhood. However, Black and other women of color are

desecrated—perceived as perpetual threats—and their humanity rendered invisible by state agents.[5] Racist stereotypes and tropes of Black women such as being "lazy," "loud," and "promiscuous" also desecrate Black womanhood, elevating exposure to police brutality.[6] Desecration of Black womanhood is shaped in part by the criminalization of Black and Brown communities, communities to which Black women belong (Figure 1).

Criminalization of Black and Brown Communities

Routinely racialized forms of policing in general and the war on drugs in particular facilitate the criminalization and routine profiling of Latina, Black, and Indigenous women as drug couriers and purveyors, leading to disproportionate stops, searches, detention, and incarceration of women of color.[6] Indeed, before the police-perpetrated death of Sandra Bland that began as a result of a traffic stop, Bland had been arrested twice and charged for possession of small amounts of marijuana. After her first arrest, she served 30 days in Harris County jail, a facility that is among the Department of Justice's most criticized facilities for unconstitutional confinement.[6] Black women are routinely victims of violent policing. As scholars have documented, many unarmed Black girls and women have been killed and physically assaulted by police, including 7-year-old Aiyana Stanley-Jones, who was killed while she was sleeping, and 22-year-old Rekia Boyd, who was shot in the head and killed in Chicago in 2015.[27]

Women of color and members of their social and kin networks are targeted in the racist War on Drugs. For example, Breonna Taylor's ex-boyfriend was the subject of an ongoing drug investigation. Taylor's affiliation to him was used as an excuse to issue a no-knock warrant for her address, criminalizing and murdering her in her own apartment.[28] Tarika Wilson and her 14-month-old son were killed under similar circumstances, shot by police during a drug raid targeting a Black man. Wilson was at home, holding her son.[27]

Black women's survivorship and attempts at self-protection are also criminalized.[29] For example, girls and women like Marissa Alexander, Cyntoia Brown, Alisha Walker, and CeCe McDonald were criminalized for defending themselves from interpersonal violence from which the police provided no safety. Many Black women and gender-nonconforming survivors continue to be incarcerated for the "crime" of protecting themselves from perpetrators of violence. As Kaba puts it, unlike normative White women, Black survivors of violence are treated as though they deserve abuse, and as though they are "incapable of claiming a self worth defending."[29(p32)]

Hypersexualization

Gendered racism helps explain the sexualized nature of police violence toward women of color. As building blocks of the United States, racial capitalism and colonialism rely on ownership and exploitation of bodies that are racialized as Black and Brown.[30] Racial capitalism and colonialism are co-constitutive—they reinforce each other and co-produce other forms of oppression. They are also patriarchal, with both relying on the "sexual exploitation of women of color through rape and systems of concubinage."[31(p2)] One of the contemporary manifestations of sexual exploitation of Black and other non-White women is hypersexualization—assumptions that women of color are sexually deviant, aggressive, available, and promiscuous.[32] Hypersexualization is driven, in part, by criminalization of Black and Brown communities. Thus, it facilitates surveillance of the bodies of women of color as well as sexual violence against them. It is no surprise that women of color are more likely than any other group to be sexually harassed, assaulted, and raped by the police during searches and routine traffic and street stops.[16] Data from the experiences of women in Baltimore, Maryland; New York City; Philadelphia, Pennsylvania; and Washington, DC, suggest that Latinas experience police sexual violence at much higher rates than non-Latina White women.[25] Indigenous women and transgender women of color are also disproportionately victims of police sexual harassment, assault, and rape.[6]

Police disproportionately threaten women of color with drug-related arrests and charges that can lead to incarceration or interfere with work and family life if they do not perform sexual acts.[6] Police sexual violence extends beyond harassment, assault, and rape. It includes invasions of privacy such as voyeurism and viewing and distributing sexually explicit photographs or videos of crime victims.[16] Unnecessary pat downs and strip and body cavity searches are also forms of police sexual violence commonly perpetrated against girls and women of color.[6]

The Burden of Vicarious Marginalization

Vicarious marginalization refers to "the marginalizing effect of police

maltreatment that is targeted toward others."[33(p2104)] Interlocking dimensions of gender, social class, and broader racial inequities constrain women of color who reside in impoverished neighborhoods. These margins of oppression symbolize a lack of power, and they increase exposure and vulnerability to police brutality. Vicarious exposure to police brutality—knowledge about the harmful experiences of others within one's network—might increase anticipatory stress of police brutality. As women of color are typically perceived as pillars of and caregivers in their communities, gender norms compel them to assume protector and provider roles for family members and friends, including those arrested, incarcerated, or murdered by the police.[34] These burdens can increase stress and take away from resources that matter for health—hence, affecting health outcomes.

Moreover, perceiving their own vulnerability to police brutality as secondary, Black and Indigenous women often focus their attention on the physical appearance of Black and Indigenous boys and men in their lives—for example, their clothing, hair, weight and height—given how their looks might expose them to police brutality,[35] often to the neglect of considerations for their own health and safety. As survivors of loved ones unjustly killed by the carceral system, Black women may face a rapid deterioration of health and early death from the stress of fighting for justice on the deceased's behalf as well as from the trauma of the sudden loss. Erica Garner—daughter of Eric Garner, who was choked to death by police in 2014—died from a heart attack at age 27 after years of advocacy work. Journalistic work has also evidenced repeated reports of Black women survivors facing multiple physical health consequences in addition to the psychological trauma of the violent deaths of their loved ones. Structural racism in the form of racial residential segregation establishes disproportionately Black and Brown neighborhoods characterized by economic deprivation and lethal police surveillance.[36]

IMPLICATIONS

A significant and growing body of research links police brutality to various health outcomes.[2] The violence and injustice of police brutality and its impact on health have centered police brutality as a salient determinant of health requiring policy action.[37] To eliminate police brutality and address its health consequences, research and policy must address the complex ways in which systems such as race and gender intersect over the life course to increase exposure to police brutality, harming health. Considering multiple sources of vulnerability and how they increase or moderate risk independently and interconnectedly across different axes matters. This requires more systematic collection of various forms of data on police brutality, especially among Black and Brown women. For example, personal narratives, ethnographies, and interviews about the nature and outcomes of police brutality; the social, political, and economic contexts in which it is experienced and anticipated; and how it affects multiple health outcomes are important data for public health policy.

We propose 4 specific recommendations for research and policy:

1. *Research should examine multiple sources of vulnerability.* Anti-Blackness is unquestionably at the center of police brutality.[7] However, determinants of exposure to police brutality and the moderators of its impact on health should not be limited to anti-Blackness or anti–Black masculinity. For example, lesbians, transgender women, and gender-nonbinary adults are more likely than their heterosexual and cisgender counterparts to be stopped, arrested, and verbally and physically assaulted by the police.[2] Women with limited household incomes disproportionately experience psychological police violence and police neglect (police not responding when needed, responding too late, or responding inappropriately) compared with their peers with higher incomes.[25] Data analyses on the impact of police brutality on health should not only examine these statuses independently but should also explore multiple systems that drive health consequences of police brutality and their intersections. As Lisa Bowleg writes, "intersectionality's promise lies in its potential to elucidate and address health disparities across a diverse array of intersections including, but not limited to, race, ethnicity, gender, sexual orientation, [socioeconomic status], disability, and immigration and acculturation status."[38(p1270)] Researchers who seek to answer these questions must then apply analytic methods that focus on interlocking types of oppression. A systematic review by Guan et al.[39] provides some examples. We must capture the multidimensionality of structural inequity in our research. Leveraging measures such as the Multidimensional Measure of Structural Racism can move this effort forward.[40]

2. *Consider the context of intersecting statuses in policy-making*. Mechanisms through which factors such as race, gender identity, and disability, for example, intersect to shape exposure to police brutality and how this exposure affects health are context-specific and dynamic. Cisgender privilege might protect an impoverished Black woman from police brutality in the same context where her Blackness and disability increase her vulnerability. Interventions like divesting from carceral systems and instead investing in access to resources that matter for health like affordable housing can help reduce exposure to police brutality among Black unhoused and economically marginalized women who are disproportionately surveilled. However, intersectionality requires us to consider how Black transgender women, for example, will still face housing discrimination and other forms of transphobic exclusion and violence that ultimately leaves them exposed to and harmed by police brutality. Just like multiple intersecting systems and structures shape the health of women of color, multiple policies are required to address intersecting systems that shape health.
3. *Center the experiences of marginalized populations over the life course*. An intersectionality framework requires us to analyze co-constitutive systems and mechanisms that shape health and to also ground these analyses in experiences of historically marginalized populations over their life course.[22,38] This will make certain policies and interventions are responsive to their needs. For example, we know that Black, Latinx, and Indigenous households are exposed to police brutality at disproportionately higher rates than White households.[2] As adults, women from these households continue to be exposed to police brutality because they are considered not worthy of defending[29] or inherently violent, because they are perceived as proximal to criminalized Black and Brown men and because their communities and economic circumstances are more broadly marginalized and criminalized.[5,6] Examining how direct police contact and vicarious and ecological exposure to police brutality during childhood, adolescence, and key periods in their lives affect health is important. Interventions to address the health impacts of police brutality must also consider the direct and indirect experiences of police brutality over the life course of women of color, especially women whose lives are at the intersection of multiple axes of oppression.
4. *Assess and expose the benefits of Whiteness.* Finally, intersectionality emphasizes the relevance of power in shaping health.[22,38] Structural racism is about power—systemic social, economic, and political domination. Structural racism is White-controlled; it is maintained and reproduced by the invisibility of Whiteness. Assessing the ways by which Whiteness, including normative constructions of White womanhood, sustains police brutality will make Whiteness more visible. Making Whiteness visible can contribute to the elimination of health inequities caused by police brutality and structural racism more broadly. Specifically, public health researchers must pose questions that explore how Whiteness limits exposure to police brutality and how and when it is mobilized as a powerful resource to buffer the impact of police brutality on the health of White and White-adjacent (benefiting from Whiteness by virtue of light skin but belonging to a racially minoritized group) people who might also be exposed.

CONCLUSION

Police brutality harms women. Women of color in the United States occupy at least 2 marginalized statuses. We argue that these statuses intersect in distinct ways to shape their exposure to police brutality and, ultimately, their health. Conceptualizations of gender, femininity, masculinity, and sexuality, while evolving, are constantly racialized. Assessing the impact of police brutality on the health of women of color in the context of historical and contemporary meanings and performances of sexuality and gender might expand our understanding of determinants of police brutality. Racist and sexist stereotypes, policies that target and criminalize Black and Brown communities, Black women's attempt at survivorship and self-protection, and broader structural inequities intersect to expose women of color to police brutality. Simultaneously, police brutality is used to criminalize and punish them for experiencing these inequities.

Gender and race are not the only factors that matter for police brutality and health. Other factors such as socioeconomic status and (dis)ability intersect to increase or reduce vulnerability to police brutality and produce new mechanisms that connect police brutality to health. These factors, the nature of

their intersections, and the mechanisms they create are context-specific and dynamic. A life course assessment of these intersections is an important research agenda for public health. Such research will help identify areas for specific interventions, as well as explore the impact of policies on differentially marginalized populations. Our 4 recommendations are not a 1-to-1 match with the 4 mechanisms we identify. Each recommendation matters for undoing all the mechanisms that connect gendered racism to police brutality. For example, multiple sources of data and measures of structural oppression can help us identify systems and patterns that desecrate Black womanhood or that facilitate the hypersexualization of women of color in different contexts. And decentering Whiteness will certainly dismantle all 4 mechanisms.

Ultimately, the goal is to eliminate police brutality, structural sexism, and structural racism. Investing in new, noncarceral ways to promote community safety is long overdue. Dismantling both structural racism and structural sexism matter significantly for improving the health of women of color. However, these efforts require the willingness of people who hold racial and gender power—who benefit from racist and sexist systems—to relinquish power and reject these benefits. Power and benefits of power are what keep oppressive systems in place. We have the tools to dismantle the systems of oppression that maintain police brutality; we must now decide if we have the will. AJPH

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Police Violence: Reducing the Harms of Policing Through Public Health–Informed Alternative Response Programs

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Police violence is a public health issue in need of public health solutions. Reducing police contact through public health–informed alternative response programs separate from law enforcement agencies is one strategy to reduce police perpetration of physical, emotional, and sexual violence. Such programs may improve health outcomes, especially for communities that are disproportionately harmed by the police, such as Black, Latino/a, Native American, and transgender communities; nonbinary residents; people who are drug users, sex workers, or houseless; and people who experience mental health challenges.

The use of alternative response teams is increasing across the United States. This article provides a public health rationale and framework for developing and implementing alternative response programs informed by public health principles of care, equity, and prevention.

We conclude with recommendations for public health researchers and practitioners to guide inquiries into policing as a public health problem and expand the use of public health–informed alternative response programs. (*Am J Public Health*. 2023;113(S1):S37–S42. https://doi.org/10.2105/AJPH.2022.307107)

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After decades of activism led by marginalized communities, the American Public Health Association (APHA) recently declared police violence a public health issue in need of public health solutions.[1] One intervention to reduce the harms of policing is the use of trained, unarmed, nonpolice alternative response teams to respond to emergency calls for behavioral health crises and nonviolent incidents (e.g., noise or loitering complaints, traffic incidents, or requests for general assistance).

In this article, we (1) detail how working toward health equity in the United States requires alternatives to contemporary policing, (2) describe key differences between existing response models and public health–informed alternative response teams, (3) identify strategies for aligning alternative response programs with public health values, and (4) recommend actions for public health workers.

HARMS OF POLICING AND THE NEED FOR ALTERNATIVES

Policing in the United States is historically rooted in suppressing racially marginalized groups to exploit labor, control wealth accumulation, and dismantle social movements that challenged White supremacy and structural racism.[2] Stemming from a system used to assert White dominance by consolidating resources to benefit White people in power,[2] current policing practices in the United States continue to perpetuate racial disparities by disproportionately targeting Black, Latino/a, Native American, and other marginalized groups.[3–5] These policing practices—and the resulting incarceration and ensnarement into the criminal legal system—are a root cause of health inequities.[2,6,7]

Evidence of Systemic Policing Harms

Each year, police kill more than 1000 people and injure more than 50 000 young people 15 to 34 years of age in the United States.[3,8] These deaths and injuries are patterned by race. Black people are 5 times more likely than

White people to sustain an injury by police that requires emergency room care,[1] and police violence is the sixth leading cause of death for young Black men.[4] Although police violence against Black men and boys has recently received research and media attention,[9] other racial/ethnic groups (e.g., Latino/a, Native American) and marginalized groups (e.g., people who are drug users, sex workers, transgender, or houseless or experience mental health challenges) are disproportionately affected. Data on the full extent of harms caused by police—including physical, sexual, and psychological violence—are not accurately documented or comprehensively collected.[8,10]

The harms of police violence ripple across families, communities, and society. Police violence can increase parental stress, caregiver responsibilities, job loss, and family economic hardship.[6] Policing practices have been shown to affect mental health and increase rates of adverse health conditions for people living in heavily policed communities.[5,11] Research shows that the killing of Black people at the hands of police also destabilizes Black Americans' mental health vicariously as individuals do not need to live near or know victims to be traumatized by their death.[12]

Current policing models also harm communities through aggressive escalation of incidents (e.g., traffic stops) and behavioral health crises. Since the 1960s, the US government has shifted funding for addressing social problems to local police departments.[11] This investment in police occurred even though police are not mental health or social service professionals, and 68% of law enforcement agencies have no specialized response protocol to address mental health crises.[13] When police respond to behavioral health crisis calls, they are likely to use the main tools of their training, citations and arrests.[14]

Despite limited evidence that investing in police reduces crime rates or harm to communities, state and local governments have increased funding for police over the past decades.[15,16] Coupled with the mounting evidence of harm and ongoing activism led by directly affected communities, these data have prompted many people in the United States to seek and build alternatives to armed police that support community health.[14,17,18] Given the APHA policy statement on police violence,[1] public health researchers and practitioners have essential roles in examining existing approaches and advocating for public health–informed alternative response programs to remove the harms of policing and promote public safety and well-being.[2,6,9]

Alternative Response Versus Police-Involved Programs

Increasingly, municipalities are exploring ways to reduce the harms of policing by creating community safety response programs that do not include the police. These types of response programs have been labeled "community response models."[14,17] We call them "alternative" response programs to specify that they are an "alternative to police involvement." Analysis of emergency call data shows that 33% to 68% of 911 calls are "noncriminal" and could be diverted to alternative response programs or handled administratively.[17] Recently established alternative response programs often begin by redirecting calls away from police for mental health or substance use crises.[17]

Emerging evidence suggests that these programs are efficient and effective. For instance, the country's longest-running alternative response program, Crisis Assistance Helping Out On The Streets (CAHOOTS), receives 2% of the Eugene, Oregon, police department's budget while handling 10% of calls in which police would have traditionally responded.[19,20] During the 6-month pilot of the Support Team Assisted Response (STAR) program in Denver, Colorado, there was a 34% reduction in the incidents the STAR team was designated to respond to, as well as a reduction in the number of crimes within the geographic boundaries of the intervention. Also, STAR was implemented at a quarter of the cost of police response.[14] Overall, alternative response teams are more likely to respond to calls for service with care (e.g., linkage to health services, de-escalation) versus criminalization.[14,18]

The absence of public health–informed approaches and advocacy has meant that the most frequent types of reforms used, crisis intervention teams, expand the role of police in mental health crises rather than funding a separate response team with adequately trained social service providers. There are more than 12 000 local police departments in the United States, within which more than 3000 crisis intervention teams have been trained since the 1980s.[21] Another police-involved reform often implemented is the co-response model, wherein police are dispatched with mental health practitioners to behavioral health crises. Quantitative evaluations of co-response programs have shown mixed results regarding arrest rates between co-response and police-only teams,[22,23] and rigorous evaluations of crisis intervention team models have revealed that they do not significantly

affect arrest or use-of-force rates among officers who have received the training.[24] Thus, the most commonly used reforms still respond with an armed officer and do not diminish the criminalization of people in mental health crisis.

