


Understanding and Addressing Social Determinants to Advance Cancer Health Equity in the United States: A Blueprint for Practice, Research, and Policy

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Abstract: Although cancer mortality rates declined in the United States in recent decades, some populations experienced little benefit from advances in cancer prevention, early detection, treatment, and survivorship care. In fact, some cancer disparities between populations of low and high socioeconomic status widened during this period. Many potentially preventable cancer deaths continue to occur, and disadvantaged populations bear a disproportionate burden. Reducing the burden of cancer and eliminating cancer-related disparities will require more focused and coordinated action across multiple sectors and in partnership with communities. This article, part of the American Cancer Society's Cancer Control Blueprint series, introduces a framework for understanding and addressing social determinants to advance cancer health equity and presents actionable recommendations for practice, research, and policy. The article aims to accelerate progress toward eliminating disparities in cancer and achieving health equity. *CA Cancer J Clin* 2020;70:31–46. © 2019 American Cancer Society.

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Introduction

The field of cancer control is at a crossroads. Despite progress against cancer in the United States, such progress has not equitably benefitted all population groups. From 1991 to 2016, the overall cancer death rate declined by 27%, yet socioeconomic disparities in cancer mortality widened, with the most striking disparities observed in cancers most amenable to prevention and early detection (eg, cervical cancer).¹ Accordingly, progress toward eradicating the inequitable burden of cancer will require not only continued population health efforts but also more focused action to eliminate cancer-related disparities. A commitment to cancer control, therefore, must necessarily include a commitment to health equity—that is, aiming to achieve optimal health for everyone, giving particular attention to the needs of those most at risk for poor health.² Continuing on a path that more rapidly improves cancer outcomes for some segments of the population than others will contribute to persistent (and potentially widening) disparities and may soon lead to an impasse in reducing the burden of cancer.

Multiple types of determinants contribute to individual cancer risk and the likelihood of survival after a cancer diagnosis. These include biological/genetic, environmental, behavioral, health care, and social determinants.³ Attempts have been made to quantify the relative contributions of each to population health, for example, asserting that a certain percentage of health outcomes is because of social and economic factors and a certain percentage is because of health care.^{4,5} A criticism of these approaches is that, although well intentioned, they neglect to account for synergistic relationships between risks and mistakenly conflate variation and causation.⁶

Certain types of determinants actually might exert more influence on health than currently proposed. In any event, embracing a more holistic and integrated view of cancer determinants (ie, factors that influence cancer incidence and/or outcomes) can broaden perspectives on prevention strategies, including those implemented beyond health care settings. In particular, greater attention to multilevel influences on health, or the complex and interacting factors across multiple levels of influence (eg, biological, behavioral, environmental), is needed.⁷

The World Health Organization defines social determinants as “the circumstances in which people are born, grow up, live, work, and age and the systems put in place to deal with illness” that are shaped by the “distribution of money, power, and resources at global, national, and local levels.”^{8,9} Social determinants include housing and neighborhood conditions, educational and economic factors, transportation systems, social connections, and other social factors¹⁰ and reflect interconnected social structures and economic systems shaped by the inequitable distribution of power and resources.^{9,11} Indeed, the National Academies of Sciences, Engineering, and Medicine acknowledge that structural inequities make poorer health outcomes suffered by disadvantaged groups unfair and unjust.¹²

This article aims to catalyze increased national cancer control efforts around social determinants of health by introducing a framework for understanding and addressing social determinants for cancer control and presenting actionable priority recommendations to accelerate progress toward achieving health equity in cancer. Rather than providing an exhaustive synthesis of the literature on social determinants and cancer, we highlight evidence illustrating how social circumstances contribute to the overall burden of cancer and related disparities in the United States. The recommendations offered are developed for a wide audience—including, but not limited to, researchers, health care providers and public health practitioners, employers, insurers, and policymakers—and are intended to supplement the broader body of social determinants of health literature as well as other national cancer control blueprint publications.¹³⁻¹⁸

