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Recommendations to Advance Equity in Tobacco Control

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Abstract

Reducing racial and socioeconomic inequities in smoking has been declared as a priority for tobacco control in the United States for several decades. Yet despite the rhetoric, these inequities persist and some have actually worsened over time. Although tobacco companies have targeted racially and ethnically diverse and lower income tobacco users, which substantially contributes to these disparities, less attention has been given to the role of individuals and organizations within the tobacco control movement who have allowed progress in eliminating disparities to stagnate. We examine the failure of tobacco control professionals to ensure the widespread adoption of equity-focused tobacco control strategies. Review of major US tobacco control reports found that the focus on equity often stops after describing inequities in tobacco use. We suggest ways to advance equity in tobacco control in the United States. These recommendations fall across five categories: surveillance, interventions, funding, accountability, and addressing root causes. Policy interventions that will have a pro-equity impact on smoking and related disease should be prioritized. Funding should be designated to tobacco control activities focused on eliminating racial and socioeconomic inequities in smoking and tobacco control programs should be held accountable for meeting equity-related goals.

Keywords

disparities; priority/special populations; public policy

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Contributor Statement

Drs. Mills and Ribisl developed the initial plan for the manuscript. Drs. Mills, Rosario, Yerger, Ribisl and Ms. Donato Kalb drafted and revised the manuscript. Drs. Mills and Ribisl and Ms. Donato Kalb developed the figures and tables. Dr. Mills is the guarantor.

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While tobacco control in the United States (US) has been lauded as a public health success story,[1, 2] this masks insufficient action taken to address persistent inequities in smoking and tobacco-related disease. Smoking prevalence and tobacco-related disease remain relatively high for certain racial and lower socioeconomic groups.[2, 3] Data from the National Survey on Drug Use and Health indicate that the 2019 smoking prevalence for Native American/Alaska Native adults (28%) is higher than overall smoking prevalence nearly 20 years ago.[4] In the total US population, income-based disparities in smoking prevalence have increased over the past decade (Figure 1).[4]

Strong progress in reducing smoking prevalence, considered a top US public health achievement, with simultaneous failure to reduce inequities, warrants reflection and action.[1] The role of the tobacco industry in creating inequities in smoking through their marketing and promotional strategies is well documented.[5, 6] In this paper, we critically examine the role tobacco control professionals (i.e., practitioners, administrators, advocates and researchers working in tobacco control) have played in this failure, despite decades of pledges to eliminate demographic inequities.

Reflection

To reflect on past tobacco control efforts, we reviewed major US tobacco control reports (Appendix Table 1) published over the past two decades by public health agencies including the U.S. Department of Health and Human Services (HHS) and their operating divisions (e.g., Centers for Disease Control and Prevention [CDC]). We focus on HHS reports because the Department and its agencies 1) document priorities and recommendations in reports for tobacco control programs, and 2) provide funding and guidance to tobacco control programs and researchers. We identified recommendations made to reduce inequities in smoking according to race or socioeconomic status and discuss whether they have been followed and goals have been achieved. We define race as a sociopolitical construct, with no biological basis, used to classify individuals into social groups.[7]

Reports document racial and socioeconomic inequities in smoking prevalence and specify reducing these as a priority. This focus, however, often stops after describing the inequities. The 1998 Surgeon General Report (SGR) *Tobacco Use Among US Racial Ethnic Minority Groups*, was the first and only SGR to focus on smoking disparities among racial/ethnic minority groups.[8] Recommendations to reduce racial or socioeconomic inequities in smoking that appeared across multiple reports included 1) conducting tobacco use surveillance among groups with high smoking prevalence; 2) disseminating culturally-appropriate interventions; and 3) increasing the price of tobacco products. Tobacco control professionals have not effectively implemented such recommendations.