Alternative response programs will likely increase across the United States as a result of recent funding by the Biden administration in Section 9813 of the American Rescue Plan for "community-based mobile crisis intervention services." Although these programs have the potential to reduce the harms of policing by reducing the scope of police response, this growing programmatic solution has wide variation, and there is an urgent need to use public health data and principles to inform these investments.

PUBLIC HEALTH–INFORMED ALTERNATIVE RESPONSE PROGRAMS

Existing alternative response programs vary in personnel, scope, and operation. Public health–informed alternative response teams can respond to a range of situations, including mental health or substance use crises, nonviolent incidents (e.g., noise or loitering complaints, traffic incidents, requests for general assistance), and low-level offenses (e.g., trespass or indecent exposure).[14,17,18] These response teams typically include people trained as social workers or medics and community members trained in crisis intervention or de-escalation. In this section, we highlight 3 key strategies based on public health values and the evidence reviewed in the preceding section to guide a public health–informed alternative response program.

The first strategy is to involve directly impacted communities in program design, implementation, oversight, and evaluation. A core principle of public health program design is that affected communities should be at the center of any design process. In this case, impacted communities would include those disproportionately harmed by police. This process should involve broad community engagement, hiring and empowering community members as key decision makers and implementers in the program.

Community engagement was critical to developing the Street Crisis Response Team (SCRT) program in San Francisco, California.[25] Community-based organizations and directly affected individuals were involved in planning and launching this pilot initiative. This engagement resulted in teams having a geographic focus to emphasize relationship building within different communities and instituting follow-up support after an initial crisis response.

Beyond the design, members from these communities should be integrated into an alternative response program as responders or other staff. The SCRT program includes a community paramedic, a behavioral health clinician, and a peer or person with lived experience.[25] The CAHOOTS program also specifically hires people with lived experience or work experience in de-escalation who respond alongside a medic.[20] Similarly, the STAR team consists of a mental health worker and a paramedic.[14]

Finally, all programs need ongoing oversight and evaluation to ensure that program goals and design are enacted appropriately and minimize harm. Members from directly affected communities need to be able to indicate which evaluation questions are most important and keep the program and its staff accountable for any harm. In Denver, after the initial success of a pilot program, the crisis response team expanded and was placed within the department of public health. However, the lack of inclusion of community members and organizations in decision making—particularly on a promised community advisory committee—has fostered distrust with community-based organizations. Alienated from this work, community members are now considering parallel response programs that are more responsive to community needs.[26]

The second strategy is to develop a program that operates independently of law enforcement agencies and the broader criminal legal system. Ample evidence demonstrates that police surveillance, harassment, and violence harm a community's mental and physical health.[3,6,8] Similarly, police contact is an entry point to the criminal–legal system, which traps historically marginalized groups into systems of parole, detention, jails, and prisons, which are also detrimental to health.[1,27] A public health–informed alternative response program must operate independently from these punitive and harmful systems, work to diminish their impact, and be linked to supportive public health and social services. To be considered an alternative response program, the program cannot exist within a police department, include police as first responders, or co-respond with police.

Structuring independence from police and the criminal legal system occurs at multiple points within alternative response program development. The control and operation of existing alternative response programs differ as a result of the varying concerns, needs, and power of local advocates and the responsiveness of government officials. For example, San Francisco's SCRT is

administered by the Department of Public Health in partnership with the fire department,[25] an example of a program housed within the municipal government. Alternatively, community groups in Oakland, California, pushed to house the Mobile Assistance Community Responders (MACRO) program within a community-based agency.[18] After the Oakland City Council decided to locate MACRO within the fire department, community advocates successfully pushed for a resolution establishing community control of the program.[18] The CAHOOTS program in Eugene is housed within a nonprofit medical clinic and contracted by the local government for crisis response services.[20]

In addition, some communities have proposed establishing alternative response teams as entirely new city entities, for example the Department of Community Safety and Violence Prevention in Brooklyn Center, Minnesota, and the Community Safety Department in Durham, North Carolina. By contrast, efforts such as Mental Health First in Oakland and Sacramento, California, have been developed by grassroots organizers and are funded and operated by local communities entirely separate from the municipal government.[18]

Beyond where programs are housed, whether and how alternative response teams receive 911 calls is another critical juncture for reducing or eliminating interactions with police. Ideally, an alternative response program has its own emergency number (e.g., 311). Yet, even with a separate number, alternative response programs may seek to be first responders to specific types of calls for service received by 911 call centers. Clear training protocols for 911 dispatchers are necessary so that police are not the default responders to behavioral health crises or any other calls for service deemed appropriate for the alternative response team to address. Police response to calls in which alternatives were expected or requested may erode trust between alternative response teams and directly impacted communities, threatening program success. It is also important to establish whether law enforcement operates local 911 call centers given that this varies widely across the United States. In those instances, it is crucial to prevent law enforcement from accessing call records or influencing diversion protocols.

The third strategy is to secure adequate program and social service funding by diverting funds from police. If an alternative response program does not have sufficient resources to respond in times of crisis, community members could view it as a failure. Funding should be allocated not only for program operations but also to equitably compensate directly impacted community members involved in the program's design, implementation, evaluation, and oversight.

In addition, if the broader ecosystem of social services is underfunded,[2,7,28] the impact of connecting people to supportive social services will be limited. Funds should be allocated to multiple social systems given that the ultimate success of alternative response teams depends on connecting people to critical support services. Although many municipalities face budgetary constraints, evidence shows that alternative programs can divert responsibilities from the local police (e.g., CAHOOTS, STAR).[14,19] Reallocating public funds toward programs aligned with public health principles and the social determinants of health is critical. The funding for these alternative programs should shift resources away from police budgets as the scope of police work decreases.

This is contentious territory. Although calls to defund the police have grown, actual budgets have not decreased.[29] Even where the scope of police work has diminished, police budgets have not. For example, although the CAHOOTS program has diverted a significant portion of calls from the police, the police budget has not decreased commensurately with the police workload.[19,20] When the STAR program expanded in Denver, the police chief noted its impact but did not decrease the police budget.[18] Movements for alternative response programs and robust social services need municipal budgets to shift funds from punitive and harmful systems into public health–oriented preventive systems.

RECOMMENDATIONS FOR ACTION

Alternative unarmed response programs represent a potential public health intervention to reduce the harms of policing but only if they are planned, implemented, and adopted with public health values and principles—as described in the preceding section—at the forefront. We share 3 recommendations for public health workers (e.g., researchers and practitioners) to support the expansion of public health–informed programs.

First, public health workers must consider police violence when identifying the causes of health issues and health inequities in local communities. For too long, public health entities have ignored policing as a root cause of health inequities. Public health workers can identify how armed policing and its sequelae contribute to health problems in local communities and require an urgent public health response, such as a public health–informed alternative response program.

Second, public health workers can advocate for public health–informed alternative response teams in their local area, guided by the 3 strategies in the preceding section. After further education (e.g., a review of APHA policy statements and research[1,27] and the first rigorous evaluation of an alternative response program[14] and a thorough assessment of different alternative programs by directly impacted community advocates and researchers[18]), public health leaders should communicate with local elected officials that policing is a public health issue that warrants intervention. Public safety is frequently considered an issue in which police have expertise. However, the social determinants of health literature suggests that many public safety issues are exacerbated by armed police and a lack of supportive social services.[1,7] Public health offers a critical framing that can reorient power and resources toward care, equity, and prevention and away from punitive and violent systems.

Finally, public health workers should conduct rigorous evaluations of alternative response programs in collaboration with community partners to identify their potential causal role in improving health and addressing health inequities.[14] It is critical to partner with directly impacted communities and individuals to ask the following questions: What are the effects of reducing police interactions and using alternative first responders? What are the characteristics of alternative response programs that improve health and reduce health inequities? What key supports are necessary to implement such programs?

CONCLUSION

Over the past decade, public health research has demonstrated empirically that policing is a public health issue. We now need to expand our efforts using public health values, skills, and data to advocate for public health–informed programs that are alternatives to policing. Substantial public health research demonstrates that police perpetrate harm, contribute to criminalization, and inhibit linkages to supportive social services. It is time for public health to reorient public safety programs and resources toward initiatives that do not involve the police and are rooted in care, equity, and prevention. AJPH

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Persistent Criminalization and Structural Racism in US Drug Policy: The Case of Overdose Good Samaritan Laws

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The US overdose crisis continues to worsen and is disproportionately harming Black and Hispanic/Latino people. Although the "War on Drugs" continues to shape drug policy—at the disproportionate expense of Black and Hispanic/Latino people—states have taken some steps to reduce War on Drugs–related harms and adopt a public health–centered approach. However, the rhetoric regarding these changes has, in many cases, outstripped reality.

Using overdose Good Samaritan Laws (GSLs) as a case study, we argue that public health–oriented policy changes made in some states are undercut by the broader enduring environment of a structurally racist drug criminalization agenda that continues to permeate and constrict most attempts at change.

Drawing from our collective experiences in public health research and practice, we describe 3 key barriers to GSL effectiveness: the narrow parameters within which they apply, the fact that they are subject to police discretion, and the passage of competing laws that further criminalize people who use illicit drugs. All reveal a persisting climate of drug criminalization that may reduce policy effectiveness and explain why current reforms may be destined for failure and further disadvantage Black and Hispanic/Latino people who use drugs. (*Am J Public Health*. 2023;113(S1):S43–S48. https://doi.org/10.2105/AJPH.2022.307037)

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The overdose crisis has resulted in over 1 000 000 deaths in the United States since 1999.[1] There were nearly 108 000 overdose fatalities in 2021, more than in any year prior.[1] Overdose death rates are currently increasing faster among Black people than any other group, and Hispanic/Latino people are experiencing particularly sharp increases in mortality from some prevalent drug combinations such as opioids and stimulants.[2]

For decades, the primary policy approach to drug use in the United States has been to arrest, prosecute, and incarcerate as many people as possible for as long as possible.[3] This approach has been ineffective in reducing drug use[4,5] and is associated with increased drug-related harms, including nonfatal and fatal overdoses, injection-related endocarditis, and HIV and hepatitis C incidence.[6–8] Strategies like mandatory minimum sentencing and disparate sentencing for crack versus powder cocaine have unjustly and disproportionately penalized Black and Hispanic/Latino people, making this set of policies a hallmark example of structural racism in the United States.

In response to the first wave of the current overdose crisis, which was characterized by record fatalities among White people and driven primarily by prescription opioids,[9] advocates urged policymakers to adopt a more public health–centered approach to reduce drug-related harms. Their successes include expanding access to the overdose reversal agent naloxone,[10] increasing availability of evidence-based treatment of substance use disorder, and enacting overdose Good Samaritan Laws (GSLs).[11] Overdose GSLs aim to encourage overdose

witnesses to seek help by providing limited legal protections from certain criminal offenses, typically including possession of controlled substances and drug paraphernalia. As of June 2021, 47 states and Washington, DC had enacted a GSL.[12] However, the nature and scope of GSL protections vary widely across states, and research on their impacts has produced mixed results.[13–16] Although 2 studies found reductions in fatal opioid overdose following GSL enactment, neither association was statistically significant at the $P < .05$ level[13,14]; a third study found that only GSLs that provide protections from arrest are significantly associated with reductions in fatal opioid overdose.[15]

Using GSLs as a case study, we argue that these public health–oriented policy changes adopted to counter the ongoing overdose crisis are undercut by persistent structural racism and criminalization of people who use drugs, which work against that goal. We highlight 3 overarching barriers to GSL effectiveness: (1) provision of very limited protections, (2) implementation being subject to police discretion, and (3) presence of competing laws that further criminalize people who use illicit drugs. Each is a manifestation of persistent structural racism in drug policy and illustrates why GSLs and related legal changes may fail to reduce drug-related harms, particularly among Black and Hispanic/Latino Americans.

LEGAL PROTECTIONS AS THE EXCEPTION, NOT THE RULE

GSLs were developed to address fear of drug-related criminal consequences, a fundamental barrier to help-seeking among individuals witnessing an overdose.[17] They provide a mechanism for help-seekers to avoid those consequences and are often considered an example of prioritizing harm reduction over criminalizing people who use drugs. However, instead of decriminalizing drug possession and use outright—the most straightforward way to ensure that fear of criminalization does not deter help-seeking—these laws merely provide exceptions through which select individuals can find relief from select criminal–legal consequences. The following examples demonstrate how the limited nature of these exceptions ultimately maintains the status quo of structurally racist drug criminalization.

Lack of Protections Under Community Supervision

As of June 2021, 22 of the 48 jurisdictions with active GSLs did not provide protections for violation of probation or parole.[12] This means that individuals under community supervision may face incarceration if they call for help at an overdose, because being in the presence of illicit drugs or being arrested (even if not formally charged) for any reason can constitute a violation. Given the high rate of prior criminal–legal system involvement among people who use drugs,[18] this disproportionately affects many whom GSLs are ostensibly intended to benefit. This is a particularly glaring example of enduring structural racism within GSLs, as Black and Hispanic/Latino people, independent of their drug use, are more likely to have prior criminal–legal interactions than White people.[3] Failing to provide protection from probation or parole violations is therefore likely to amplify racial inequities in criminal–legal involvement, overdose, and broader adverse health outcomes related to substance use and incarceration.

Lack of Protections From Arrest

Only 27 states and Washington, DC provide protection from arrest for the offenses covered by the GSL.[12] In the remaining 20 states, help-seekers (and, typically, the overdose victims) can still be arrested and detained for covered offenses, even though the GSL protects them from subsequent charge or prosecution.[12] A national survey of patrol officers revealed that more than one third of those who had responded to an overdose in the prior 6 months reported making an arrest on scene.[19] Preserving the ability to arrest and detain help-seeking individuals is unlikely to sufficiently dismantle fear of police as a barrier to medical help-seeking and has numerous downstream risks, even if charges are not pursued.[20,21] Detainment, even for a short time, can have potentially life-altering consequences for employment (e.g., missed shifts) and dependent care responsibilities, and can subject people dependent on opioids to forced withdrawal. Moreover, it increases the potential for stigma, harassment, and violence associated with police interactions and detainment,[20,21] which disproportionately affects Black and Hispanic/Latino Americans, illustrating another structurally racist characteristic of many GSLs.[3] Given the adverse consequences of arrest itself, it is unsurprising that a recent study found evidence of reductions in fatal overdose only in states where GSLs specifically included arrest protections.[15]

More broadly, there is considerable confusion among the public about which protections GSLs provide.[22,23] Colloquially, the term "arrest" is often used interchangeably to mean arrest, charge, and prosecution. This may

contribute to distrust that law enforcement officials are abiding by the laws, which studies have suggested is a considerable barrier to their effectiveness.[24] Individuals who believe that the law protects from arrest and are subsequently arrested when seeking help for an overdose may interpret this as law enforcement failing to comply with the law, even if they are ultimately released without charge.

This confusion may be further exacerbated by insufficient or inaccurate information regarding these laws. Many state Web sites do not provide information about the state's GSL protections, and those that do may mischaracterize them. For example, a Fact Sheet produced by the New York Department of Health erroneously states that, under certain circumstances, "The New York State 911 Good Samaritan Law allows people to call 911 without fear of *arrest*" [emphasis added] for possession of drug paraphernalia or "under 8 ounces" of a controlled substance.[25] However, the law only provides protection from charge and prosecution for those crimes; a related law provides protection from arrest for possession of controlled substances, but of much smaller amounts. This difference is not merely semantic: it reflects the distinction between being forcibly detained by law enforcement or not.

In some states, such as Iowa, South Dakota, and Tennessee, GSLs only offer protection a single time,[26] subjecting the bystander and the police to a bizarre decision tree that entails knowledge of the overdose history of those at the scene. The lack of clarity, consistency, and comprehensiveness of GSLs poses a clear obstacle to ensuring that police and bystanders understand these laws' protections. It further complicates help-seeking decisions during a critical window of time and does so in a way that may disproportionately reduce GSL effectiveness among Black and Hispanic/Latino Americans.