Growing Support for Social Determinants–Focused Initiatives

Disparities in health are not merely health-related differences between groups but those that are systemic, preventable, and suffered by socially, economically, or geographically disadvantaged groups.^{19,20} Importantly, social, economic, and geographic disadvantages cut across multiple other population characteristics, such as race/ethnicity, age, disability status, sexual orientation or gender identity, or other characteristics historically linked to discrimination or exclusion.²⁰ More than 2 decades ago, Link and Phelan²¹ introduced

their theory of fundamental causes to explain persistent socioeconomic health disparities. The theory posits that such disparities persist because, despite scientific or medical advances, disadvantaged communities persistently lack resources that enable them to protect and enhance their health. Nevertheless, despite longstanding disparities in cancer occurrence and outcomes, we have yet to adequately understand and overcome these fundamental (ie, root) causes by addressing social determinants in our cancer control efforts.

Increasingly, leading health entities recognize the critical role social determinants play in shaping population health, appreciating that many solutions for better health exist outside of the health care system. The US Department of Health and Human Services (including the Centers for Disease Control and Prevention and the National Institutes of Health) emphasizes that resource availability, social norms, and socioeconomic conditions as well as patterns of social engagement and sense of security and well-being influence health outcomes at the population level.²² To better address social determinants and influence good health where people live, learn, work, and play, the Robert Wood Johnson Foundation prioritizes evidence-based approaches that focus on enhancing positive social influences, such as school quality, housing affordability and stability, employment opportunity, and neighborhood safety.²³ Given the increasing recognition of the important role of social determinants and current trends, now is an opportune time for more concerted efforts addressing social determinants in cancer control research, practice, and policy.

Social Determinants Framework for Cancer Health Equity

Understanding social determinants and identifying viable strategies to address them are not only important cancer control needs but also urgent health equity issues. To propel this work, Figure 1 presents a multilevel conceptual framework for understanding and addressing social determinants to advance cancer health equity. The framework integrates and extends several existing models^{12,24-27} and broadly depicts how social phenomena can influence health.

Structural Inequities and Social Injustice

As shown in the framework, health-related disparities stem from social-structural factors. These factors were, and continue to be, based on exclusionary narrative and beliefs propagated by inequities in power and resources. Exclusionary narrative and beliefs result in excluding certain populations from fair access to resources in society.²⁸ Historically, as the US social structure was shaped, common exclusionary narrative and beliefs centered on race—itsself a social construct rather than a biological one.²⁹⁻³¹ Resulting social stratification produced social inequities,