One promising tobacco control intervention to advance health equity is a menthol cigarette and flavored cigar ban, yet this was not typically noted as a key strategy in reports. As a result of targeted marketing by the tobacco industry, 85% of Black individuals who smoke use menthol cigarettes, more than any other racial group.[6, 9] Little cigars and cigarillos are also disproportionally marketed to and used by Black youth and adults.[10] Lower-income individuals who smoke also use these products more.[9, 10] In May 2022 the FDA finally

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proposed rules to ban the sale of menthol cigarettes and flavored cigars.[11] This decision came after public health organizations filed a lawsuit, rightly asserting "unreasonable delay" by FDA to begin the rulemaking process.[12] A decade earlier FDA's own advisory panel concluded banning the sale of menthol cigarettes would promote public health.[13]

Advancing health equity requires ensuring conditions for everyone to live healthy, tobacco-free lives through valuing populations equally, redressing injustices, and providing a socially-just distribution of resources according to need.[14, 15] While there are constraints on the scope and reach of work of individual tobacco control professionals, it is in their collective purview, especially those provided government funding to reduce the burden of tobacco use for all, to identify interventions that reduce smoking inequities and to be held accountable for supporting implementation of the few interventions known to work. Here we critique the lack of progress made in implementing the three recommendations described above.

Surveillance

Healthy People guides public health priorities by establishing measurable objectives to improve health.[16] While *Healthy People* monitors smoking prevalence by race and socioeconomic status, their Tobacco Use Objectives have focused on outcomes that assess the population average ("e.g., Reduce current use of cigarettes among adults").[17–19] In response to a solicitation for public comment,[20] some authors of this article requested *Healthy People 2030* add equity-focused corollaries to their Objectives (e.g., "Reduce inequities in current use of cigarettes among adult populations defined by level of education, race/ethnicity, …"). This recommendation was not implemented,[21] and no rationale was provided.

In addition, tobacco use surveillance systems sample populations in ways that preclude obtaining reliable estimates of smoking prevalence in groups among whom it is highest. For example, the Behavioral Risk Factor Surveillance System, sponsored by CDC and other federal agencies, collects estimates of smoking in ways that limit reliable estimates to only three racial/ethnic groups (non-Hispanic Black, non-Hispanic White, Hispanic) for many states.[22] Some states such as California have their own surveillance systems to obtain estimates in more racial groups,[23] but they are an outlier.

Culturally-tailored Interventions

Several reports recommend the dissemination of culturally-tailored interventions. These have been described as having surface and/or deep structure.[24] Interventions with *surface* structure match materials to characteristics of the target population.[24] The race of individuals featured in an intervention may be matched to the intended population, for example. Interventions with *deep* structure go further and incorporate the target population's cultural values, norms, and language.[24] Deep structure is considered critical for enhancing effectiveness.[24] Despite the large body of research in this area, findings from studies comparing the effectiveness of culturally-tailored smoking cessation interventions to standard interventions are mixed.[25] This research may be biased by studies comparing the effectiveness of interventions across demographic groups without the statistical power

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to do so.[26] Several studies, however, find no benefit of tailoring, suggesting the need for improved study designs or more effective implementation of such interventions.[25, 27]

Price

Another common recommendation is to increase the price of tobacco products, which reduces smoking prevalence more among individuals with lower socioeconomic status.[25] The federal cigarette tax was last increased in 2009, however.[28] In addition, although the average state cigarette excise tax ($1.91 in 2021) is almost double the federal tax ($1.01), rates vary.[29] Four states have cigarette taxes less than $0.50 per pack.[29] Many states tax other products such as little cigars and cigarillos at lower rates than cigarettes,[30] making cigars a cheaper alternative. These cigars are used more among Black and lower-income groups, so cheaper prices maintain disparities.[10, 30]

Recommendations

A review of tobacco control reports provided little guidance on how to reduce racial and socioeconomic inequities in smoking and tobacco-related disease. We provide recommendations to advance equity in tobacco control in the US (Table 1). The recommendations may not all be applicable outside the US because of unique tobacco control contexts and other cultural, economic and health system differences across countries.[31] The recommendations are most relevant to countries like the US with histories of colonization and racial health inequities associated with that history.[32] The US is also a high-income country with a history of state and national tobacco control programs.[33] Globally, the majority of countries have a national tobacco control agency with fewer than five full-time staff or no national agency.[34]

Surveillance

1. Name and monitor the social systems that produce racial and socioeconomic inequities in smoking in tobacco use surveillance reports.—

Discussing causes of inequities in smoking, such as structural racism and income inequality, may dispel incorrect presumptions that biological factors drive observed differences in smoking prevalence across racial groups.[35] For example, persistent residential segregation enables the tobacco industry to target marketing of menthol cigarettes to Black communities, driving health inequities.[35] Surveillance systems should monitor distributions of social privileges to assess relationships between these factors and smoking.