RELIANCE ON POLICE DISCRETION AND TRUST IN POLICING

Another barrier to GSL effectiveness is the fact that equitable implementation depends on police discretion. Police discretion is a critical determinant of whether policy-level reforms translate into the changes in street-level practice necessary for improvement in downstream health outcomes.[27] Individuals who are structurally disadvantaged under the status quo are most vulnerable to this discretion.[28] Even where more sweeping reforms are adopted, as with cannabis liberalization, evidence demonstrates ongoing structural racism illustrated by persistent or amplified racial disparities in arrest.[29] In the case of even the most comprehensive current GSLs, police retain latitude in whether and how to physically interact with individuals at an overdose scene, including decisions about interrogation, searches, confiscation of drugs or paraphernalia, and whether to charge individuals with adjacent low-level offenses (often referred to as crimes of poverty, such as loitering).[27] GSL effectiveness may therefore rely on how entrenched a culture of racist policing is,[3] and on the community's perceptions of whether that culture has shifted. Despite reforms, recent data show that drug-related arrests have not decreased,[30] and concerns about police conduct and arrest have been shown to persist in settings for years after GSL enactment,[31] particularly among people of color.[22]

COMPETING POLICIES REINFORCE DRUG CRIMINALIZATION

An additional barrier to GSL effectiveness is the persistence of laws firmly rooted in drug criminalization, as well as the introduction of new ones. Even if comprehensive GSLs that provide immunity from a much broader range of crimes than current laws are successfully enacted, myriad legal consequences may await individuals seeking help.[24] Drug-induced homicide laws, which authorize the prosecution of drug-related deaths as criminal killings, offer a clear illustration of this contradictory environment. These laws assign criminal liability for a drug-related death to the individual who supplies the drug. In many cases, this person is a family member or friend who sold a small amount of drug to someone they knew, or shared or used the drug with the deceased. As of January 2019, 23 states and Washington, DC had a drug-induced homicide law (all but 2 also have a GSL).[32] Drug-induced homicide laws may make individuals present at the scene of an overdose more reluctant to call 911.[33] In a recent study, 87% of people who used drugs in Maryland were familiar with the state's drug-induced homicide law, compared with just 53% aware of the GSL.[22] Furthermore, hearing of someone else being charged under the state's drug-induced homicide law was strongly associated with greater perceived vulnerability of overdose-related arrest; these concerns were disproportionately reported by non-White respondents.[22]

The increased popularity of drug-induced homicide laws, as well as the recent proliferation of laws that create harsher penalties for the sale or possession of fentanyl and other synthetic

opioids, signal a doubling-down on failed Drug War rhetoric and actions.[4] It further sends a stark message to potential help-seekers about the government's priorities regarding prevention of fatal overdose. In states with both a GSL and a drug-induced homicide law, individuals in possession of drugs who seek help at an overdose scene may be protected from the legal consequences of drug possession—but if the overdose becomes fatal, they may find themselves facing felony charges ranging from "delivery or distribution resulting in death" to "murder in the first degree."[32] Although GSLs are intended to motivate help-seeking, concomitant drug-induced homicide laws—along with laws that prohibit trespassing, loitering, possession with intent to distribute, and numerous other offenses of which people who use illicit drugs are frequently accused—do the opposite. Here again, structural racism is at play: early data suggest drug-induced homicide charges are being deployed at disproportionately high rates among Black and Hispanic/Latino individuals.[3,34,35]

CONCLUSIONS

Amid the current overdose crisis, rhetoric has proclaimed that "we can't arrest our way out of the problem."[36] However, this rhetoric has largely failed to translate into reality. Instead, the persistence of a broader, structurally racist environment of criminalization that is maintained by policymakers and law enforcement continues to threaten health and racial equity outcomes. The case of GSLs clearly illustrates this dichotomy. The combination of laws designed to provide protections only in limited circumstances, actions and decisions that erode trust in the policies and the officials enforcing them, and contradictory laws that further reinforce drug criminalization, signal continued structural racism that undercuts public health policies and their potential impacts on racial justice moving forward.

Analogous barriers undermine other harm reduction policies; for example, efforts to expand access to naloxone (which is often in injectable form) and safe injection equipment among people who use illicit drugs are compromised by criminalization of syringe possession in many states.[37] This status quo of structurally racist criminalization and enforcement will continue to disproportionately limit the effectiveness of public health–oriented drug policies for Black and Hispanic/Latino people who use illicit drugs, and entrench racial inequities in corresponding health and social outcomes.

A number of steps would allow for more robust impacts of GSLs amid escalating overdose mortality. First, improvement can and should be made to GSLs to ensure that protections are the rule rather than the exception. This includes comprehensive protections from arrest for a broad range of crimes and violations of probation or parole, without limitation on the number of times the immunity is provided.[15] Second, interventions are needed to establish a harm reduction– and public health–oriented environment more broadly. Several North American settings have abandoned routine police attendance to drug overdose calls in favor of a well-resourced behavioral health response system.[38] This may help bypass issues of distrust in law enforcement, although empirical evidence from these settings is needed. In addition, the recent adoption of overdose prevention centers in New York City and Rhode Island may serve as an example of structural interventions to promote the safety of people at risk for overdose in health-promoting, rather than criminalizing, environments.[39] However, efforts need to be taken to ensure equitable access to these sites by Black and Hispanic/Latino people, and research is necessary to determine whether additional steps, such as prohibiting police from targeting participants, are needed. Finally, a more direct and comprehensive approach to reducing drug-related harm that focuses on the health, rights, and dignity of people who use drugs is needed. Rather than narrow provisions of immunity, decriminalizing or legalizing illicit substances could more directly remove drug use from the purview of the criminal legal system, offering an opportunity to usher it into the public health arena. Internationally, countries are increasingly decriminalizing drug possession, actions endorsed by public health and racial justice advocates.[40–42] Although there is limited experience of this strategy domestically, in 2021, Oregon's Ballot Measure 110 went into effect, decriminalizing personal possession of drugs in the state while increasing access to health assessments and substance use disorder treatment and recovery services. Evaluations of this change, informed by and with the direct involvement of people who use drugs, will be critical to understanding its potential for effectively reducing drug harms in a racially equitable way and its feasibility for adoption in other states.[43]

Progressive policies rooted in a true harm reduction framework have produced considerable enthusiasm and are the product of decades of organizing efforts to shift societal views and approaches to drug use. However, even these well-meaning policies will continue to perpetuate structural

racism and fail to mitigate overdose deaths if the broader policy environment does not abandon the criminalization of drug use in earnest. Until then, Black and Hispanic/Latino communities will continue to be disproportionately targeted by the War on Drugs. AJPH

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Historic Redlining Practices and Contemporary Determinants of Health in the Detroit Metropolitan Area

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Objectives. To examine how redlining, a historical racially discriminatory housing policy implemented by the Home Owners' Loan Corporation (HOLC), is associated with current neighborhood determinants of health in the Detroit Metropolitan Area.

Methods. We analyzed associations between census tract–level HOLC color grades (red = "hazardous"; yellow = "declining"; blue = "desirable"; and green = "best") and a developed neighborhood determinants of health index (DOHI) consisting of 8 indicators of economic, social, governance, and physical environment characteristics using spatial regression analysis and controlling for change in the census tract's percentage of White residents.

Results. A total of 484 Detroit Metropolitan Area census tracts had HOLC grades. The mean redlining score across all census tracts was 3.02 (min = 1.0; max = 4.0). The mean contemporary DOHI was 19.11 (min = 8.0; max = 36.0). Regression models show significantly higher DOHI scores in yellowlined (b = 2.71; 95% confidence interval [CI] = 1.52, 3.91), bluelined (b = 5.33; 95% CI = 3.65, 7.01), and greenlined (b = 9.25; 95% CI = 6.86, 11.64) neighborhoods compared with redlined neighborhoods.

Conclusions. Historical redlined neighborhoods experience contemporary determinants of health conditions that are less conducive to health compared with those in nonredlined neighborhoods. These differences also reflect the accumulation of resources essential for health in greenlined neighborhoods.

Public Health Implications. Neighborhood development initiatives should consider the impacts of historical redlining on contemporary neighborhood conditions. (*Am J Public Health*. 2023;113(S1): S49–S57. https://doi.org/10.2105/AJPH.2022.307162)

Public health research has examined the impacts of residential segregation on health and health inequities largely through pathways that indicate greater disinvestment and lack of resources in neighborhoods with greater proportions of non-White racialized groups, particularly non-Hispanic Blacks and Hispanics/Latinx.[1,2] For the most part, such research has overlooked the structural forces that created and reinforced segregation in these neighborhoods. Redlining practices of the Home Owners' Loan Corporation (HOLC) exploited segregation, providing more opportunities for wealth building among Whites while simultaneously stripping homeownership opportunities from non-White racialized groups, particularly Black Americans.[3–5] Understanding the extent to which those historical practices are associated with differential health opportunities—reflected in economic, social, governance, and physical environmental determinants of health—is critical for public health efforts to reduce racial health inequities.

As part of a series of programs established in the 1930s to help middle-class Americans purchase and maintain homes, the HOLC program had the primary purpose of stabilizing the nation's mortgage lending system.[4] HOLC created maps to classify neighborhoods by their perceived level of lending risk. Neighborhoods were assigned 1 of 4 grades and corresponding colors: A (green) for "best," B (blue) for "still desirable," C (yellow) for "definitely declining," and D (red) for "hazardous." Areas with a larger

proportion of non-White racialized groups, primarily non-Hispanic Blacks, were classified as "hazardous" for investment. Redlining institutionalized neighborhood racial segregation and restricted access to homeownership for non-White racialized homebuyers, who turned to land contracts with no safety nets where buyers could lose any equity built on their home if a payment was missed.[6] Redlined neighborhoods have experienced long-term disinvestment.[4,6] Redlining maps present a unique opportunity to examine the long-term impact of racist structural policies with geographic specificity contributing to the racial health equity gap seen in the United States. For example, research has connected historical redlining with socioeconomic factors like credit scores and disinvestment,[3] foreclosures,[7] violence,[8] physical factors like excess heat,[9] and health including preterm birth[10] and mental health.[11]

The Detroit Metropolitan Area (DMA), with a population of approximately 3.8 million, offers an important case study for understanding these processes. Made up of 3 counties, Oakland, Macomb, and Wayne (where Detroit city is located),[12] the DMA was among the nation's largest and most prosperous metropolises at the start of the 20th century.[13] As described by Sugrue, redlining practices of the 1930s set the stage for the establishment of suburbs in the 1960s to 1970s that lured White homeowners to move from the city to heavily subsidized suburban areas with lower property taxes. Deindustrialization and globalization contributed to the loss of many manufacturing jobs, while remaining employment opportunities moved to the suburbs.[13] Together, these processes moved economic sources away from the city and into largely White and wealthy neighborhoods.[13,14] By 2010, Detroit had lost close to two thirds of its population, and with it much of its resources.[14] These historical processes have contributed to the racial divide seen today: in 2020, Macomb and Oakland counties had approximately 11.7% and 13.6% non-Hispanic Blacks, respectively.[15] Wayne County was 38.8% non-Hispanic Black,[13] with 77.2% of non-Hispanic Black residents living in Detroit city.[12]

Historical redlining has been linked to specific health outcomes. We take this research a step further, to examine its associations with economic, social, governance, and physical environmental determinants of health. Our conceptual model borrows from existing frameworks developed by Krieger et al.[10] and Swope et al.[16] focusing on the neighborhood- or intermediate-level factors associated with health inequities. According to Swope et al., redlining leads to disinvestment, with increasing racial segregation and concentrated disadvantage influencing place-based risk factors like air pollution and healthy food access. Similarly, in the framework of Krieger et al., redlining leads to neighborhood trajectories of disinvestment, residential segregation, and homeownership, which simultaneously affect place-based resources for healthy living and the census tracts' demographic and socioeconomic composition. Therefore, examining historical patterns can help us understand the pathways through which institutional racism maintains racial hierarchy by, for example, concentrating economic, social governance, and physical environmental benefits in areas predominantly occupied by non-Hispanic Whites while eroding access to these critical determinants of health for racially minoritized groups.[2,17,18]

In this study, we examined the associations between historical redlining and the distribution of multiple contemporary social, economic, governance, and physical environmental indicators of health equity (henceforth, social determinants of health) in the DMA. Examining such associations can build evidence to work upstream to inform policies that improve economic, social, governance, and physical environments for better health and health equity. We tested the hypothesis that the legacy of redlining continues, with areas historically deemed as "hazardous" for investment leading to disinvestment over time are associated with worse contemporary social determinants of health indicators. We argue that those patterns contribute to contemporary racial health inequities in the DMA.

METHODS

We conducted an ecological study to examine the associations between historical neighborhood HOLC grades and a neighborhood determinants of health index (DOHI). To create the DOHI, we adapted commonly used methods for examining economic, educational, and civic opportunity (e.g., US Census Opportunity Index, 2010),[19] to examine opportunities for health conceptualized across 4 domains that are well-established predictors of health: economic growth, social and human development, governance, and physical environments. We used census tract level as a proxy for neighborhood to capture the variability across geographic areas within the DMA. This level was selected as the finest spatial scale at which all data used in this analysis were available and to maximize comparisons with previous research.[20,21]

Home Owners' Loan Corporation Grade

Detroit HOLC redlining maps were obtained from the University of Michigan,

Institute for Social Research.[22] Using digitized HOLC mortgage security risk maps from the University of Richmond's Digital Scholarship Lab,[23] researchers at the Institute for Social Research overlaid the HOLC maps with 2010 census tracts. Using ArcGIS version 10.8.2 (Esri, Redlands, CA), they determined the proportion of HOLC residential security grades within the boundaries of each census tract.[22] A numerical value (A-1 [greenlined], B-2 [bluelined], C-3 [yellowlined], and D-4 [redlined]) was assigned. A historical redlining score was then calculated from the summed proportion of HOLC grades multiplied by a weighting factor based on the area within each tract. A higher HOLC score corresponds with greater redlining in the census tract. In this study, we used both a continuous historical redlining score assessing the degree of redlining and a categorical variable consisting of the 4 grades.

Determinants of Health Equity Index

We used the Detroit Urban Health Equity Assessment Tool (Detroit Urban HEART) to guide the selection of indicators to include in the DOHI. The Detroit Urban HEART tool consists of economic, social, governance, and physical environmental indicators that have been established as predictors of mental and physical health.[24] Urban HEART was developed by the World Health Organization specifically to engage stakeholders in a participatory process of developing indices that are relevant and reflective of their community.[25] The goal was to support urban stakeholders to address health inequities by addressing the social determinants of health.[25] More than 100 cities in 54 countries have used the tool.[25]

In 2015–2016, Urban HEART was adapted for Detroit by the Healthy Environments Partnership, a community-based participatory research partnership consisting of community-based organizations, academic researchers, and health service providers. A detailed description of this process can be found elsewhere.[24] Briefly, 14 indicators of health, well-established in the literature, across 5 domains (economic growth, social and human development, governance, physical environment and infrastructure, and population health) were identified and used to categorize areas across the city and to develop strategic actions.[24]

For the analysis presented in this article, we focused on a subset of 8 of the 14 indicators in 4 domains. We omitted the fifth domain, population health, consisting of 4 variables, given our focus on determinants of health rather than on health outcomes. In addition, for the analysis presented here, to address correlation, we grouped 2 indicators of education (the percentage of the population with a high-school education and the percentage with a bachelor's degree), and excluded the median housing value variable because of correlation with percentage of homeownership and median household income. Table A (available as a supplement to the online version of this article at https://ajph.org) provides a description of the indicators included by domain.

To create our index, we calculated quintile scores for each of the variables described previously. Quintiles are often used to categorize income and other socioeconomic measures when examining inequities across areas.[26] Quintiles with higher values received a higher score (e.g., census tracts within the quintiles with the greatest economic growth received a score of "5"). For the $PM_{2.5}$ (airborne particulate matter with a diameter of less than 2.5 micrometers) variable, quintiles with lower values received higher scores reflecting less pollution. We summed the quintile scores for each variable to create an additive index, with higher index scores representing more favorable conditions for health across the 4 domains, ranging from 8 (low on all indicators) to 40 (high on all indicators).

Covariates

To account for the "White flight" that occurred between the time redlining was implemented and the present day, we constructed a variable that captures the change in the percentage of White residents from 1970 to 2019 using the 1970 Census and the 2019 American Community Survey 5-year estimates.

Statistical Analysis

We calculated the mean value of all census tracts by HOLC score for each indicator and for the index. We used the ESTAT MORAN function on Stata version 17 (StataCorp LP, College Station, TX), a postestimation test used after using a regression model with spatial data to perform a Moran test for spatial correlation among the residuals, for the DOHI, our dependent variable. Our findings showed significant ($P < .001$) spatial autocorrelations indicating that the observations are not independent and identically distributed across the DMA. We then used the SPREGRESS command to fit our spatial regression models using an inverse-distance–weighted matrix. We present findings from models that regressed our index on the HOLC grades categorical variable, adjusted for the change in White population over time.

RESULTS

The analysis presented here includes 484 of the possible 495 DMA census tracts that had a corresponding HOLC grade. We excluded 9 census tracts because of missing data for variables in the index or the covariate.