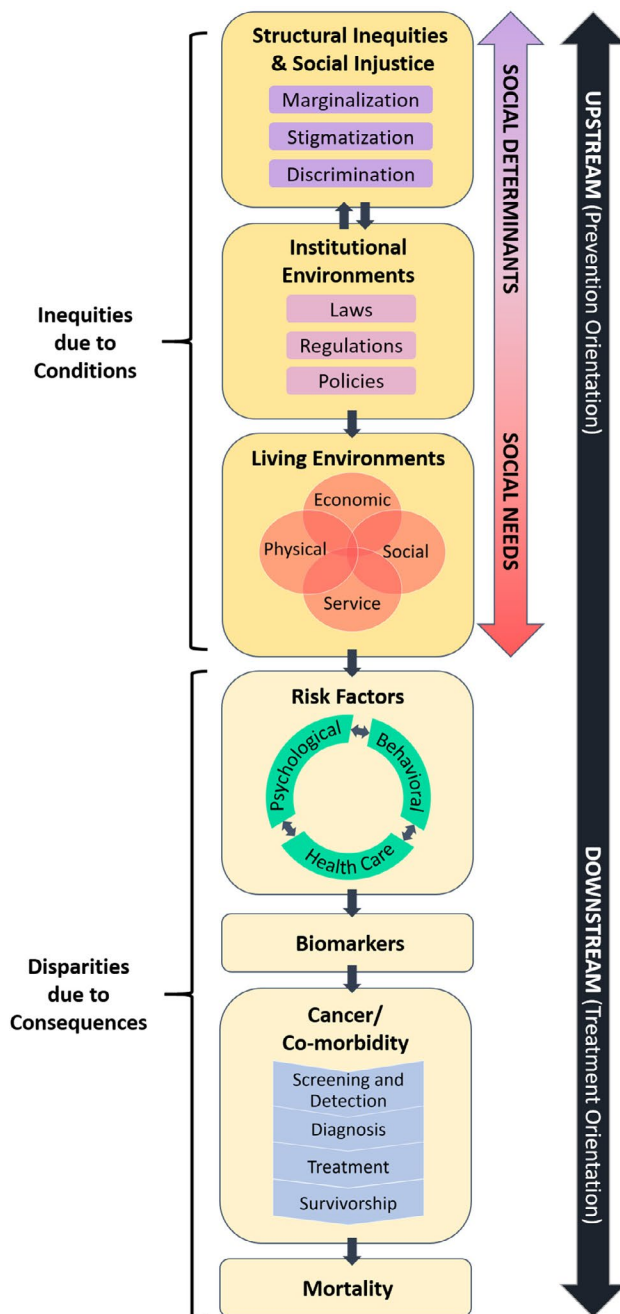


FIGURE 1. Integrated Conceptual Framework for Understanding and Addressing Social Determinants to Advance Cancer Health Equity.

which have lasting significant and transgenerational impact (including racial/ethnic disparities in health) because of historical trauma. Ignoring social-structural factors can result in, for example, attributing racial disparities in cancer solely to behavioral or biologic factors rather than social inequities.³² Today, social inequities are predicated on characteristics such as race/ethnicity, socioeconomic status, sexual identity/orientation and gender, and immigration status/national origin, among others. Disadvantaged populations are subjected to various degrees of social

exclusion and marginalization, which have deleterious effects on health.³³

Discrimination and stigmatization, in particular, significantly contribute to social inequities. Discrimination is defined as “policies, practices, and [behaviors] that perpetuate inequities between socially defined groups”³⁴; stigmatization is “the co-occurrence of labeling, stereotyping, separation, status loss, and discrimination in a context in which power is exercised.”³⁵ From a social determinants perspective, discrimination and stigmatization are rooted at the societal-structural level such that social conditions and norms systemically disadvantage certain groups (although these phenomena occur via institutional practices and interpersonal interactions as well).^{36,37} For example, racial residential segregation, a type of structural discrimination in housing that engenders inequitable access to social and economic resources, is a root cause of black-white racial disparities in health.^{12,38,39} Left unaddressed, social-structural determinants may inhibit intervention efficacy and/or sustainability,³⁵ preventing long-term progress toward cancer health equity.

Institutional Environments

Exclusionary narrative and beliefs, coupled with inequities in power, can produce environments that reinforce social inequities.²⁸ Governments and other institutions enact and adopt laws, regulations, programs, and policies that intentionally or unintentionally maintain the status quo of inequity. Because institutions both influence and are influenced by social structure, government and institutions play key roles in addressing social inequities and health disparities. Therefore, enhancing cancer control efforts through broader engagement of institutional partners across varied sectors is warranted.