2. Disaggregate data to take into account intersecting forms of identity.—

Social identities such as race and socioeconomic status do not exist independently, yet estimates of smoking prevalence provided by US governmental agencies are often presented for a single demographic group. Using national data from 2004-2018, research from Sweden found that immigrant men aged 30-44 years old with low educational achievement and who lived alone had the highest smoking prevalence at 54%.[36] Analyses such as this should be incorporated into surveillance systems to direct tobacco control efforts.[37]

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3. Ensure surveillance systems adequately sample populations disproportionately affected by smoking and tobacco-related disease.— Surveillance systems should sample populations to obtain reliable estimates of smoking prevalence in groups with high prevalence of smoking and tobacco-related disease, such as individuals experiencing homelessness or with other substance use disorders.[2, 38–40] Surveillance systems should include items that ask about tobacco products individuals from racial minority and lower socioeconomic groups use and gather detailed data on tobacco use behavior (e.g., methods used in quit attempts).[38] National surveys are limited in their sampling procedures and items allotted. Supplemental surveys may be an effective way to oversample subpopulations and gather more data on tobacco-related behavior.

Interventions

1. Prioritize implementation of policy interventions that will have a pro-equity impact on smoking and related disease.—Banning menthol cigarette sales is expected to disproportionately reduce smoking prevalence among Black and lower-income adults in the US, who use menthol cigarettes more.[41] Prior to implementation of a federal ban, states and localities could enact menthol cigarette bans and over 145 localities and two states have done so.[42] A federal ban, however, would have greater reach and impact. Presently, Black adults and individuals with lower levels of education are under-represented in areas with comprehensive flavored tobacco product bans.[43] Some argue a menthol cigarette ban is racist because it removes the preferred cigarette option for most Black individuals who smoke and could lead to more policing in Black communities.[44] To avoid biased policy enforcement, FDA's proposed rule indicates no penalty for possession or use of flavored products.[11] States and localities should continue including this language in their legislation.

Policies that reduce tobacco retailer density and advertising for tobacco products in Black, Hispanic, and lower-income communities may also help advance equity because studies find higher tobacco retailer density and more marketing in these neighborhoods.[5, 45] The number of tobacco retailers could be reduced through several approaches, such as placing a cap on the number of tobacco retailers in an area or restricting sales of tobacco products to certain retailer types.[46] In 2015 a policy was implemented in San Francisco that capped the number of tobacco retailers to 45 per district.[47, 48] The policy also prohibited issuance of new permits to sell tobacco to retailers within 500 feet of schools or other tobacco retailers. Ten months post-policy, tobacco retailer licenses decreased by 8% overall.[47] Lower-income districts that had the highest number of tobacco retailers pre-policy experienced the greatest declines.[47] Although it is unconstitutional in the US to ban tobacco product advertising, the "time, place, and manner" of it could be restricted and advertising displays limited to a small section of a store.[49]

Tobacco product prices should be raised by increasing excise taxes, as is regularly done in several countries (e.g., France, Canada).[50] There are also non-tax approaches such as minimum price laws and restricting price promotions.[51] Some criticize price increases because they may place additional financial burdens on lower-income individuals who smoke.[52] However, these individuals are more price responsive than those with higher-

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incomes, and may therefore disproportionately reap the health benefits and reduced financial burdens through increased cessation.[53] To help maximize the pro-equity benefits of raising prices, cessation services should be free and easily available. Comprehensive pricing strategies on all tobacco products would reduce product switching to cheaper alternatives.[54, 55]