Table 1 shows neighborhoods that had been designated historically with an A grade (green = "best") fared better across most contemporary indicators. The greatest advantages appear in economic indicators, with A-graded census tracts having a mean median household income almost double that of neighborhoods graded as B and C, and almost 3 times that of the D-graded neighborhoods. Similarly, 91.18% of residents in greenlined census tracts had a high-school education or more, compared with 88.61%, 84.69%, and 77.56% in blue-, yellow-, and redlined census tracts, respectively. Differences across neighborhoods in ambient levels of $PM_{2.5}$ were smaller although they trended in a similar direction. Neighborhoods historically designated with a D grade ("hazardous") fared worse on most contemporary indicators including a substantially lower homeownership rate (46.15%) and percentage of children living above the poverty line as defined by the US Census (54.62%) compared with other graded neighborhoods. The one exception to this finding was the slightly higher percentage of residents with a work commute less than 30 minutes in D-graded neighborhoods compared with the other-graded neighborhoods.

When these indicators were used in the DOHI score, trends suggest that residents of formerly greenlined census tracts experience conditions that are more supportive of the opportunity for good health across multiple domains, compared with current residents of census tracts that were historically graded with lower HOLC scores.

Panel a of Figure 1 illustrates that the tracts with a D grade (red), deemed as "hazardous," were mostly located in the downtown areas of Detroit, while tracts that were deemed as "best" or A-graded (green), were clustered in the west and north of Detroit city. Panel b of Figure 1 illustrates the spatial distribution of the DOHI scores in the same HOLC-graded tracts. Census tracts that appear in the darkest blue are those with the highest quintile of DOHI scores. Those in the fourth, third, and second quintiles are shown in successively lighter shades of blue, and those census tracts with the lowest (quintile 1) DOHI scores are shown in light gray.

A visual inspection of Figures 1a and 1b suggests considerable overlap, with census tracts with HOLC grades of A (green) tending to have higher contemporary DOHI scores, as indicated in dark blue, while many with historical scores of D (red) have lower (light blue or gray) DOHI scores.

In Table 2 we present results from the spatial regression models in which we tested the hypothesis that HOLC scores are significantly associated with contemporary DOHI scores as captured in our index, while controlling for percent change in White residents. Results are shown for 4 models, using red-, yellow-, blue-, and greenlined neighborhoods as the referent, to specifically examine differences across all neighborhood types.

Results shown in model 1 indicate that access to positive determinants of health captured in our DOHI are

TABLE 1— Historical Home Owners' Loan Corporation Color Code and Contemporary Mean Economic, Social, Governance, and Physical Environment Indicators: Detroit Metropolitan Area, 2015–2019

	A—Green (n = 28), Mean (SD)	B—Blue (n = 71), Mean (SD)	C—Yellow (n = 232), Mean (SD)	D—Red (n = 153), Mean (SD)
Homeowners, %	74.75 (20.66)	64.63 (17.41)	57.74 (17.23)	46.15 (19.83)
Median household income, $	92 408.68 (57 365.08)	53 218.90 (29 071.82)	43 641.41 (22 777.93)	32 099.15 (13 700.48)
Employed, %	90.00 (9.11)	87.26 (8.45)	89.01 (8.53)	84.91 (9.31)
≥ high-school education, %	91.18 (8.86)	88.61 (7.14)	84.69 (9.23)	77.56 (13.28)
Children living above poverty line, %	77.02 (25.47)	68.33 (22.40)	62.84 (24.05)	54.62 (24.19)
Health insurance, %	95.83 (4.03)	94.09 (3.49)	92.60 (4.14)	91.62 (5.00)
Have work commutes < 30 min, %	64.88 (7.86)	64.18 (10.68)	64.04 (9.62)	65.33 (11.34)
$PM_{2.5}$ values	9.53 (0.21)	9.61 (0.19)	9.61 (0.17)	9.64 (0.14)
Determinant of health index	26.11 (8.84)	21.08 (7.39)	19.47 (6.74)	16.37 (4.97)

Note. $PM_{2.5}$ = airborne particulate matter with a diameter of less than 2.5 micrometers. Green = "best"; blue = "desirable"; yellow = "declining"; and red = "hazardous."

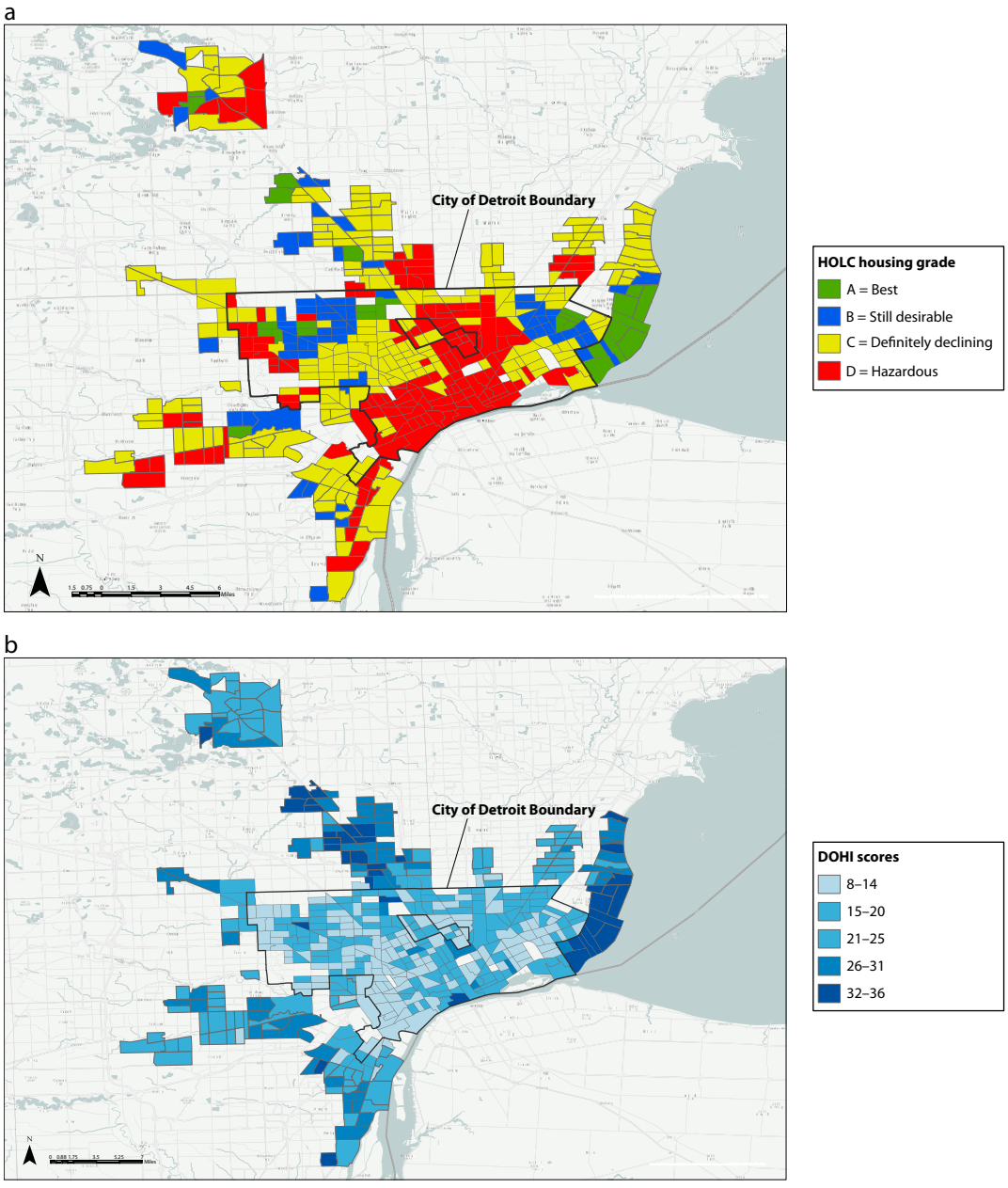

FIGURE 1— Historical (a) Home Owners' Loan Corporation (HOLC) Redlining Grades and (b) Determinants of Health Index (DOHI) Scores Applied to 2020 Detroit Metropolitan Area Census Tracts

Source. Inter-university Consortium for Political and Social Research redlining scores for 2010 census tracts.

significantly greater in formerly yellow-lined (b = 2.71; 95% confidence interval [CI] = 1.52, 3.91), bluelined (b = 5.33; 95% CI = 3.65, 7.01), and greenlined (b = 9.25; 95% CI = 6.86, 11.64) census tracts, compared with formerly redlined tracts. Formerly greenlined neighborhoods have, on average, a 9.25-point advantage (on a scale of 8–40) over formerly redlined census tracts, after accounting for changes over time in racial composition.

Models 2 through 4 report results using yellow-, blue-, and greenlined neighborhoods, respectively, as the referent group, and allow comparisons of relative advantage and disadvantage in determinants of health across census tracts with varying HOLC scores. As with model 1, these models illustrate the nonlinear nature of relative advantage and disadvantage in access to multidimensional determinants of health for census tracts with varying HOLC scores.

TABLE 2— Determinants of Health Index Regressed on Home Owners' Loan Corporation (HOLC) Grades, Controlling for Percent Change in White Population at the Census Tract Level: Detroit Metropolitan Area, 2015–2019

HOLC Grade	Model 1, b (95% CI)	Model 2, b (95% CI)	Model 3, b (95% CI)	Model 4, b (95% CI)
Red	0 (Ref)	−2.71 (−3.91, −1.52)	−5.33 (−7.01, −3.65)	−9.25 (−11.64, −6.86)
Yellow	2.71 (1.52, 3.91)	0 (Ref)	−2.62 (−4.20, −1.03)	−6.54 (−8.86, −4.22)
Blue	5.33 (3.65, 7.01)	2.62 (1.03, 4.20)	0 (Ref)	−3.92 (−6.49, −1.36)
Green	9.25 (6.86, 11.64)	6.54 (4.22, 8.86)	3.92 (1.36, 6.49)	0 (Ref)

Note. CI = confidence interval.

This is further illustrated in Table 3, where mean differences across the HOLC-graded areas are collectively driven by the DOHI indicators, where, on average, greenlined areas fare better across all the indicators in comparison with the others. We conducted a sensitivity analysis that included census tracts with no HOLC grade as a category (shown in Table B, available as a supplement to the online version of this article at https://ajph.org). These non–HOLC-designated tracts had significantly lower levels of inequities than those designated as red, yellow, and blue. On the contrary, these tracts had higher levels of inequities than those designated as green, although not significant.

DISCUSSION

Our findings are consistent with the hypothesis that the impacts of structural racism in the housing system, enacted in the form of HOLC grades, are associated with contemporary DOHI scores in the DMA almost a century later. Because HOLC grades were implemented in urban communities with populations of 40 000 or more,[27] these associations are most visible in urban areas of the DMA (e.g., Detroit). We found significant associations between HOLC grades and contemporary indicators of economic, social, governance, and physical environmental characteristics. Specifically, formerly redlined census tracts scored significantly lower on the DOHI that captures multiple determinants of health, compared with formerly yellow-, blue-, and greenlined census tracts. Furthermore, greenlined neighborhoods appear to have accrued larger relative benefits in terms of social determinants of health compared with, for example, census tracts that were scored predominantly yellow or blue.

Similar to opportunity indices commonly used in economic analyses,[28] the DOHI offers a measure for examining the geographic distribution of health opportunities. The patterns identified through this study suggest variations in the distribution of widely used determinants of health, some 80 years after the HOLC grading system was implemented. They are consistent with systemic

TABLE 3— Mean Characteristics of Census Tracts Categorized by Their Quintiles Ordered Low (Worse) to High (Better) Outcomes: Detroit Metropolitan Area, 2015–2019

DOHI Quintile	Median Income, $	Owner-Occupancy, %	Employed, %	High-School Education, %	Children Above Poverty Level,[a] %	Health Insurance Coverage, %	Commute <30 Min, %	Diesel $PM_{2.5}$ Exposure ($\mu g/m^3$)[b]
1 (lowest 20%)	24 483.70	33.14	78.84	72.76	37.26	87.52	47.42	9.77
2	39 108.44	54.96	89.86	85.35	64.87	92.70	55.97	9.62
3	56 810.68	67.27	94.11	90.31	83.90	95.07	61.77	9.49
4	75 619.83	80.58	96.34	94.04	94.21	96.74	66.62	9.34
5 (highest 20%)	120 118.20	93.55	98.11	97.90	99.27	98.45	76.32	9.12

Note. DOHI = determinants of health index; $PM_{2.5}$ = airborne particulate matter with a diameter of less than 2.5 micrometers; $\mu g/m^3$ = micrograms per cubic meter.

[a]According to the US Census.
[b]Lower values indicate lower diesel $PM_{2.5}$ exposure.

economic disinvestment of redlined neighborhoods and opportunity hoarding in areas historically categorized as green. While our study is among the first to compare redlining maps to contemporary determinants of health, findings reported here are consistent with previous studies that have established the consequences of these practices on health,[10,11] violence,[8] housing,[3] and environmental conditions.[9]

The use of a multidomain DOHI contributes to the growing body of literature examining the ways that structural racism, or racism embedded in public policy, is associated with access to resources that are essential for health. Our index draws on well-established determinants of health that have demonstrated links to health in Detroit[20,21,24,29] and reflecting those sufficiently established to be included in the US Department of Health and Human Services' 2030 Healthy People Objectives.[30] The DOHI used here offers a holistic assessment of various area-level characteristics and is the first to our knowledge to specifically examine their associations with HOLC grades in Detroit. Our findings are consistent with existing studies that demonstrate that HOLC grades are associated with the contemporary distribution of risk and opportunity and that those distributions are associated with racial inequities in health.[10,17,31]

Our findings suggest that each HOLC grade is associated with differences in access to critical determinants of health across multiple domains, with relative privilege in access to resources increasingly apparent with higher HOLC grades. While recent efforts by the city government are aiming to provide more employment opportunities, housing stability, and investment in neighborhoods, Detroit residents in many census tracts continue to experience high levels of housing instability, restricted educational opportunities, and excess exposure to environmental pollutants.[20,21,29]

Furthermore, our findings provide an example of the persistent effects of structural racism, or racist ideologies that are embedded in social policies. Neighborhoods with larger proportions of Black residents were more likely to be redlined; those neighborhoods remain disproportionately Black in contemporary Detroit. The contributions of those historical policies to differential patterns of investment, governance, and environmental exposures and to contemporary racial inequities in health offer one example of racism as a structural driver of health inequities.[17]

Limitations

There are several limitations in our data and analysis. First, the analyses presented here suggest associations between historical redlining scores and an index that sums multiple determinants of health. We report statistically significant differences between HOLC-graded neighborhoods and contemporary determinants of health, but are not able, based on this analysis, to infer causal mechanisms. There is, however, substantial evidence from other sources to suggest that HOLC grades did determine the extent and types of investment available to residents, resulting in systematic investment and disinvestment across neighborhood types.[4,5]

There is also substantial evidence, some of it longitudinal, to suggest that many, if not most, determinants of health used in our index are associated with differential health outcomes over time including, for example, studies establishing associations between childhood poverty and adult health,[32] household wealth and health,[33] and exposure to particulate matter and health.[20] Together, these bodies of research are consistent with an interpretation that living in areas that have experienced systematic disinvestment is associated with reduced access to resources needed to protect health throughout life, while residing in areas with accumulated resources across multiple domains is protective of health.

While it is unlikely that the HOLC scores singularly caused disinvestment in redlined neighborhoods or investment in greenlined neighborhoods, they did contribute to patterns of investment that shape access to important determinants of health. In our analysis, we controlled for percent change in White residents from 1970 to 2019. The 1970 US Census data were the earliest census we could obtain that had tracts mapped onto the 2010 census tracts, allowing for comparison over the years. Despite this limitation and given that a large proportion of population change occurred in the 1960s and is captured by the 1970 Census, we expect that the impacts of White population change across census tracts in the city before the 1970 Census would be fairly minimal.

Another limitation is that we did not account for the unequal investment in certain areas of the DMA that were formerly redlined but where recent investments have led to redevelopment attracting higher-income residents.[34] These areas tend to be in the Detroit downtown core, including the Midtown area, which has seen considerable population growth and economic development in recent decades.[34] There are conflicting views on gentrification in Detroit,[34,35] and this study did not account for this process. However, our findings are likely conservative if such changes have occurred, impacting the DOHI score, especially in formerly redlined

areas by furthering inequities between "nonhazardous" tracts compared with "hazardous" ones. Future studies should incorporate longitudinal socioeconomic changes into the analysis of redlining effects, particularly in areas that have seen significant recent economic development.

In this analysis, our focus was on determinants of health rather than health outcomes. While this may be considered a limitation by some, we argue that the important contribution made here is not in linking HOLC scores to health outcomes, as has been done by cited papers. Rather, our objective in this study was to examine associations between HOLC scores and the determinants of health that help to support the health of communities—that is, the conditions that make health possible. In doing so, we aimed to consider implications for the determinants of health as potential points for public health interventions toward the end of racial health equity. This analysis offers consideration for specific interventions that may help to interrupt the pathways linking historical patterns of disinvestment and opportunity hoarding and to consider those that may be most amenable to change as well as most impactful in improving health opportunities among residents whose contexts are currently less conducive to health.