Despite this need, the impact of institutional characteristics on cancer and related disparities is inadequately understood. Examining individual factors alone is insufficient for understanding social phenomena such as socioeconomic disparities in cancer. For example, individual educational attainment does not account for policies, resources, or quality of the educational system(s) to which an individual was exposed. Considering institutional characteristics and other socially based factors can help illuminate, for example, why African Americans continue to earn less than whites with comparable levels of education⁴⁰ as well as the health implications (including cancer outcomes) of this persistent socioeconomic inequity. Another limitation of (solely) using individual-level, proxy-centric evidence to inform disparity-focused interventions is that individual-level analyses can provide information on where or among whom to intervene but less guidance on *how* to intervene. For example, evidence that low individual educational attainment is associated with poor cancer-related outcomes does not point to a clear and

practical solution at the population level nor to strategies that attend to the social contexts in which these disparities persist. Although a seemingly daunting task, intervening in institutional environments is feasible via public policy and other systems changes (eg, education system reform) and has potential for wide and sustainable reach. For example, evidence from early education programs indicates varied and long-term benefits, including improved adult health.⁴¹ A recent study of 1057 Federally Qualified Health Centers found that Medicaid expansion under the Patient Protection and Affordable Care Act (ACA) was associated with improved quality in Papanicolaou testing as well as other areas.⁴²

Living Environments

In contrast to social determinants, which are directly embedded in social structure, social needs are indirect consequences of social determinants and pertain to resources available in individuals' more immediate living environments. These include the interrelated environments that hinder or facilitate access to resources necessary for optimal health and well-being. Efforts are increasing to address individuals' social needs as a strategy to address social determinants, although these approaches only indirectly address structural issues.⁴³⁻⁴⁶ For example, some schools provide breakfast to address the social need for healthy food among individual students. However, to sufficiently address the affordability of healthy foods at the population level, social determinants such as food deserts must be addressed. To make both immediate and long-term progress against cancer and associated disparities, an integrated plan that addresses both social determinants and social needs is imperative.⁴⁷

Economic environment

Cancer occurrence is impacted by access to economic resources.⁴⁸ Socioeconomic disadvantage may necessitate living in environments that increase individual cancer risk; make prioritizing health difficult; and/or reduce access to cancer screening, diagnosis, and high-quality treatment. Individuals living in poverty are less likely to have access to health care and more likely than others to be diagnosed with cancer at advanced stages,⁴⁹ when successful treatment is more difficult. An analysis of 6 decades of data consistently found that residents of socioeconomically deprived areas had higher cancer mortality and incidence rates compared with their more affluent counterparts—most notably for colorectal, liver, stomach, lung, and cervical cancers.⁴⁸

Access to employment opportunities also impact cancer and related disparities. Even individuals who are employed may lack job security, a livable wage, or adequate benefits—all of which can have health implications. Because health insurance coverage for the working-age population is predominantly employment-based, limited employment opportunities can restrict access to affordable employer-sponsored

insurance coverage for patients and their families. Other workplace benefits, such as paid sick leave and flexibility in work schedules and locations, may influence one's ability to maintain employment and health insurance coverage while receiving cancer treatment, obtaining preventive care, or supporting a loved one in seeking timely preventive or ongoing care. In addition, the adverse financial impact of the cost of cancer care (ie, financial toxicity) presents an additional economic burden because of out-of-pocket costs.^{50,51}

Physical environment

Personal autonomy notwithstanding, behaviors and decision making often occur in the context of the physical environment. For example, maintaining a healthy weight, living a physically active lifestyle, and following a healthy diet can reduce the risk of developing and dying from cancer, and healthy eating and physical activity behaviors can improve treatment outcomes and quality of life for patients with cancer.^{14,52,53} However, disadvantaged patients may be unable to comply with health care provider recommendations to increase healthy food consumption because of factors beyond their control, such as geographic availability of healthy options.⁵⁴⁻⁵⁶ In many impoverished neighborhoods, nutrient-poor foods are abundant and often highly marketed, cheap, and convenient to access.⁵⁷⁻⁶⁰ The manufactured physical design of a neighborhood, or built environment,⁶¹ also can influence adherence to provider recommendations. High-poverty areas have significantly fewer sports areas, parks, and greenways compared with lower poverty areas, thereby limiting opportunities for physical activity.^{62,63} The built environment also puts individuals in impoverished communities at risk for food insecurity or for the disruption of food intake or eating patterns because of a lack of financial and other resources.⁶⁴ Food insecurity may result in individuals purchasing inexpensive, unhealthy foods or forgoing food to pay for living or medical expenses.⁶⁵⁻⁶⁷