Implications of e-cigarettes for health equity remain unclear. In the US and other countries including China, India and the Philippines, some studies find higher e-cigarette use among individuals with higher as compared to lower socioeconomic status, but this is not consistent.[56, 57] Some research finds non-Hispanic Black and Hispanic smokers in the US are less likely to use e-cigarettes compared to non-Hispanic White smokers.[58] Additional research is needed to assess disparities in use, whether e-cigarettes are effective in helping smokers quit, and impacts of e-cigarette use on initiation of other tobacco products.[59] Although some randomized control trials indicate e-cigarettes help smokers quit, national cohort studies considered more generalizable to real-world settings find smokers who use e-cigarettes are less successful at quitting.[60–62]

The US FDA is also considering setting a product standard to reduce the nicotine content in cigarettes to non-addictive levels; research on the equity impacts of such a policy is nascent.[63, 64] Extending the product standard to non-cigarette products such as cigars may help reduce product switching, particularly among Black and lower-income individuals, among whom the use of little cigars and cigarillos is relatively high.[63, 65]

2. Evaluate the equity impacts of tobacco control interventions.—The 2000 SGR noted "…little research has been completed on the relative effectiveness of interventions for prevention and treatment in some of the population groups or communities."[66] Two decades later, equity impacts of many interventions remain unclear.[25, 67] Tobacco control programs should be systematically evaluated for equity impacts. Even when a study is not statistically powered to compare subgroups, impacts of tobacco control interventions by socioeconomic and racial background should be reported to provide data for subsequent meta-analyses.[27]

3. Ensure the participation of populations systematically excluded from tobacco control programs or policy development and implementation.—Researchers, government representatives and advocacy groups working in tobacco control are often limited in terms of racial and socioeconomic diversity.[68] We recommend tobacco control professionals eliminate institutional barriers to inclusion of individuals from under-represented population groups. Management-level positions responsible for increasing diversity in an organization and funded mentorship and networking programs should be established.[69] The Carolina Postdoctoral Program for Faculty Diversity is an exemplar program for increasing diversity in academic settings that can inform program development to increase diversity in the tobacco control workforce.[70] The University of North Carolina, Chapel Hill (UNC)-supported Program funds postdoctoral fellows from under-represented groups in academia for two years to develop their research with the support of an advisor and alumni network. Since 2015, 41 fellows have completed the Program and 75% were offered tenure-track faculty positions at UNC.[71] Tobacco control

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professionals should play an important role in the leadership development of individuals from populations disproportionately burdened by smoking who enter the workforce.[72] Established investigators should prioritize including individuals who are under-represented in research as investigators in their grants.

Identification of common goals with community stakeholders and working on partnership dynamics and processes, including democratic decision-making and providing equitable compensation, can help mitigate challenges to community-based participatory research as individuals learn how to share power.[73] Establishing partnerships may also take time not directly related to the research, for example, by participating in community events.[73] For researchers in academic settings, this time invested may lead to fewer manuscripts being published, which should be recognized in promotion evaluations.[73]

Funding

Tobacco control funding decisions that do not center equity, use colorblind approaches, or fail to assess advantages afforded by accumulated resource wealth will maintain and increase inequity.[74] Funding strategies must be complemented by equitable decision-making processes, as such decisions represent a form of power, and distributions of power lie at the center of health inequities in our society. Power can be expressed through the allocation or withholding of resources, or by setting agendas within which such decisions are made.[75] We recommend public health and other agencies:

1. Designate funding to tobacco control activities focused on eliminating racial and socioeconomic inequities in smoking.—Structural drivers of health inequitably distribute socioeconomic and race-related resources in ways that assure that tobacco control activities for the general population primarily benefit the already advantaged.[76] While current CDC recommended funding levels account for costs of investments to address disparities, proportions of people in poverty, and proportions of racial/ethnic minorities within each state, recommendations do not require funds be used toward activities focused on eliminating demographic disparities in smoking.[14] Equity-centered funding strategies must prioritize activities known to reduce inequities. Formal equity analyses would challenge decision-makers to consider which populations stand to benefit or be burdened by funding strategies. Some places such as California already require funding be directed to reducing health disparities. Proposition 56, which passed in 2016 in California, raised the tax on cigarette packs by $2.00 and requires at least 15% of funds generated be used to reduce tobacco-related disparities.[77]

When soliciting grant applications, funders should require candidates to describe how their research will advance health equity and identify in which “generation” of research their application falls: 1) documenting health disparities, 2) identifying factors that drive disparities, 3) identifying solutions, or 4) using interventions to address structural causes.[37, 59] Research in the third and fourth generations is most needed.[37]

2. Ensure participation of populations systematically excluded from decisions about resource allocation for tobacco control efforts.—Distributive justice refers to the just allocation of tobacco control resources according to need.