Public Health Implications

Understanding the historical roots of contemporary health inequities is critical to inform current conversations about reparations needed—for example, in the form of explicitly focused reinvestment in housing, infrastructure (e.g., water systems), and greening—to reduce the adverse impacts of longstanding disinvestment, as well as the enactment of greater protections for residents whose economic well-being and health are placed at risk because of patterns of systematic disinvestment in predominantly Black Detroit neighborhoods. Our article highlights such inequities in addition to the discrimination in local policies that govern funding and resource allocation where a few neighborhoods, largely consisting of White residents, are benefiting more, resulting in better opportunities. Finally, our study demonstrates the need for reinvestment strategies that protect, sustain, and promote health with a particular focus on historically redlined communities. Such policies and practices must be implemented in a manner that understands the risks, as formerly redlined communities become more desirable, and include protections against displacement of current residents. AJPH

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All authors disclose no conflicts of interest.

HUMAN PARTICIPANT PROTECTION

This study used secondary data that are publicly available and, therefore, exempt.

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Structural Racism, the Social Determination of Health, and Health Inequities: The Intersecting Impacts of Housing and Mass Incarceration

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Public health researchers have directed increasing attention to structural racism and its implications for health equity. The conceptualization of racism as historically rooted in systems, structures, and institutions of US society has important implications for addressing social determinants of health (SDOH). It requires theorizing SDOH as embedded in and expressions of racially oppressive historical structures that are manifested in and maintained by policies, programs, and practices in multiple domains that dynamically intersect to reinforce and reproduce in new ways: race inequities in health.

We develop this argument using housing, a SDOH recognized as reflecting longstanding racist practices and policies that, among other things, have restricted the affordable housing options of Black people to segregated neighborhoods with limited resources. We argue that understanding and addressing the health inequities resulting from structural racism associated with housing requires simultaneously understanding and addressing how housing intersects with mass incarceration, another SDOH and manifestation of structural racism.

We suggest that unless these intersections are intentionally analyzed and confronted, efforts to address the impacts of housing on racial health disparities may produce new forms of health inequities. (*Am J Public Health*. 2023;113(S1):S58–S64. https://doi.org/10.2105/AJPH.2022.307116)

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Public health researchers are directing increasing attention to structural racism and its implications for advancing health equity. Structural racism is not a new concept. Twenty-five years ago, for example, Williams[1] presciently argued that race differences in health provide a measure of the consequences of our history of racist oppression. It is this history, and its ongoing manifestations, that the concept of structural racism seeks to capture.

Although varied, definitions direct attention beyond individual demonstrations of racism to focus on systemic racial exclusion from power and its consequences.[2] Racism is recognized as historically rooted in systems, structures, and institutions in multiple domains of US society and embedded in the policies, practices, programs, and operating logic producing and maintaining these domains, and the system of racial oppression more generally, at any given historical moment.[3]

This framing has important implications for conceptualizing and addressing the social determinants of health (SDOH). Bailey et al. argue that structural racism shapes "the distribution of the social determinants of health."[3(p1461)] But accounting for structural racism also requires moving beyond the distribution of these determinants. It suggests as well the importance of recognizing and theorizing about the determination of SDOH.[4] Not only are SDOH distributed differentially because of structural racism, they have different meanings and implications for Black people than for White people because they are determined by and represent a contemporary manifestation of this racism.

Also important to this conceptualization is understanding how these

processes operate and intersect across different domains, potentially reinforcing or challenging one another.[5] This framing has critical implications for promoting health equity, which we illustrate here by discussing examples of how housing intersects with mass incarceration—each recognized as SDOH determined by structural racism—in producing health inequities.

DETERMINATION OF HOUSING

Much recent attention has focused on analyzing housing as a SDOH in the United States, with a particular interest in the health consequences associated with the shortage of affordable housing and the cost burdens and instability it produces. In no state in the country will a minimum wage job affordably cover the rent of a 1-bedroom apartment.[6] Public housing and rental assistance are typically funded at levels that meet the needs of just 20% of those with eligible income.[7] This unmet need for affordable rental housing contributes to increasing the rates of homelessness and crowded and unstable housing arrangements, with well-documented health consequences.[8] Low-income renters who do find housing often experience significant cost burdens,[9,10] which are associated with many adverse health-related outcomes.[11–13] Housing instability—via evictions and other forced moves—is also associated with poor health outcomes.[14–17]

These experiences are not racially neutral; access to stable, affordable housing is distributed by race.[10] Twenty percent of Black households are extremely low-income renters, as compared with 6% of White households.[18] Furthermore, Black renters comprise a disproportionate share of those evicted.[19] The associated health outcomes are also distributed by race,[10] but situating affordable and stable housing in a structural racism framework directs attention beyond the distribution of these SDOH by race to the context that has produced this distribution: its determination. In this regard, the structural racism underlying residential segregation is critical.

Research documents that racial exclusion was essential to the project of suburban development in the late 19th and early 20th centuries,[20–22] including through racially restrictive deed covenants and the professionalization of realtors, whose standards influenced government policies and programs.[22,23] Although various government policies have contributed to residential segregation, New Deal housing policy is considered particularly significant.[24] To increase access to affordable housing for unemployed workers through the construction of public housing, the Public Works Administration was known to tear down existing housing to replace it with segregated projects, in some instances turning what were once racially integrated neighborhoods into segregated ones.[25]

Even after local authorities took over public housing construction, US Housing Authority guidelines required public housing to reflect the neighborhood racial composition and cautioned against integrating communities by constructing projects for White families in predominantly Black neighborhoods.[25,26] Racially restrictive covenants excluded Black people from the Federal Housing Administration (FHA)–backed opportunities. Additionally, FHA underwriting guidelines standardized the valuation of homes in terms of "neighborhood risk," signified in large part by neighborhood racial composition, a practice known as redlining.[24] Passage of the Fair Housing Act in 1968 made redlining illegal, opening the housing market to Black people but did so on "predatory and exploitative terms."[27(p18)] Previously excluded from homeownership because they were too "risky" to lend to, "risky" buyers became a source of profit in an era of FHA-insured home mortgages meant to encourage home ownership in predominantly Black neighborhoods.[27]

Situating housing in this structural racism framework highlights the importance of considering how both affordable housing and stable housing (which are SDOH) are distributed differently by race. It is also important to consider the context in which these SDOH occur because the context is shaped by structural racism and gives these SDOH different meanings for Black residents than for White residents. In the 1990s, for example, risky subprime loans were differentially marketed (distributed) to poor Black clients, who represented a unique niche for such loans because of residential segregation. However, residential segregation also structured the impact (meaning) of these loans, with Black and Hispanic neighborhoods bearing the brunt of the foreclosure crisis.[28] Similarly, even for low-income Black renters who do live in an affordable and decently maintained building, that building is more likely to be located in a high-poverty, racially segregated neighborhood[29] that is surrounded by abandoned housing,[30] more exposed to pollutants,[31] and further from grocery stores stocked with healthy foods[32] than the decent and affordable buildings lived in by their White counterparts. Also, homeownership does not represent the same path to wealth accumulation for Black owners as it has for White

owners,[33,34] nor does it bring them the same health advantages.[35]

DETERMINATION OF MASS INCARCERATION

Locating the affordable housing crisis in the racist history and interests that produced residential segregation has important implications for understanding and addressing health inequities. Also critical is another contemporary form of structural racism that has structured and given meaning to housing access and affordability and the context in which it occurs: mass incarceration. Comprising less than 5% of the world's population, the United States accounts for 20% of those incarcerated.[36] In any given year, more than 600 000 people enter US prisons and more than 10 million enter jails; about a quarter of them will be rearrested in the same year.[37] Many have not been convicted of a crime; they sit behind bars because they cannot afford the bail that would release them.[37] When released, many will join the more than 4.3 million people currently under probation or parole.[38] The consequences of arrest, incarceration, or community supervision will follow most throughout their lifetime because each leaves a (virtually permanent) public record that can be used to exclude them from resources critical for healthy living.[39] Further affected by mass incarceration are the nearly 113 million people, or 50% of adults, who have had a family member incarcerated for at least 1 year or the 6.5 million with an immediate family member currently incarcerated.[40]

These experiences with the criminal legal system are not racially neutral. Black people are incarcerated at almost 5 times the rate of White people[37]; and non-Hispanic Black people comprise 38% of those on parole and 30% of those on probation.[38] They are 50% more likely to have had a family member incarcerated and 3 times more likely to have had a family member incarcerated for more than a year.[40] Entry into the criminal legal system typically begins with a police encounter, not necessarily with a crime. When driving, Black drivers are more likely than are White drivers to be stopped, and when stopped, searched by police.[41] Black people are also more likely to be subject to "stop and frisk" policing practices.[42]

The disproportionate distribution of Black people under the scrutiny of the criminal legal system cannot be explained by race differences in the perpetration of crimes. Instead, consistent with a structural racism framing, it is the product of the history of racial oppression that mass incarceration signifies.[43] This history is embedded in policies and practices designed to preserve White privilege, including in the US Constitution, which, to reconcile slavery with founding principles of liberty and equality, defined a slave as "three-fifths of a man."[44–46] When the Thirteenth Amendment ended slavery, it did so with 1 exception: "as a punishment for crime." Southerners then worked to ensure that all expressions of Black freedom were prohibited, first through Black Codes, then via Jim Crow laws.[44,46] Policing practices took shape in this context, with police responsible for enforcing these laws.[46]

Scholars differently locate the emergence of the current form—mass incarceration—that this racist history takes (e.g., as part of the President Johnson administration's "war on poverty"[47] or the President Nixon administration's "war on drugs"[44]). What is abundantly clear, however, are its powerful impacts on life: whereas Black people of all socioeconomic backgrounds are subject to the suspicious gaze of those who assume their criminality, and many experience mass incarceration through their connection to incarcerated family members, these impacts are most profound in low-income, racially segregated urban neighborhoods.[48]

Mass incarceration is increasingly recognized as a SDOH in its own right,[49–51] operating at multiple levels[52,53] and among the formerly incarcerated,[49,50] their children and romantic partners,[54,55] and their communities.[56] Here, we highlight examples of how it intersects with housing, with subsequent implications for health equity.

HOUSING–MASS INCARCERATION INTERSECTION

One manifestation of mass incarceration is federal and state laws that have created a new category of citizens who—by virtue of their criminal record, especially when for a drug-related crime—do not have the rights or access to resources accorded other citizens. Access to affordable housing is among such rights they lose. Federal regulations require housing authorities to ban public housing or vouchers for at least 3 years for applicants who have been, or who have a household member who has been, evicted from federally assisted housing for a drug-related crime in the past 3 years. Federal regulations also require housing authorities to set standards prohibiting admission to or permitting eviction from households if a member is using drugs.[57] Although the regulations leave room for housing administrations' discretion in implementation, most local polices are more restrictive than

federal law requires.[58,59] Landlords, too, use criminal background checks in determining who to rent to.

Undoubtedly, these policies contribute to rates of homelessness among formerly incarcerated people that are nearly 10 times those among the general public.[60] When combined with policies that criminalize homelessness, they can create a "revolving door" between incarceration and the community[60,61] that can exacerbate any existing, and may provoke new, health problems as people move through this door.[62] These policies also create communities in which the systematic exclusion of some members from access to affordable housing shapes the meaning of having such access for others. In this context, it can be difficult to develop and maintain long-term stable relationships and the health benefits they can bring.[63] Relatedly, residents who seek to fill housing gaps exacerbated by criminal legal policies by providing a place for friends, family, or acquaintances to stay put their own health and housing in jeopardy.[64] They risk eviction or losing a voucher if a guest has a warrant against them or brings drugs or attention from the police or landlords—or just because strict housing policies prohibit guests from staying for more than 14 days.[58]

Mass incarceration also intersects with housing to further shape life in racially segregated, low-income neighborhoods through harsh policing tactics and heavy surveillance that have become increasingly part of the daily lives of residents.[65] When implemented in neighborhoods where a legacy of structural racism has segregated low-income Black people with limited access to housing and where there is heavy police surveillance, policies that define drug crimes as deserving stricter penalties than other crimes virtually ensure that residents will be noticed gathering on street corners. Suspicious police officers will assume they are and sometimes may find them selling drugs[66] even as their White counterparts, who self-report equivalent rates of drug selling,[67] conduct their business unobserved behind the locked doors of their homes. Highly surveilled contexts can also lead to housing instability for those returning from prison or jail who, to ensure that their residences comply with strict parole and probation stipulations, avoid otherwise stable situations for more precarious ones.[68,69]

This same heavy police presence in combination with assumptions of Black criminality can turn everyday items, such as cell phones and toys, into "dangerous objects," justifying the killing of their owners. Even witnessing these forms of policing affect the health of community residents.[70,71] A home in some contexts may provide a place to escape from external stressors (i.e., provide ontological security), which Padgett[72] theorizes is a central mechanism through which housing can benefit health. However, the homes of those living in racially segregated, heavily policed spaces are subject to surveillance and even raiding by police, child welfare services, and probation or parole officers—diminishing any sense of security and further jeopardizing stability, health, and well-being.[68,73,74]

As housing gains increasing attention as a SDOH and expanding access to affordable housing a strategy for promoting health equity,[75] it is critical to account not only for the implications of a structural racism framework for understanding the determination of this SDOH but also for how housing intersects with mass incarceration—another SDOH and manifestation of structural racism. Otherwise, our efforts run the risk of exacerbating, if not creating new forms of, health inequities.

As an example, consider "evidence-based" calls that promote tenant based–housing voucher programs to improve health but do not address the exclusion from these programs of those with criminal records.[75] These programs may extend access to safe, stable, and affordable housing and the health benefits that accompany it, but for whom and with what implications for those who remain excluded? At minimum, criminal records should not determine access to housing, or any other rights and benefits of citizens. Still, if criminal records no longer dictate housing access, will potential health benefits be fully realized if the neighborhoods in which housing is located continue to be racially segregated and oversurveilled? As decision makers contemplate policies to expand access to affordable housing, it is critical to recognize and consciously ask how that access is given meaning by a context where structural racism has produced residential segregation as well as mass incarceration and how best to challenge the structural racism at their cores. Also critical are solutions that enhance the ability of residents themselves to do the challenging.

CONCLUSIONS

We conclude with 2 thoughts. First, in keeping with the special issue theme, "structural racism and public health," we have focused on structural racism, but we acknowledge that it simultaneously intersects with systems of gender and class oppression. Promoting health equity also requires intentionally recognizing and addressing these forms of oppression. Second, in a dynamic and

complex conceptualization that recognizes the historically rooted and currently manifesting structures of oppression undergirding different policy domains that have produced health inequities, it is difficult to anticipate all the impacts of efforts to address them—often referred to as "unintended consequences." The stronger our theory and methods are in understanding and analyzing the oppressive systems and structures at the heart of SDOH, and the more intentional our efforts to recognize and challenge these systems of oppression (and the new forms they will take if unchallenged), the better we will be at advancing health equity. AJPH

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Incorporating Structural Racism, Employment Discrimination, and Economic Inequities in the Social Determinants of Health Framework to Understand Agricultural Worker Health Inequities

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In 2010, the federal government and several state governments began using the social determinants of health (SDOH) framework to highlight contributing factors of health inequities and, in 2022, recognized that structural racism was associated with health inequities. Yet, efforts to eliminate health inequities have disproportionately focused on individualized solutions instead of addressing structural racism.

Many racial/ethnic-minority workers have been segregated to low-wage occupations that lack access to paid sick leave, such as agricultural work, which has been associated with health inequities. Research shows these inequities are attributable to structural racism enforced through laws that structure the employment system to disadvantage agricultural workers, who are disproportionately racial/ethnic-minority individuals, which will not be addressed with individualized solutions.

In this article, we explain why the current SDOH framework and efforts to eliminate health inequities are inadequate, discuss Yearby's revised SDOH framework that includes structural racism as one of the root causes of health inequities, and illustrate how Yearby's revised SDOH framework better captures the impact of structural racism, which is associated with health inequities for agricultural workers. (*Am J Public Health*. 2023;113(S1):S65–S71. https://doi.org/10.2105/AJPH.2022.307166)

Since the formation of the United States to the present day, structural racism has limited agricultural workers' employment opportunities as well as their economic conditions.[1,2] Specifically, laws enacted at federal and state levels have limited racial/ethnic-minority individuals' employment opportunities, leaving them relegated to low-wage jobs, such as agricultural work, compared with White workers.[1,2] Compounding this inequality, federal and state laws limit agricultural workers' union rights, pay, and benefits compared with the rights provided to White workers.[1,2] These differential conditions caused by structural racism and laws that codified economic inequities have been associated with health inequities in physical and mental health for agricultural workers.[3,4]

GAPS IN THE CURRENT SOCIAL DETERMINANTS OF HEALTH FRAMEWORK

The current and most widely used social determinants of health (SDOH) framework includes 5 key areas of social and economic conditions—economic stability, education access and quality, health care access and quality, neighborhood and built

environment, and social and community context—that are considered the main factors determining individuals' ability to achieve their full health potential. However, the current framework fails to show racism as a root cause of inequality as well as differences in social and economic conditions between White individuals and racial/ethnic-minority individuals.