Another important aspect of the physical environment is housing. Lack of quality housing disproportionately exposes disadvantaged communities to secondhand smoke, asbestos, radon, and other cancer risks.^{68,69} In addition, disadvantaged communities often experience housing instability—from homelessness to unsafe or unsanitary living conditions and severe rent burden—resulting in poor access to preventive health care such as cancer screenings.⁷⁰⁻⁷² The homeless population is particularly at risk: homeless adults are twice as likely to die from cancer as non-homeless adults in the United States.⁷³

Social environment

The social environment can exert especially strong influences on health. Social networks among disadvantaged groups differ from those among nondisadvantaged groups,⁷⁴ keeping disadvantaged individuals disconnected from others who might provide connections to economic

opportunity and other resources.⁷⁵ Social isolation, a measure of one's (limited) social contact and networks, is disproportionately prevalent among socioeconomically disadvantaged populations, the chronically ill, and racial/ethnic minority groups.^{76,77} Associations between social isolation and smoking, physical inactivity, and other cancer risk behaviors are reported in the literature.^{78–80} Being socially isolated increases overall mortality risk as much as (or more than) well-established factors such as obesity and lack of health care access.^{81,82} Social isolation is associated with cancer mortality as well, at least in certain demographic groups.^{76,83,84}

As noted previously, discrimination operates across multiple domains, including via interpersonal social interactions. Individuals from socially disadvantaged groups may be more vulnerable to discrimination than others because they may have few resources to avoid or cope with stressors.⁸⁵ Perceived discrimination is associated with cancer risk behaviors, such as smoking, dietary fat intake, poor sleep, and nonreceipt of cancer screening.^{86–89} Discriminatory experiences can act as psychosocial stressors, stimulating physiological responses and adversely affecting health status and behaviors that increase health risks.^{90,91}

Service environment

Deprivation in the economic, physical, and social environments may be ameliorated by adequate community and social services. However, inequitable access to these services (eg, in rural communities⁹²) contributes to the cancer burden and associated disparities. For example, transportation allows individuals to access employment, education, healthy food outlets, health care, and other resources that can enhance health. Unfortunately, an estimated 3.6 million Americans miss at least 1 medical visit each year because of lack of transportation, with higher rates among those who are older, female, from racial/ethnic minority groups, or have low levels of income and education.⁹³ Inadequate transportation is a critical barrier to health care for disadvantaged communities.^{56,94} Lack of transportation access can delay treatment initiation and completion, diminish quality of care, and impact prognosis,⁹⁵ particularly for survivors requiring specialized care in cancer centers.

Public safety is another essential service, as crime and violence can have deleterious impacts on health. Exposure to violence and other adverse experiences (eg, property crime, community violence) can increase exposure to risks and disease, including cancer.^{96,97} A study of nearly 45,000 adults found that neighborhood safety fears were more prevalent among socioeconomically disadvantaged individuals compared with others and were inversely associated with physical activity.⁹⁸ Nevertheless, although physical activity can

reduce cancer risk^{99–101} and provide therapeutic benefits to patients with cancer (eg, physical functioning, fatigue),^{102–104} personal safety inequities are inadequately considered in physical activity–focused surveillance or advice.

Downstream Consequences of Upstream Conditions

Social inequities are the fundamental conditions that create health inequities and consequent disparities in cancer (Fig. 1) (Inequities due to Conditions vs Disparities due to Consequences). Social factors influence other risk domains, such as health behaviors, psychological sequelae, and health care use. These influences, although more proximal to clinical cancer care, are further downstream from and impacted by social-structural influences. To achieve cancer health equity, more focused efforts are needed upstream (ie, addressing Inequities due to Conditions) to address social factors for population-level impact. A paradigm shift is needed to consistently and systemically identify and integrate solutions related to social and structural conditions in cancer control planning and action. Recommendations provided in the section below can serve as an impetus for developing and implementing solutions, which could impact population health broadly (ie, beyond cancer).