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Procedural justice ensures equitable brokering of decision-making power.[78] Building and sharing power with populations most affected by tobacco-related disparities avoids relegating them as objects upon which power is exerted,[79] deepens transparency, and holds decision-makers accountable.[80]

Best practice power-building strategies recommend initially assessing where power sits among those who determine resource allocations and identifying to what extent populations most affected are represented at the decision-making table.[81] Guy et al.[82] recommend at least population-level representation of Black individuals in grant application review panels. Additional actions include assessing existing capacity, structures and guidelines for participatory decision-making.[83] Strategic partnerships and community coalitions should be leveraged to ensure resource decisions are made in an inclusive, participatory way.[81]

Accountability

1. Local, state and federal tobacco control programs should establish specific equity-focused goals.—Goals should be selected based on conceptualizations of need. This could be achieved through community-based participatory approaches, a critical orientation to public health intervention with structured accountability to community stakeholders.[84] An example of an equity goal is narrowing disparities in tobacco use between higher- and lower-income individuals. Goals should also be set related to research funding. Funding agencies could set a goal that the demographic makeup of researchers receiving grant funding more closely reflects the composition of the US population.

2. Establish accountability mechanisms to encourage tobacco control programs to reduce racial/ethnic and socioeconomic disparities in smoking. —Tobacco control programs, when provided with funding to reduce demographic disparities in smoking, should be held responsible if their equity goals are not met. Different accountability approaches should be explored. Tobacco control programs could establish task forces with expertise in tobacco control and health equity that meet annually to review programs' progress towards their equity-related goals. Another option is to set funding penalties for programs that do not meet their equity goals, similar to the approach taken in the Synar Amendment which effectively reduced tobacco sales to minors.[85]

Root Causes

Fundamental cause theory suggests interventions addressing more proximal causes of smoking, such as education campaigns to change social norms, are insufficient to eliminate smoking inequities because proximal causes are merely mechanisms through which fundamental causes operate.[76] We provide the following recommendations:

1. Target root causes of inequities in smoking.—Some individuals smoke to deal with experiences of discrimination and marginalization and to alleviate the associated stress. [35] To have a lasting impact, interventions are needed that target root causes of inequities in smoking such as environmental racism, income inequality, and stress. Addressing root causes has not, however, been a focus of tobacco control.[86] A review of studies published

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in tobacco-specific journals found ten articles published from 2000-2020 that explicitly measured racism.[86]

Considering structural interventions that have been successful in other public health areas such as housing initiatives, government-funded childcare, and community empowerment programs may be useful for identifying interventions that also address root causes of inequities in smoking.[87–90] A partnership between the Atlanta Housing Authority, a private philanthropist, and community residents supported the rebuilding of neglected public housing and the development of facilities and programs designed to promote healthy behaviors, reduce crime, and support employment.[90] The community-engaged reinvestment initiative increased the employment rate among families living in public housing from 13% to 70% over a 20-year period.[90] There is some evidence that healthcare coverage expansion in the US has advanced health equity in tobacco control.[91, 92] Expansion of Medicaid eligibility under the Affordable Care Act extended Medicaid cessation coverage to 2.3 million low-income adults and increased new cessation medication prescription fills by 24%.[91, 92] In Australia, the Tackling Indigenous Smoking (TIS) Program found its focus on community capacity-building increased access to smoking cessation support through more referral networks among Aboriginal and Torres Strait Islander people, who have a smoking prevalence three times higher than non-Indigenous Australians.[93, 94]