Healthy People 2030 includes this SDOH framework and acknowledges structural racism as a key factor in health inequities. Healthy People 2030 also provides overarching goals to eliminate health inequities associated with employment or economic conditions that are centered around reducing the proportion of people living in poverty and increasing employment in working-age people.[5]

However, neither the SDOH framework nor Healthy People 2030 provide recommendations for eliminating structural racism, which is a root cause of health inequities among Black, Indigenous, Asian, and other people of color.[6–11] Thus, the goal of the present essay is to provide evidence on how structural racism, codified by employment laws and manifested by economic inequities, fuels health inequities among racial/ethnic-minority individuals. By applying Yearby's revised framework to agricultural workers, we demonstrate how structural racism is illustrated by the limited employment opportunities and poor economic conditions that results in health inequities for this group.[6]

STRUCTURAL RACISM AS A DRIVER OF HEALTH INEQUITIES

Williams et al. define racism as

> an organized social system in which the dominant racial group, based on an ideology of inferiority, categorizes and ranks people into social groups called "races" and uses its power to devalue, disempower, and differentially allocate valued societal resources and opportunities to groups defined as inferior.[12(p106)]

Jones notes how the social system of racism determines how opportunity is structured, which unfairly disadvantages some racial/ethnic-minority individuals and communities, unfairly advantages White individuals and communities, and saps the strength of the whole society through the waste of human resources.[13] Freeman notes that "law serves largely to legitimize the existing social structure" of racism by focusing exclusively on trying to neutralize the inappropriate conduct of an individual or institutional perpetrator, which legitimizes the existing social structures built to limit racial/ethnic-minority individuals' equal access to education, employment, housing, and health care.[14(p1051)]

Building on this work, we define structural racism as both the limitation of racial/ethnic-minority individuals' employment opportunities and the way social and economic conditions are organized to advantage White individuals and disadvantage racial/ethnic-minority individuals.[6] Law—including political processes, statutes, regulations, policies, guidance, advisory opinions, cases, and budgetary decisions, as well as the process of enforcing or failure to enforce the law—is one of the tools used to limit racial/ethnic-minority individuals' employment opportunities as well as to organize social and economic conditions in a racially discriminatory way, which has been associated with health inequities.[6,8–11]

INCORPORATING STRUCTURAL RACISM INTO THE FRAMEWORK

Numerous scholars have already proposed methodologies and models to include structural racism as a key factor in health inequities. Ford and Airhihenbuwa created the Public Health Critical Race Praxis methodology, which noted that structural determinism and racial categories are the bases for ordering society, which contributes to racial health inequities.[15] Williams et al. created a model, entitled "the house that racism built," showing how multiple forms of racism can affect health.[16] Yearby's revised SDOH framework[6] builds on these models.

In revising the SDOH framework[6] to incorporate structural racism, Yearby shows how structural racism and employment laws create differential social and economic conditions between White and racial/ethnic-minority individuals, which are associated with health inequities. We used Yearby's revised framework in this essay to illustrate how structural racism is evident via the limitation on agricultural workers' employment opportunities, which, in turn, creates poor economic conditions for agricultural workers. The combination of limited opportunities and poor economic conditions interact to create conditions that lead to health inequities. Laws that have been enacted to limit agricultural workers' employment opportunities and economic conditions are discussed here and listed in Box 1.

AGRICULTURAL WORKERS' INEQUALITY OF OPPORTUNITY

Agricultural workers are essential because they are human beings who

BOX 1— Laws Impacting Equality Rights, Protected Union Activities, Pay, and Paid Sick Leave for Agricultural Workers: United States, 1865–2021

Law	Coverage and Exclusions	Effective Date
Black Code Laws[a]	State laws that restricted Black Americans to working in agricultural or domestic service	1865–1950
13th Amendment[b]	Allows for slavery as a punishment for a crime Breaking Black Code Laws was a crime punishable by enslavement	1865–present
National Labor Relations Act[c]	Guarantees the right of employees to organize and bargain collectively with their employers Provides union activities of employees Excludes all agricultural workers[d]	1935–present
Fair Labor Standards Act (FLSA)[e]	Establishes 40-hour work week, overtime pay, and minimum wage requirements and prohibited child labor Excludes all agriculture workers until the 1966 amendment to the FLSA[f]	1938–present
Migrant and Seasonal Agricultural Worker Protection Act[g]	Provides employment standards related to migrant and seasonal agricultural workers (i.e. wages, housing, transportation, disclosures, and recordkeeping) Does not provide the right to organize or bargain collectively with their employers[h]	1983–present
Personal Responsibility and Work Opportunity Reconciliation Act[i]	Establishes comprehensive restrictions on the eligibility of noncitizens for federal public benefits; these restrictions applied to the majority of nonnaturalized (i.e., non-US citizen) foreign-born persons, including lawful permanent residents (also known as green card holders), asylees and refugees, nonimmigrants, and unauthorized immigrants[j]	1996–present
Coronavirus Aid, Relief, and Economic Security Act[k]	Established limitations (an amendment to the Families First Coronavirus Response Act) on emergency paid sick leave employer payment requirements Does not include noncitizens because it requires US work authorization[l]	Apr–Dec 2020 (required) Extended to Sep 2021 (voluntary)

[a]The Black Codes and Jim Crow Laws, https://education.nationalgeographic.org/resource/black-codes-and-jim-crow-laws. Accessed November 19, 2022.
[b]US Constitution Amendment XIII, Sec. 1.
[c]29 USC §§151–169.
[d]29 USC §§151–169, Title 29, Chapter 7, Subchapter II, §152(3).
[e]29 USC §201, et seq.
[f]29 USC §213(a)(6)(A)-(E) and Pub L No. 89–60, Title I, Sec. 103(a)3(e).
[g]29 USC §1801, et seq.
[h]29 USC §1801, Sec. 4(a)(1)-(3).
[i]Pub L No. 104–193.
[j]Pub L No. 104–193, Title IV.
[k]Pub L No. 116–136.
[l]Pub L No. 116–136, Title III, Part IV, Subtitle C, Sec. 3602(f)(1)-(2).

plant, pick, process, and pack food for shipment and consumption, which ensures that Americans have access to food, including fresh produce. Throughout the history of the United States, the government has used law to limit racial/ethnic-minority individuals' employment opportunities, including limiting their ability to work in jobs beyond certain industries. From 1787 until 1865, some White individuals enslaved Black and Indigenous individuals, forcing slaves to do agriculture and domestic work for free.

After the end of slavery, a majority of agricultural workers in the South were Black Americans because many states passed "Black Code" laws prohibiting Black Americans from working in any occupation other than agricultural or domestic service.[1] Solomon et al. note, "if [Black Americans] broke these laws or abandoned their jobs after signing a labor contract, they could be arrested," imprisoned, and forced back into unpaid servitude on White plantations because the 13th Amendment allows for slavery as punishment for a crime.[1] In addition, several laws were passed that prevented Black Americans from migrating to northern states. As a consequence, in the 1930s, approximately 65% of all Black workers in the South were employed as domestic or agricultural workers, while a majority of the agricultural workers in the North and West were White Americans, who were free to work in any industry.[17] Between 1950 and 1990, the agricultural system in the South changed as a result of technological advancements, which reduced the need for agricultural workers. These advancements allowed many Black agricultural workers to shift to other occupations and to also leave the South.

Currently, agricultural workers are largely employed in Western states, including California, Arizona, and

Washington.[4,18] Today, agricultural workers in the United States include (1) hired workers and (2) self-employed farm operators and their family members. This article focuses on hired agricultural workers, which includes hired farmworkers that are employed in a variety of occupations—from field crop, nursery, and livestock workers to graders and sorters, agricultural inspectors, supervisors, and hired farm managers.[18] Now a large percentage of hired agricultural workers are foreign-born individuals from Mexico and Central America. For the fiscal year 2017–2018, 77% of all agricultural workers were Latino and 64%, 32%, and 3% of all agricultural workers were born in Mexico, the United States (including Puerto Rico), and Central America, respectively.[19] Agricultural work is one industry in which the federal government and several state governments allow non–US citizens to work legally in the United States under a H-2A visa, but permits employers to pay these workers less than US citizen workers.

The percentage of hired crop farmworkers who are not US citizens has greatly increased—growing from 14% in 1989–1991 to 55% in 1999–2001 and stabilizing slightly under 50% in recent years. Between 2005 and 2020, the number of H-2A visas requested and approved for agricultural workers increased more than fivefold—from approximately 48 000 to more than 275 000 positions. In 2020, the average hourly rate for nonsupervisory workers was $14.64, but this rate is not what is typically paid to most racial/ethnic-minority agricultural workers.[18] Some agricultural workers, including racial/ethnic-minority workers with H-2A visas, are paid an adverse effect wage rate, which, on average, can be as low as $11.71 per hour.[2] Because of increased demand and scarcity of agricultural labor in the United States, many of the agricultural positions are held by H-2A workers whose pay is lower than that of US citizen workers who must be paid minimum wage.[2] As Holmes notes, laws, such as California's Proposition 187, make it legal for farmers to pay non–US citizen agricultural workers only enough for daily survival.[20] In addition, Title IV of the Personal Responsibility and Work Opportunity Reconciliation Act of 1996 prohibits the majority of non–US citizens—including lawful permanent residents, asylees and refugees, nonimmigrants, and unauthorized immigrants—from receiving federal public benefits, such as Medicaid and the Supplemental Nutrition Assistance Program.[21] As a consequence, almost a third of agricultural workers have incomes below the poverty level as defined by the US Department of Labor.[4]

Historical and modern-day structural racism, enforced through laws, limits racial/ethnic-minority individuals' employment opportunities by restricting their ability to travel, attain jobs outside of low-wage industries like agriculture, and access public benefits. Specifically, historical structural racism limited Black Americans' equality rights by forcing them to stay in the South and work in agricultural or domestic work, while modern-day structural racism limits non–US citizen agricultural workers' pay and access to public benefits. Each of these restrictions interacts to leave many agricultural workers, who are predominately racial/ethnic minority individuals, in poverty and unable to attain high-wage jobs.

AGRICULTURAL WORKERS' ECONOMIC CONDITIONS

During the Jim Crow era (1875–1964), many of the federal laws passed to protect and support workers did not cover agriculture workers or other occupations that were predominantly filled by racial/ethnic-minority individuals. For example, in 1935, the Social Security Act was passed providing old-age, survivor's, and disability insurance to workers and their families, yet it excluded agricultural, domestic, and service workers, who were predominantly racial/ethnic-minority individuals.[22] In 1950, amendments to the Social Security Act provided coverage to most agricultural workers and domestic workers, yet many Jim Crow–era laws remain in effect that limit agricultural workers' access to equal pay and paid sick leave.[22]

The National Labor Relations Act of 1935 (NLRA) expanded collective bargaining protections for White workers, allowing them to join unions, which resulted in their higher wages and benefits, such as paid sick leave.[23] The NLRA did not apply to domestic or agricultural workers, who were predominately racial/ethnic-minority individuals, and the government allowed unions to not represent racial/ethnic-minority workers employed in other industries, such as manufacturing.[1] Workers covered by the NLRA who join unions are protected from being fired or punished for collective bargaining activities, such as negotiating for raises or benefits. In 1983, the Migrant Seasonal Agricultural Worker Protection Act was passed, which provided some protections for "migrant and seasonal agricultural workers by establishing employment standards related to wages, housing, transportation, disclosures, and recordkeeping."[24]

For instance, it requires that employers must disclose the terms of employment at the time of recruitment and comply with those terms. However, it did not make the NLRA applicable to

agricultural workers. Although agricultural workers are not prohibited from creating unions, farmers do not have to negotiate with the union when bargaining for wages and benefits. Farmers can also fire workers who form unions without consequence, which is not allowed in industries covered by the NLRA. Therefore, many of these workers still do not have high wages or paid sick leave.

The Fair Labor Standards Act of 1938 (FLSA) also explicitly exempted agricultural occupations.[1] The FLSA limits the workweek to 40 hours and establishes federal minimum wage and overtime requirements.[25] It also requires employers to keep records of the payroll. In 1966, the minimum wage requirements of the FLSA were applied to agricultural workers, but many workers are still not paid minimum wage. If farmers did not utilize more than 500 man days (any day in which an employee performs agricultural work for at least 1 hour) of agricultural labor in any quarter in the previous calendar year, then the FLSA does not apply to any of the hired workers for the entire year.[25]

Moreover, the FLSA minimum wage requirements do not apply to "local hand harvest laborers who commute daily from their permanent residence, are paid on a piece rate basis in traditionally piece-rated occupations, and were engaged in agricultural less than thirteen weeks during the preceding calendar year."[26] Eighty percent of hired crop workers who hand harvest live in one place, commute daily, and work at a single location within 75 miles of their home. Hence, these workers are not paid minimum wage because the FLSA does not apply to them. In addition, the FLSA requirement for overtime pay does not apply to agricultural workers. Newer laws also limit agricultural workers' economic conditions.

During COVID-19, the federal government enacted several COVID-19 economic relief bills that provided federal public funds. The Coronavirus Aid, Relief, and Economic Security Act of 2020 (CARES Act) provided unemployment benefits and provided direct payments to individuals through refundable tax credits.[27] These benefits provided workers with federal financial assistance; however, they were not available to non–US citizens, especially undocumented workers. Because roughly 50% of agricultural workers are not US citizens, including H-2A visa workers, the expanded employment benefits provided by the CARES Act did not cover them.[28]

Historical and modern-day structural racism, enforced through laws, limits the economic conditions of agricultural workers, who are predominately racial/ethnic-minority individuals. Employment laws not only advantage White workers, including farm managers, inspectors, and supervisors, as well as those working in other industries, by giving them union rights that boosted their wages, but they also advantage farmers who are predominantly White by limiting their employee costs.[1] However, racial/ethnic-minority agricultural workers remain in poverty because they do not receive union rights, minimum wage, overtime pay, or paid sick leave. Compounded by the laws that limit agricultural workers' opportunities, each of these employment restrictions interacts to leave many agricultural workers in poor economic conditions, which has been associated with health inequities.

AGRICULTURAL WORKERS' HEALTH INEQUITIES

Agricultural workers suffer from a host of health inequities compared with other workers, including diabetes, respiratory disease, and heart disease. In this article, we focus on mental health and pandemic health inequities, because these have been tied to employment conditions in the literature. There is an increasing global concern for the mental health of agricultural workers as national and international studies have linked key risk factors to negative mental health outcomes for agricultural workers, including employment conditions, pesticide exposure, financial difficulties, climate variabilities and drought, poor physical health, and past injuries.[29]

In the United States, psychosocial stressors such as rigid work demands, poor housing conditions, low family income, and living in poverty have been significantly associated with anxiety and depression for Mexican migrant farmworkers.[3] Other significant stressor categories specific to migrant farmworkers that have also been associated with anxiety and depression are social isolation and hazardous, poor, and stressful working conditions.[30] As pay concerns for these workers go unaddressed, the mental health and livelihood of these workers continue to be jeopardized.

Several research studies provided evidence that lack of equality and poor economic conditions were associated with higher rates of H1N1 infections, hospitalizations, and deaths for racial/ethnic-minority workers across the United States.[31,32] These studies, which included national surveys, showed that racial/ethnic-minority individuals were unable to practice social distancing or stay at home during the H1N1 pandemic because they did not have the freedom to work at home and lacked paid sick leave.[31,32] In fact, Quinn et al. found that a majority of Spanish-speaking Latino workers (63.1%) did

not have paid sick leave, compared with 23.2% of Black workers, 26.1% of White workers, and 33.3% of English-speaking Latino workers.[31] The study also found that 73.1% of Spanish-speaking Latino workers were only able to do their job in the workplace, compared with 34.3% of Black workers, 45.4% of White workers, and 47.3% of English-speaking Latino workers. As a result, Spanish-speaking Latino workers had an increased exposure to H1N1 within the workplace that was associated with higher rates of infections, hospitalizations, and deaths.[31]

This association between employment factors and H1N1 infections was supported by a study that tracked self-reported influenza-like symptoms during the 2009 H1N1 pandemic. The researchers found that there was a higher incidence of self-reported influenza-like illness for those who lacked paid sick leave or could only do their job in the workplace. Of those surveyed, Latino individuals were more likely to lack paid sick leave (40.5%) or could only do their job in the workplace (56.8%), compared with White workers (22.4% and 40.4%) and Black workers (22.0% and 26.2%).[32]

A study conducted by Schoch-Spana et al. showed that Latino farmworkers were also at risk for increased exposure to H1N1 because many of them did not have paid sick leave and could only do their job in the workplace.[4] Furthermore, even if the workers were sick, they could not afford to lose the wages or jeopardize their jobs by not showing up to work. These inequities in H1N1 infections, hospitalizations, and deaths were particularly notable because Latino individuals traditionally have lower mortality rates than White individuals. In fact, from 2009 to 2013, Latino individuals had a "24% lower all cause death rate and lower death rates for nine of the 15 leading causes of deaths" compared with White individuals.[33(p470)] These inequities in infections have persisted during the COVID-19 pandemic.

Although COVID-19 data disaggregated by occupation are limited, the available data and news stories show that there are agricultural worker health inequities in COVID-19 infections. For instance, in May 2020, all 200 workers on 1 farm in Tennessee were infected with COVID-19, while Yakima County, Washington—a key agricultural area—"had the highest rate per capita infection rate of any county on the West Coast."[34] In addition, there was one study that highlighted agricultural workers' heightened COVID-19 risks. The study estimated that in the first 13 months of the COVID-19 pandemic, cumulative rates (deaths) were 170 137 (2969), 202 902 (3812), and 27 223 (459) among hired agricultural workers, unpaid agricultural workers, and migrant agricultural workers, respectively.[35] Counties with more agricultural workers had significantly higher COVID-19 cases and death incidence rates.[35] Many employment factors have been associated with these inequities in COVID-19 infections, including lack of paid sick leave and gaps in health and safety protections for workers.