Priority Recommendations for Understanding and Addressing Social Determinants to Advance Cancer Health Equity

Embracing a more holistic paradigm requires more prompt and focused action around social determinants to accelerate progress against cancer. In the United States, cancer is projected to soon overtake heart disease as the leading cause of death.^{105,106} Already, cancer has surpassed heart disease as the leading cause of death in many US states (22 states as of 2014)^{107,108} and among Hispanics and Asian Americans.^{1,107} In addition, projected demographic changes and patterns of cancer diagnoses in the United States will shift not just the count but also the composition of survivors, with proportions of survivors from racial/ethnic minority groups increasing.¹⁵ Strategic coordination and collaboration with diverse sectors, in collaboration with researchers and in partnership with communities, are imperative to meet the needs of all population groups.

Focused action across practice, research, and policy domains is needed in consideration of the nature of the disparities being addressed. Addressing social determinants that drive disparities in cancer incidence (eg, tobacco-related and infection-related cancers) because of inequitable risk factor exposure will require policy action beyond the health care system. Addressing these types of disparities, in part, will require policies that directly address socioenvironmental conditions such as housing. In contrast, addressing social

TABLE 1. Summary of Priority Recommendations and Key Domains of Influence

RECOMMENDATION	KEY DOMAIN(S)		
	PRACTICE	RESEARCH	POLICY
Recommendations to address structural inequities and social injustice			
◦ Address income and wealth inequality			•
◦ Support targeted provisions			•
◦ Support models of care that consider social risk	•		•
◦ Enhance multilevel research		•	
◦ Implement focused training for health care providers	•		
Recommendations to address institutional environments			
◦ Improve access to high-quality care			•
◦ Enhance standards relevant to patients' social circumstances	•	•	
◦ Enhance navigation and service integration	•	•	
Recommendations to address living environments			
◦ Enhance surveillance data and data integration		•	•
◦ Increase cross-sectoral collaboration	•	•	
Cross-cutting recommendations			
◦ At the leadership level, commit to eliminating disparities	•	•	•
◦ Proactively partner with disadvantaged communities/patients	•	•	•
◦ Consistently monitor progress and provide feedback	•	•	•

determinants that drive disparities in cancer survival because of inequitable access to timely, appropriate, and quality care will require more focused attention to social risk in health services provision.

Practice-focused strategies should prioritize and integrate cancer health equity practices by systematically assessing and addressing social determinants of health for downstream influence across the cancer control continuum. Research efforts should support and increase cancer research on social determinants of health to identify modifiable risks that can be addressed through sustainable interventions. Public policy-focused efforts should identify, advocate for, and implement focused strategies that counteract inequitable social conditions and ensure that current and future laws, regulations, and policies do not have an adverse impact in socioeconomically disadvantaged populations. To advance these broad aims and as aligned with the framework depicted in Figure 1, specific evidence-informed priority recommendations for cancer control practice, research, and policy are summarized in Table 1 and discussed below.

Recommendations to Address Structural Inequities and Social Injustice

Address income and wealth inequality

One overarching societal trend has contributed to widening health disparities, perhaps more significantly than any other: widening wealth disparity. Recent economic studies suggest

that income and wealth inequality depress economic growth at the national level, which adversely impacts society overall.¹⁰⁹ In recent decades, gains in wealth have been substantially greater for the wealthiest segment of the population compared with other segments.¹¹⁰ Addressing this trend will demand broad engagement of all levels of government (ie, via public policy) as well as virtually all sectors of society. Failure to promote wealth growth in the poorest sectors of society will perpetuate determinants of inequitable health outcomes.