Income inequality in the US is higher than almost any other high-income country.[95] The US ranks last among 11 high-income countries in providing accessible high-quality healthcare.[96] Cross-country comparisons suggest this can be attributed in part to the fewer public social services offered in the US that address root causes.[95, 96]

2. Develop partnerships with non-traditional partners in tobacco control that focus on addressing the root causes of smoking inequities.—Non-traditional partners in tobacco control, such as community-based organizations and advocates, are already providing services to and building relationships with community members. However, they are not likely to be focused on tobacco control and may not have capacity to do more. The key to partnering with non-traditional partners is to be strategic in how tobacco control is introduced; for example, work closely with “champions” who have entree to a community and appreciate the tobacco-related inequities affecting their communities. It may take time, effort and resources to engage with community-based groups and national organizations. In Australia, the TIS Program cite using an informal and flexible approach, and involvement of TIS staff from local communities, as key to engaging organizations that work in areas such as housing and employment in tobacco control.[93]

Conclusion

Tobacco control has succeeded despite challenges, from limited political will to tobacco industry litigation. Now is the time to step up and fight for what is just.[97] Policy interventions with pro-equity impacts must be prioritized. Funding should be earmarked towards efforts focused on advancing health equity.

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Supplementary Material

Refer to Web version on PubMed Central for supplementary material.

Competing Interests and Funding

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What is already known on this topic

- Tobacco control reports provide little guidance on how to reduce racial and socioeconomic inequities in smoking.

What this study adds

- Policies that have a pro-equity impact on smoking should be prioritized.
- Funding should be designated to activities focused on eliminating inequities in smoking.

How this study might affect research, practice or policy

- Tobacco control professionals should be held accountable for meeting equity-related goals.

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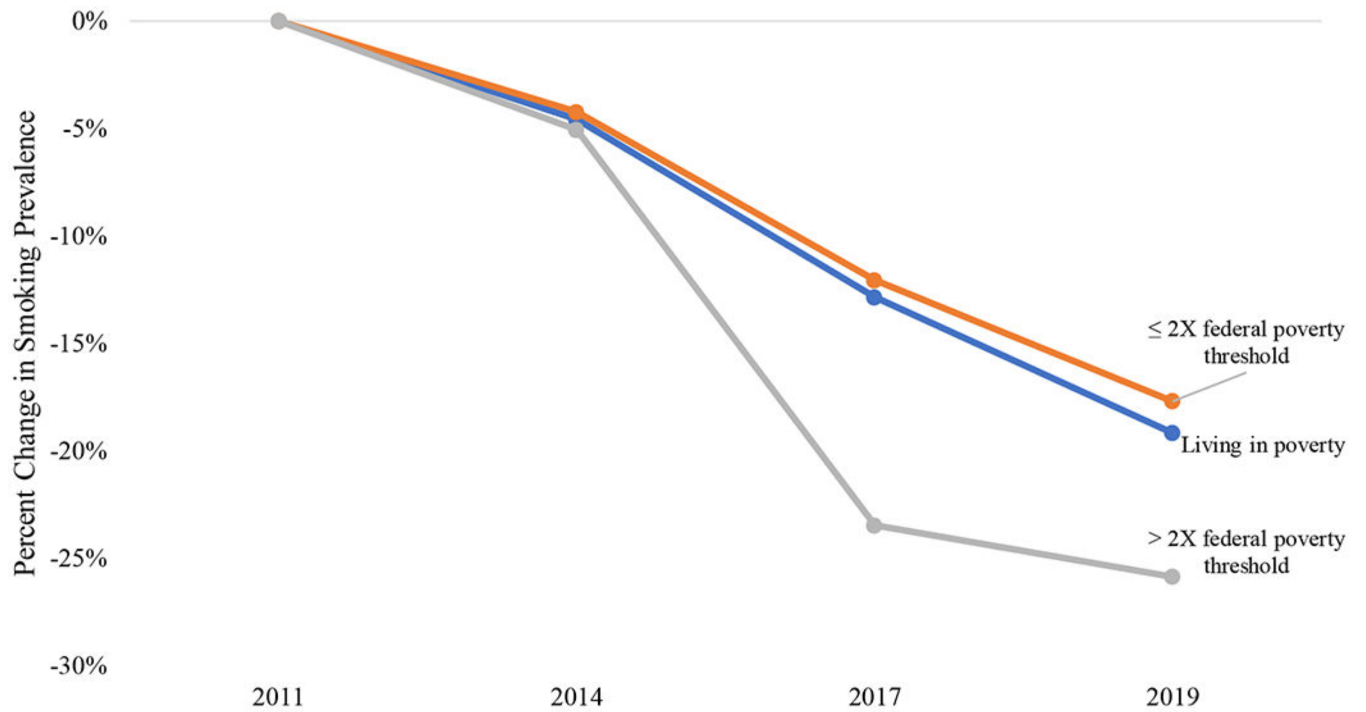