CONCLUSIONS

As illustrated by the conditions of agricultural workers, racial/ethnic-minority workers disproportionately tend to be employed in low-wage jobs that do not provide minimum wage, overtime pay, collective bargaining rights, or paid sick leave. As a result, many racial/ethnic-minority workers remain in poverty, which has been associated with poor physical and mental health outcomes. These problems are not captured in the current SDOH framework and cannot be fixed by using the individualized worker training programs suggested in Healthy People 2030. To eliminate health inequities, the government must aggressively work to end structural racism perpetuated by employment laws and economic inequities as discussed here. Yearby's revised SDOH framework as applied to agricultural workers provides a clear model for government officials to understand the connection among structural racism, employment law, the SDOH, and health inequities. AJPH

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Strategies for Naming and Addressing Structural Racism in Immigrant Mental Health

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See also Young and Crookes, p. S16.

Immigrants account for 13.7% of the US population, and the great majority of these individuals originate from Latin America or Asia. Immigrant communities experience striking inequities in mental health care, particularly lower rates of mental health service use despite significant stressors. Structural barriers are a significant deterrent to obtaining needed care and are often rooted in racist policies and assumptions.

Here we review and summarize key pathways by which underlying structural racism contributes to disparities in immigrant mental health, including anti-immigration policies, labor and financial exploitation, and culturally insensitive mental health services. Significant accumulated research evidence regarding these barriers has failed to translate into structural reform and financial investment required to address them, resulting in pronounced costs to both immigrant populations and society at large.

We propose specific strategies for addressing relevant structural inequities, including reforming economic and financial policies, community education initiatives, and task-sharing and strengths-based interventions developed in partnership with immigrant communities to promote access to mental health care for populations in dire need of culturally appropriate services. (*Am J Public Health.* 2023;113(S1): S72–S79. https://doi.org/10.2105/AJPH.2022.307165)

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There are 45 million immigrants in the United States, defined here as any foreign-born individuals living in this country. Representing 13.7% of the population, this group accounts for the largest number of immigrants in any country worldwide.[1] When immigrants and their immediate family members are considered together, their share of the total population increases to nearly 30%.[2] In light of these statistics, it is clear that improving immigrant health is critical for improving the country's overall health.

The vast majority of US immigrants originate from either Latin America and the Caribbean (51%) or Asia (31%).[3] On arrival to the United States, most immigrants are subject to racialization processes that result in the ascription of a racialized minority identity (e.g., Latina/x/o[4] or Asian) by society and the subsequent gradual internalization of that identity.[2] Although the assignment of individuals from diverse ethnic and cultural backgrounds to racial monoliths on the basis of an external phenotype is scientifically unjustified,[2] it substantially shapes the immigrant experience through socially mediated race-based discrimination and associated adverse mental health outcomes.[5,6]

Latina/Latinx/Latino (Latina/x/o) and Asian immigrants are subject to not only interpersonal racism but also structural racism, here defined as "the totality of ways in which societies foster [race-based] discrimination via mutually reinforcing systems (e.g., in housing, education, employment, earnings, benefits, credit, media, health care, criminal justice, etc.)."[7(p650)] These embedded forms of structural discrimination become interwoven with underlying legal, economic, and cultural norms, reinforcing exclusionary beliefs, attitudes, and actions against racialized minorities.[6,7]

Much of the research on immigrant mental health has focused on characteristics of these populations that might limit their usage of mental health services, especially stigma and culturally influenced illness beliefs.[8] Although these factors are important targets for intervention, it is also critical to name and address the impact of

systemic and interpersonal race-based discrimination on poor mental health outcomes. A framework recognizing the fundamental role of both structural and interpersonal racism could help explain several observations regarding immigrant mental health outcomes and service use, including (1) the immigrant health paradox, in which immigrants often enjoy better health than their US-born counterparts, perhaps as a result of less exposure to racism and racist structures; and (2) a higher risk of depression and anxiety among certain immigrants than among their nonimmigrant counterparts.[9]

Recognizing the utility of considering factors beyond stigma and cultural beliefs, a growing body of research has attempted to elucidate the mechanisms by which interpersonal racism, xenophobia, and social disenfranchisement are internalized and negatively affect the mental health of marginalized communities,[10] including immigrants.[6,11] To build on these efforts, it is essential to characterize and address the role of institutionalized and structural racism in contributing to negative mental health outcomes and hindering access to appropriate mental health services.

Given the significant representation of Latina/x/o and Asian immigrants within the US immigrant population and their unique and shared experiences as racialized immigrant groups, an examination of the literature on these populations can yield valuable insight into the effects of structural racism on immigrant mental health. Evidence suggests that, relative to US-born White individuals, Asian and Latina/x/o immigrants experience higher rates of race-based discrimination across multiple institutional domains, including health care, housing, employment, and law enforcement.[2,12,13]

In their recent incisive article, Misra et al. proposed a range of mechanisms through which structural racism affects immigrants' overall health.[2] Here we build on these scholars' work by reviewing and summarizing 3 major pathways by which structural racism contributes specifically to inequities in immigrant mental health outcomes and access to care: (1) anti-immigration policies, (2) labor exploitation and financial disinvestment, and (3) culturally insensitive mental health services. We then propose strategies to develop and implement structural reforms to address these shortcomings, ameliorate stressors directly contributing to poor mental health outcomes, and improve mental health access and engagement among immigrant populations.

Although we focus on the 2 largest immigrant groups—Latina/x/o and Asian—many of the pathways and strategies explored here apply, with important nuances and variations, to other immigrant subpopulations such as immigrants from the Middle East and Africa.[2] In addition, important nuances and variations exist within and between Latina/x/o and Asian immigrant groups including national origin, reasons for immigration, religious influences, and availability of support networks (among other intersectional factors, many of which are not explicitly addressed here). Despite these limitations, and as long as disaggregated data remain scarce, considering Latina/x/o and Asian immigrants as we do in this analysis remains a useful framework to begin naming and addressing structural racism in immigrant mental health.

ANTI-IMMIGRATION POLICIES

Citizenship and immigration status are legal identifiers that ultimately determine to whom immigration policies apply. Citizen immigrants are foreign-born naturalized citizens, and noncitizen immigrants are all other foreign-born individuals, including individuals residing permanently in the United States (e.g., legal permanent residents, refugees), those temporarily residing in the country (e.g., for employment or education), and those in the country without legal authorization (e.g., undocumented immigrants).

Federal policies broadly regulate citizenship and immigration status and dictate the allocation of resources to subsidize state-level coverage of immigrant populations.[2] The Personal Responsibility and Work Opportunity Reconciliation Act of 1996 introduced restrictions on the eligibility of noncitizens for federal public benefit programs, including Medicaid. Although reforms since then have tended to expand coverage for immigrant populations, recent history is not without anti-immigration policies at the federal level. A prominent recent example is the now-revoked 2019 Public Charge Rule implemented by the Trump administration, which qualified lawful receipt of Medicaid, public housing, or Supplemental Nutrition Assistance Program benefits as a potential reason for inadmissibility for permanent legal residency.

Within the constraints set by federal guidelines, policies at the state level ultimately determine access to social services and benefits, including health insurance, government identification, and higher education. Exclusionary immigration policies at the state level are

perhaps best represented by omnibus immigration laws, or bills that (unlike single immigration laws) intend to regulate immigration through 3 or more provisions, such as requiring law enforcement to verify immigration status during a lawful stop ("show me your papers" laws), penalizing the employment of undocumented immigrants, and limiting immigrants' access to social services.[14]

As a result of between-state variability, more data are available at the state than the federal level specifically associating anti-immigrant legislative climates with worse mental health outcomes. A systematic review conducted by Martinez et al.[15] revealed that undocumented immigrants living in states with anti-immigration health policies—defined as policies granting no or minimum rights to access health services—exhibit consistently higher rates of depression, anxiety, and posttraumatic stress disorder. Furthermore, omnibus immigration laws have specifically been linked to poorer mental health outcomes among Latina/o/x immigrants, irrespective of documentation status.[14,16]

By contrast, changes in policies aimed at protecting certain immigrant subpopulations, such as the Deferred Action for Childhood Arrivals (DACA) program, have been associated with significantly fewer gaps in health care engagement and lower odds of depression among Latina/x/o and Asian beneficiaries relative to their noneligible undocumented counterparts.[5] DACA helped to improve mental health outcomes among recipients while increasing the gross domestic product by an estimated 0.02%.[17] Although the DACA program benefits a specific subset of the immigrant population—limiting the generalizability of these findings to the broader Latina/x/o and Asian immigrant community—the program's positive impact on the mental health of its beneficiaries and the US economy helps illustrate the potential effects of more inclusive, immigrant-friendly policies at a broader population level.

Systemic racism encoded in federal and state-level immigration policies seems to affect mental health through at least 2 general pathways. First, policies limiting the eligibility of noncitizens for public health insurance programs have a negative impact on mental health by restricting access to care. Noncitizens are less likely than their US-born and naturalized citizen counterparts to possess health insurance.[18] Lack of insurance is, in turn, associated with decreased mental health service use among immigrants.[19,20] Currently, segments of the documented noncitizen population may qualify for Medicaid and the Children's Health Insurance Program, but most are significantly restricted by eligibility criteria, including a 5-year waiting period.

Furthermore, undocumented immigrants and DACA recipients are not eligible for federally funded Medicaid benefits and are barred from purchasing insurance through the Affordable Care Act marketplace. Thus, these individuals must often rely on emergency Medicaid services, which include only those psychiatric services necessary to protect life or safety.[19] Reliance on emergency funds to address the health needs of undocumented immigrants, including mental health needs, has been postulated to lead to the forgoing of necessary care and higher long-term health care spending.[18]

Second, anti-immigration policies can enable and legitimize stressors that contribute to adverse mental health outcomes. For example, among Latina/x/o immigrants, along with limiting access to care through reductions in health insurance coverage and job opportunities, omnibus immigration laws contribute to increased fears of deportation, perceived discrimination, and feelings of lack of safety.[14] Although further research is needed, "show me your papers" provisions of omnibus immigration laws, by increasing stressors such as racial profiling during police stops, appear to exert a more significant effect on mental health among Latina/o/x immigrants than provisions that more directly limit access to care.[14]

ECONOMIC DISINVESTMENT AND EXPLOITATION

In 2020, immigrants made up 17% of the total US workforce and disproportionately occupied sectors designated as "essential" during the COVID-19 pandemic.[21] Latina/o/x individuals account for nearly half of the foreign-born labor force, whereas Asians make up about one quarter.[21] Despite their labor contributions, immigrants continue to face structural racism in the form of labor exploitation.[2] Here we argue that this form of economic disinvestment in the immigrant population has important effects on immigrants' mental health outcomes and access to care.

In part because of constrained job opportunities resulting from their immigration status, immigrant workers are disproportionately employed in the most dangerous industries and are often exposed to chemical and physical hazards.[22] Inadequate labor protection and ineffective pathways for demanding recourse force immigrants to continue working under unsafe conditions, likely placing them at higher risk for sustaining work-related injuries than their US-born counterparts.[2,22] In addition,

these same systemic vulnerabilities help facilitate asymmetric interpersonal dynamics in the workplace, leading to experiences of violence, discrimination, abuse, and harassment.[22]

These hazardous working conditions and work-related stressors are associated with poor mental health outcomes among Latina/x/o and Asian immigrants, including elevated rates of depression, psychological distress, and substance misuse.[22] Diminished access to employment-based private health insurance[19] and increased difficulty in accessing health care facilities because of long working hours and remote job locations[22] illustrate the negative consequences of economic disinvestment beyond mental health outcomes and into immigrants' access to mental health care.

Although laws have been enacted specifically to protect immigrant workers from labor exploitation, legislative forms of structural discrimination have often counteracted these attempts at the cost of mental well-being. Detailing the complex balance and imbalance between laws that protect certain immigrant labor rights and laws that circumvent these protections is beyond the scope of this article. However, the negative ramifications of legislative structural discrimination for immigrant mental health become apparent when considering the prohibitively high risks of retaliation that undocumented immigrants face if they attempt to denounce their employers' violations of worker rights. Although laws exist to prohibit such retaliation, in practice employers often report dissidents to US Immigration and Customs Enforcement,[23] highlighting shortcomings in the enforcement of existing protective laws. Immigrants who possess work visas are not exempt from exploitation, as their employment status is intrinsically tied to their ability to legally remain in the country.[2]

In addition, undocumented immigrant workers regularly fear deportation as a consequence of workplace immigration raids.[22,24] This immigration enforcement tactic has been explicitly linked to adverse mental health outcomes among Latina/o/x adults, regardless of immigration status.[24] Structural racism reflected in a lack of serious protections from financial exploitation and the absence of legal pathways for demanding recourse contribute to the prevalence of such exploitative practices and may perpetuate their adverse effects on immigrant mental health.

Although noncitizen immigrants—particularly undocumented immigrants—are most vulnerable to structural discrimination via anti-immigration policies and economic disinvestment, these populations are by no means the only ones affected. As reflected by the evidence so far presented, many anti-immigration policies and forms of economic disinvestment also directly affect documented immigrants.[2,14,16,19,20,22,24] Furthermore, the mental health of this broader population is affected by the same forms of structural racism that affect undocumented immigrants in at least 2 ways. First, the concept of familial vulnerability, wherein experiences of structural discrimination affect not only the targeted individuals but also their entire family unit,[25] offers a mechanism by which anti-immigration policies and economic disinvestment can affect the mental health outcomes of both documented immigrants and US-born individuals closely associated with undocumented immigrants, including children.

Second, structural forms of discrimination targeting undocumented immigrants, particularly state-level anti-immigration policies, are associated with poor mental health outcomes and limited access to care among documented immigrants[26] and even nonimmigrants.[16] This spillover effect has been partially attributed to an increased fear of jeopardizing access to full citizenship status among documented immigrants[26] and the exacerbation of interpersonal discrimination mechanisms (including more frequent experiences of overt discrimination) affecting any individual belonging to a racial or religious minority group who might be suspected of being an immigrant.[16]

As a result of these mechanisms, the public health burden of anti-immigration policies and economic disinvestment is further amplified. This paradigm, coupled with the detrimental long-term financial burden of disinvesting in immigrant health,[19] emphasizes the importance of addressing the structural oppression that specifically targets immigrants—both undocumented and documented—and its negative consequences for immigrant mental health.

CULTURALLY INSENSITIVE MENTAL HEALTH SERVICES

In the case of both Latina/x/o and Asian immigrants, regardless of documentation status, limited English language proficiency—defined by the US Department of Health and Human Services as English not being one's first language and having a limited ability to read, write, speak, or understand English—has been consistently identified as a major barrier to access to and continued use of health care services in the United States, including mental health services.[20] Language concordance has been found to improve retention in outpatient psychiatric settings[27] and to increase the likelihood that patients will

discuss their mental health needs in primary care, although this particular effect might depend on the patient's age and spoken language.[27] Language concordance seems particularly important for Asian and Latina/x/o immigrants seeking psychological help.[20]

In the domain of mental health, professional interpreter services improve disclosures in patient–physician communications, self-understanding, and referral to specialty care while reducing clinically significant errors.[28] Federal guidelines require most health care programs and providers, including those accepting any form of federal remuneration apart from Medicare Part B, to offer meaningful language assistance services free of cost to their patients.[29] However, the high cost of interpreter services often limits compliance with this requirement. Despite federal guidelines, states are not required to reimburse providers for the cost of language services—although 14 states and the District of Columbia have decided to do so through Medicaid and the Children's Health Insurance Program CHIP[29]—and are not required to claim available federal matching funds. Another strategy available to states is transferring the financial burden to contracted managed care organizations and providers, although this has been described as a mechanism that ultimately hinders the affordability and availability of such services.[29]

Another critical barrier to the effective use of mental health services is a lack of knowledge among immigrant communities regarding available resources.[20] This barrier seems particularly important for Asian immigrants, although it also appears to be true for Latina/x/o immigrants.[20] Limited awareness of mental health resources likely reflects both a lack of tailored outreach efforts designed to increase mental health literacy among these populations and the inadequacy of at least some trialed interventions. In turn, the relative lack of culturally adapted interventions may reflect assumptions that immigrant populations will conform to currently available approaches, most of which have been based on federally funded research lacking immigrant representation at all levels, from priority setting to involvement as participants.[2]

By contrast, successful mental health care outreach and delivery efforts beyond the provision of language translation seem to leverage specific cultural characteristics of these communities. It is well known that Asian and Latina/x/o immigrants rely heavily on familial and informal community networks for mental health support,[20] and referral from these networks has been proposed as an important pathway for accessing mental health care among immigrants.[20] In line with this observation, family- and community-oriented psychoeducational interventions and outreach efforts are associated with improved mental health outcomes among Latina/x/o immigrants.[30]

ADDRESSING STRUCTURAL RACISM IN IMMIGRANT MENTAL HEALTH

Latina/x/o and Asian immigrants are 40% less likely to use mental health services than their US-born counterparts.[19] Rather than focusing on strategies to curb the effects of subpopulation-specific cultural values or negative attitudes toward mental health care, which are addressed elsewhere in the literature, we offer 2 main pathways for addressing the impact of structural racism on immigrant mental health: reforming economic and financial policies with the needs of immigrants in mind and partnering directly with immigrant communities in the development and implementation of mental health interventions.

Immigration, Insurance, and Economic Reform

It should be evident that policy reform would fundamentally address several of the aforementioned structural inequities affecting mental health outcomes and access to care. This approach would entail changes facilitating the integration of immigrants into social services regardless of citizenship status. Ideally, these policy reforms should not only decrease deportation fears among undocumented individuals who are already integral contributors to society but also empower the broader immigrant population to use mental health care services, promoting their overall health and productivity.

Expanding Medicaid coverage for mental health services to immigrant populations would greatly assist Latina/x/o and Asian immigrants in overcoming financial barriers to accessing necessary care. Broadening coverage to include nonemergent but necessary outpatient mental health treatment of patients with serious psychiatric conditions, regardless of citizenship status, would not only lead to higher service use rates but could also reduce costs associated with untreated mental health conditions.[19] Shifting from emergency coverage to incentivizing the use of preventive and subacute services would likely increase cost-effectiveness and decrease the ethical burden placed on providers.[31]

Moreover, there appears to be no association between expansion of public health insurance coverage and interstate migration among low-income

immigrants,[32] contradicting often-threatened concerns to the contrary. Broadening access to affordable buy-in private insurance options should also be considered as a complementary tool to expand coverage for low-income documented immigrants.[19] In addition, nonparticipating states should consider offering public health insurance to immigrant children, as this is associated with improved health service use among this population.[33] In general, public assistance programs benefiting low-income children fully pay for themselves in the long run through increased tax collection.[34]

The immense physical and psychological burdens placed on immigrant workers as a result of hazardous working conditions illuminate the need for legislative changes that effectively defend immigrant worker rights and promote safe working environments. Such laws should unequivocally guarantee protection from any forms of retaliation, particularly those that could lead to deportation, if undocumented workers or workers on temporary visas report abusive practices.

Financial reforms should also aim to increase funding for interpreter and language services and thus promote accessibility of existing psychological care among immigrants. Solutions that reduce the costs of these services should be explored as well, including use of centralized video or telephone interpreter services that could be shared across Medicaid state programs.[29]

Partnership With Immigrant Communities

Designing and implementing public health interventions with an overreliance on aggregated scientific data derived from homogeneous research populations and without direct engagement of diverse community members will often lead to prescription of solutions based on reductive assumptions about the populations they aim to serve.[35] Such an approach is particularly problematic when designing mental health interventions for populations such as Latina/x/o and Asian immigrants, in which cultural attitudes and risk factors are often blamed for low mental health care utilization. Instead, in addition to advocating for disaggregation in mental health research, a simultaneous effort should be made to partner directly with immigrant communities to develop and implement culturally relevant interventions.

Tailoring culturally sensitive psychosocial interventions to a given community's demographics should be based on direct outreach and awareness of pressing necessities identified by community members themselves. In addition, adopting strengths-based paradigms—in which community members and partners identify community-specific strengths that promote emotional wellness—has been proposed as a mechanism to improve immigrants' mental health outcomes and access to care.[5,20,30] Examples of strengths-based interventions include psychoeducational efforts emphasizing individual- and community-level capacity to deal with stressors, training on leveraging existing networks and mental health resources, culturally informed teaching of healthy coping strategies, and the creation and promotion of employment and educational opportunities.[30]

Furthermore, interventional strategies should harness the positive influence of trusted organizations, including faith-based institutions, neighborhood councils, and community centers. Partnering with community leaders in these spaces can lead to greater acceptance and integration of psychoeducational efforts within existing programming and even physical infrastructure.

Successful interventions developed in partnership with communities should leverage not only community organizations but also trusted social networks and human resources. Such task-sharing strategies, which involve training lay members of the target community to facilitate psychosocial support interventions, can help address shortages in the mental health provider workforce. This approach has proven successful in global mental health settings and, more recently, in the United States, and it has already been proposed as a means to address mental health disparities in Asian American communities.[36]

Two existing task-sharing interventions are the Mental Health Gap Action Program and Problem Management Plus. The former seeks to expand the mental health care capabilities of primary care physicians, strengthening their role in improving mental health outcomes and care access for immigrants through increased screening and early intervention,[37] whereas the latter trains lay helpers to deliver brief transdiagnostic interventions. Remote adaptations of these strategies have already been deployed to address COVID-19-related mental health care barriers.[38]

Training community health workers—lay members of communities who work in association with the local health care system—to provide psychosocial care has also shown promise in addressing racial gaps in mental health care delivery and should be considered a feasible strategy in the immigrant mental health space.[39] In addition, the availability of mental health peer

specialists in outpatient settings has been associated with increased service use and decreased disparities among US-born Latina/x/o youths,[40] suggesting a potentially effective application for immigrant youth communities. As a potential added benefit, strengths-based and task-sharing approaches might help to decrease the stigma surrounding mental health and improve mental health literacy through the facilitation of trusting relationships between community members.

Despite many findings demonstrating the effectiveness of community-based interventions, several barriers limit the feasibility of these projects, particularly a critical lack of funding for both research and implementation. Thus, advocacy efforts must expose and confront a long-standing and crippling absence of investment in such community partnerships and support appropriate policies and financial allocations dedicated toward enabling the success of task-sharing and community-based projects.

CONCLUSION

We have highlighted several key pathways through which structural racism can negatively affect immigrant mental health outcomes and access to care. Although the pathways we have outlined, including anti-immigration policies, financial and economic exploitation and disinvestment, and culturally insensitive mental health services, are by no means comprehensive, they illustrate the complex, mutually reinforcing, and often covert mechanisms that perpetuate health care disparities. Structural racism is not only a multifactorial phenomenon but also a deeply rooted force plaguing our systems and institutions. Thus, eradicating it and addressing its effects on immigrant mental health require a multipronged approach based on meaningful collaboration among stakeholders across society.

The success of such an immense undertaking demands, first and foremost, political and economic support for immigrant mental health, which, as described, will exert broader societal benefits. Without disregarding the importance of cultural factors such as stigma and illness beliefs, policymakers must recognize how structural racism locks out immigrants from needed treatment and resources. Through economic and financial policy reforms and culturally adapted mental health interventions developed and enacted through community partnerships, we can and must take action to address the effects of structural racism on immigrant mental health outcomes and access to care. AJPH

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Integrating Racism as a Sentinel Indicator in Public Health Surveillance and Monitoring Systems

Kellee White, PhD, MPH, Danielle L. Beatty Moody, PhD, and Jourdyn A. Lawrence, PhD, MSPH

Objectives. To evaluate public health surveillance and monitoring systems' (PHSMS) efforts to collect, monitor, track, and analyze racism.

Methods. We employed an environmental scan approach. We defined key questions and data to be collected, conducted a literature review, and synthesized the results by using a qualitative description approach.

Results. We identified 125 PHSMS; only 3—the Behavioral Risk Factor Surveillance System, Pregnancy Risk Assessment and Monitoring System, and California Health Interview Survey—collected and reported data on individual-level racism. Structural racism was not collected in PHSMS; however, we observed evidence for linkages to census and administrative data sets or social media sources to assess structural racism.

Conclusions. There is a paucity of PHSMS that measure individual-level racism, and few systems are linked to structural racism measures.

Public Health Implications. Adopting a standard practice of racism surveillance can advance equity-centered public health praxis, inform policy, and foster greater accountability among public health practitioners, researchers, and decision-makers. Failure to explicitly address racism and the insufficient capacity to support a robust health equity data infrastructure severely impedes efforts to address and dismantle systemic racism. (*Am J Public Health*. 2023;113(S1):S80–S84. https://doi.org/10.2105/AJPH.2022.307160)

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Public health surveillance and monitoring systems (PHSMS) collect data to guide disease prevention, improve population health, and eliminate racial/ethnic health inequities.[1] Addressing inequities may be hampered, in part, by inadequate efforts to incorporate measures of racism data in PHSMS. One recent study reported the inadequacy of PHSMS in monitoring racism, stigma, and COVID-19–related surveillance.[2] However, a broader assessment of PHSMS's capacity to collect, monitor, track, and analyze racism (operating at multiple levels) relative to general population health outcomes has not been conducted. We aimed to fill this gap by conducting an environmental scan of PHSMS to assess data collected on and linked to racism measures, highlight barriers and opportunities for data collection and linkages, and discuss public health implications.

METHODS

We performed an environmental scan to assess PHSMS capacity to collect racism data and linkages with structural racism measures. Our process entailed (1) defining key questions and data to be collected, (2) conducting a literature review, and (3) synthesizing the results with a qualitative description approach.[3] A priori study questions asked (1) what are the strengths, weaknesses, and gaps in PHSMS's capacity to collect racism and (2) to what extent are PHSMS linked with measures of structural racism? We identified PHSMS that (1) were Centers for Disease Control and Prevention–supported or –led and

active from 2015 to 2020, (2) collected and reported data periodically or on an ongoing basis, and (3) monitored human health. We searched the Web site, technical documentation, data collection instruments, and publications for measures on racism, racism-related experiences, and racial discrimination. A literature review identified studies linking structural racism with PHSMS. We searched PubMed, Google Scholar, and Web of Science databases. We used a qualitative descriptive approach to synthesize the results.

RESULTS

We identified 125 PHSMS, and only 3—the Behavioral Risk Factor Surveillance System (BRFSS), Pregnancy Risk Assessment and Monitoring System (PRAMS), and California Health Interview Survey—collected and reported data on racism or race-related experiences (Table A, available as a supplement to the online version of this article at https://ajph.org).

We observed heterogeneity in measures used to operationalize racism. BRFSS collects information about health risk behaviors, conditions, and use of preventive services. Reactions to Race is an optional BRFSS module, comprising 6 questions assessing socially assigned race, race consciousness, differential treatment at work and in health care, and reports of emotional or physical symptoms to differential treatment. Since its initial pilot in 2002, approximately 50% of states administered the module for at least 1 year, with fewer states administering it in consecutive years.[4] PRAMS collects data about maternal attitudes and experiences before, during, and after pregnancy. Although not a part of the "core" (fixed questions asked each year), race-related experiences 1 year before birth and during pregnancy were queried. Only 22 states assessed racism in PRAMS.[5] The California Health Interview Survey provides population estimates for Californians across several health indicators. Respondents were asked about racial/ethnic discrimination in health care in select waves (i.e., 2003, 2005, 2015, 2017, and 2021).

Structural racism measures were not collected in PHSMS; however, we observed evidence for linkages to census and administrative data sets or social media sources to assess structural racism (Table 1). Data linkages enabled characterization of structural racism across judicial, economic, educational, housing, residential segregation, political, and immigration domains. Multiple quantitative measures were operationalized across each domain. For example, the economic domain included indicators related to Black–White inequalities in unemployment, poverty, and homeownership. PHSMS most commonly linked with structural racism were BRFSS; PRAMS; National Health Interview Survey; Surveillance, Epidemiology, and End Results Program; National Death Index; and National Vital Statistics System for births, fetal deaths, and mortality data. Studies captured structural racism at multiple geographic levels including census block, census tract, zip code, county, metropolitan statistical area, and state.

DISCUSSION

Racism measures are not routinely collected and integrated in PHSMS. We identified budgetary constraints, methodological issues, decision-making authority, data linkage, and aggregation as key considerations for this observation. While a comprehensive racism measure may assess chronicity, recurrence, severity, and duration, and delineate between direct and indirect experiences,[6] concerns about survey length may constrain the type of scales included. The decision-making authority that determines and gives value to the data included in PHSMS raises serious equity issues. For example, state BRFSS advisory committees composed of community and academic partners who provide input and may bear financial responsibility for items administered in optional modules. This can lead to bias and the continued omission of racism measures in PHSMS. Actionable suggestions to address these data gaps entail adding racism measures to a rotating core. The permanent adoption of racism measures as standard fixed questions would mirror the recent decision by PRAMS leadership and set a poignant standard for PHSMS.[5,7]

In synthesizing findings from PHSMS linked with structural racism, studies leveraged multiple data sources, social media, innovative tools for data generation, and data-mining techniques (e.g., machine learning) to operationalize structural racism. Other novel opportunities to characterize structural racism and link with PHSMS involve designing data clearinghouses for historical and contemporary laws[8] and research tools that permit access to data sharing across government agencies. For example, the New Jersey Integrated Population Health Data Project develops an integrated data system linking health and social administrative data.[9]

PUBLIC HEALTH IMPLICATIONS

Integrating racism as a sentinel indicator in PHSMS can advance equity-centered public health praxis and antiracist policy development, implementation, and

TABLE 1— Public Health Surveillance and Monitoring Systems (PHSMS) Linked to Measures of Structural Racism: United States

Structural-Level Racism Domain	PHSMS	Operationalization	Geographic Level	Source for Data Linkage
Composite measure	BRFSS	Weighted estimate across criminal justice, education, employment, health care, and housing	County	US Census Bureau
Criminal justice	BRFSS	Police killings of unarmed Black Americans	State	Mapping Police Violence
		Blacks' disproportionate level of disenfranchisement	State	The Sentencing Project
		Racial inequality of incarceration	State	Vera Institute of Justice
		Racial inequality in juvenile custody rates	State	The Sentencing Project
		Racial inequality in sentencing rates	State	The Sentencing Project
	NVSS	Fatal police violence	State	Fatal Encounters Mapping Police Violence The Counted
Economic	BRFSS	Racial inequality in unemployment	State County	IPUMS CPS American Community Survey
		Racial inequality in poverty	State	IPUMS CPS
		Racial inequality in median income	County	American Community Survey
		Racial inequality of percentage living below the poverty line	County	American Community Survey
Education	BRFSS, SEER	Racial inequality of proportion with a bachelor's degree	State County	IPUMS CPS American Community Survey
Housing	BRFSS	Racial inequality of proportion who are homeowners	State County	IPUMS CPS American Community Survey
	SEER	Anti-Black bias in mortgage lending	Census tract	Home Mortgage Disclosure Act Data
		Redlining index	Metropolitan statistical area	Home Mortgage Disclosure Act Data
Immigration and border enforcement	NDI	Average of individual antiimmigrant prejudice	Metropolitan statistical area	General Social Survey
Political	BRFSS	Racial inequality of proportion who voted	State	US Census Bureau
		Level of Blacks' political underrepresentation in state legislatures	State	National Conference on State Legislatures
Residential segregation	BRFSS	Dissimilarity index	State	National Strategic Planning and Analysis Research Center
	NHIS	Racial/ethnic residential segregation (Black–White; Hispanic–White)	Metropolitan statistical area	US Census Bureau
	SEER	Index of concentration at the extremes	Census tract	US Census Bureau
		Index of dissimilarity	Census block	US Census Bureau

Note. BRFSS = Behavioral Risk Factor Surveillance System; CPS = Current Population Survey; IPUMS = Integrated Public Use Microdata Series; NDI = National Death Index; NHIS = National Health Interview Survey; NVSS = National Vital Statistics System; SEER = Surveillance, Epidemiology, and End Results Program.

evaluation, and foster greater accountability among public health actors. The absence of racism data precludes the development of data-driven health objectives and hampers targeted evidence-based action to address health inequities. For example, the Healthy People initiative guides national health promotion, disease prevention, and health equity efforts. Every 10 years, data from PHSMS are used to inform measurable objectives and set benchmarks to evaluate progress. While select social determinants of health (e.g., educational attainment) are tracked and considered targets for action, capturing the lived experience of racism with the same scientific rigor and consistency is nonexistent.

Harnessing racism data has the potential to strengthen data-driven governance and data-based policymaking to create equitable communities. Racism data coupled with racial equity tools (e.g., racial equity impact assessments) can be used to critically evaluate the effect of budgetary decisions, policies, legislation, and regulations on population health and inequities. Systems of accountability for public health practitioners, health care providers, policymakers, and other key stakeholders can be designed. For example, a novel structural racism measure utilizes data from the Census Bureau's Census of Governments, which collects information on financial decision-making related to revenues, expenditures, debts, and assets across government entities.[10] These data can illuminate structural forces influencing financial decision-making.

Antiracist public health necessitates an infrastructure with data tools that collect, track, and evaluate dynamic patterns of racism at all levels. Advancing health equity requires strategies for sustained political support and systemic change. For example, in 1992, Congress passed the Cancer Registries Amendment Act (Pub L No. 102–515) establishing the National Program of Cancer registries, which authorized funds to develop and set standards for cancer registries and establish a reporting system.[11] Earmarking funds to finance the optimization of PHSMS to capture, analyze, and report racism data would represent an intentional effort toward equity-centered surveillance. There is a collective memory in communities that endures the scars of the unethical use of data that reifies racist ideologies and perpetuates intergenerational racial/ethnic health inequalities. While data alone will not serve as a panacea for dismantling racism, the omission to explicitly name, measure, collect, and track racism data severely impedes science and precludes translational efforts to achieve health equity. AJPH

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