Figure 1.

Percent change in past 30-day smoking prevalence by poverty status showing increasing disparities over time, National Survey on Drug Use and Health, 2011- 2019

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Table 1.

Recommendations to advance equity in tobacco control for tobacco control programs, researchers and funding agencies and example action steps

Category	Recommendations	Who is responsible?		
		Programs	Researchers	Funding Agencies
Surveillance	Name and monitor the social systems that produce racial and socioeconomic inequities in smoking in tobacco use surveillance reports	X	X	
	Disaggregate data to take into account intersecting forms of identity	X	X	
	Ensure surveillance systems adequately sample populations disproportionately affected by smoking and tobacco-related disease	X		
Example Action Steps	• CDC's annual publication on prevalence of tobacco use among adults in the United States names the social systems that produce demographic inequities in smoking. • The Behavioral Risk Factor Surveillance System adds questions about use of little cigars and cigarillos to their annual survey.			
Interventions	Prioritize the implementation of policy interventions that will have a pro-equity impact on smoking and related disease	X		
	Evaluate the equity impacts of tobacco control interventions	X	X	
	Ensure the participation of populations systematically excluded from tobacco control program or policy development and implementation	X	X	
Example Action Steps	• Tobacco control programs evaluate whether their interventions reduced racial/ethnic and socioeconomic disparities in tobacco use in their localities in the past five years. • Tobacco control programs conduct an audit of the demographic composition of their workforce.			
Funding	Designate funding to tobacco control activities focused on eliminating racial and socioeconomic inequities in smoking	X		X
	Ensure the representation and influence of populations systematically excluded from decisions about resource allocation for tobacco control efforts	X		X
Example Action Steps	• CDC adds recommendations for funding levels allocated to reducing demographic disparities in smoking to their existing funding recommendations for state tobacco control programs. • Tobacco control programs conduct an audit to summarize the demographic composition of their research contract recipients over the past five years.			
Accountability	Local, state, and federal tobacco control programs should establish specific equity-focused goals	X		
	Establish accountability mechanisms to encourage tobacco control programs to reduce racial and socioeconomic disparities in smoking			X
Example Action Steps	• Tobacco control programs establish specific five-year goals related to reducing racial/ethnic and socioeconomic disparities in smoking. • CDC pilot tests an accountability program that adjusts funding to state tobacco control programs that fail to meet their equity goals.			
Root Causes	Target root causes of inequities in smoking in tobacco control interventions	X	X	
	Develop partnerships with non-traditional stakeholders in tobacco control that focus on addressing the root causes of smoking inequities	X	X	X
Example Action Steps	• Tobacco control programs identify structural interventions that have been effective in addressing root causes of demographic inequities in other public health areas.			

Category	Recommendations	Who is responsible?		
		Programs	Researchers	Funding Agencies
	• Tobacco control programs identify community-based organizations that focus on fighting structural racism to partner with in future work.			

Notes. Programs refers to tobacco control programs at local, state, and/or federal levels (e.g., United States Food and Drug Administration Center for Tobacco Products) or advocacy organizations such as Truth Initiative. Funding agencies responsible may include public and private public health agencies such as the National Institutes of Health, the Centers for Disease Control and Prevention, and the Robert Wood Johnson Foundation.

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