Support targeted provisions

Compared with socioeconomically disadvantaged groups, socioeconomically privileged populations are better able to take advantage of new information and access interventions at earlier stages.²¹ Therefore, public policies without explicit provisions for disadvantaged groups may unintentionally widen health inequalities.¹¹¹ Instead, a targeted universalism framework sets universal goals while using targeted, population group-specific strategies to facilitate each group achieving the goal.¹¹² A targeted and more intentional focus is needed at all levels—local, state, and national.¹¹³ For example, soda taxes reduce the consumption of soda,¹¹⁴ and tobacco taxation policies can reduce smoking rates.^{115,116} However, additional targeted strategies are needed to dissuade socioeconomically disadvantaged smokers from price-minimization behaviors (eg, rolling their own cigarettes) and ensure access to evidence-based cessation programs (eg, nicotine replacement products).¹¹⁶ Policies

may be more effective if language is included specifying that revenue generated from these taxes, in part, must be used for public health efforts targeting populations with the greatest smoking burden and obstacles (ie, smokers who are socioeconomically disadvantaged or have mental and/or substance use disorders) rather than allocating all resources to general state funds or for nonhealth services. Given the persistent underrepresentation of disadvantaged groups in clinical research trials and barriers to participation,^{117,118} support for public policies that eliminate barriers to trial participation are needed as well.

Funding for policy research is critical; greater investments must be made that address interconnected relationships between biology and social and political environments and how policies can be effectively applied, including prioritizing more population health strategies over individual-focused strategies.¹¹⁹ State health departments and cancer control plans should increasingly prioritize, integrate, and put into action evidence-based policies to address social determinants. For example, aligned with strategies in the New York State Comprehensive Control Plan, the state's department of health is engaging health systems, local health departments, and community organizations to build support for paid time-off policies for cancer screenings in worksites. Although outcomes from these efforts are not yet reported, more organizations and practitioners at all levels can be a persuasive voice for greater investments in the policies impacting upstream factors that contribute to cancer and health.

Support models of care that consider social risk

Addressing social determinants must systemically acknowledge and attend to social risk resulting from marginalization, stigmatization, and discrimination. Financial incentives can motivate health care providers and systems to institutionalize a social determinants perspective (eg, routine screening for social determinants) in health care. The ongoing shift away from volume-based care toward value-based care¹²⁰ or, more recently, values-based care (improving health irrespective of cost savings)⁴⁴ could help to foster quality and accountability for reducing disparities in cancer. At the same time, concerns have been raised that providers may be less willing to care for patients with social risk. Given that disadvantaged patients often have more complex needs than other patients,¹²¹ policy strategies that enable providers to be incentivized for the provision of more holistic health care warrant close consideration.

Enhance multilevel research

Research can advance knowledge of dynamic relationships between individual factors, macroenvironmental influences, and health disparities.⁷ Multilevel research should address how marginalization, stigmatization, and discrimination influence inequitable workplace benefits (eg, health

insurance, paid sick leave) and how these influence the uptake of screening and other preventive services, treatment, and survivorship care. Multilevel research also is needed to understand influences across the life course (ie, circumstances an individual experiences in society as s/he ages) as evidence suggests social exposures can become biologically embedded and accumulate over time.^{122,123} Also needed is a better understanding of how life course factors and neighborhood environments (eg, home, work) are associated with cancer incidence and mortality.¹²⁴ Future research should integrate intersectionality, a perspective involving the simultaneous examination of multiple dimensions of social status and life experiences (eg, race and nationality and socioeconomic status).^{118,125,126} A more nuanced understanding of race as a social construct (rather than a biological one) is needed as well to identify underlying societal influences on persistent racial disparities in cancer outcomes.¹²⁷

Evidence to inform new or more targeted behavioral and other intervention strategies in disadvantaged and marginalized populations is essential.^{128–130} For example, the National Cancer Institute recently called for more socioecological approaches to addressing tobacco-related disparities, urging greater understanding and consideration of the unique contextual determinants and intervention needs of smokers from disadvantaged groups.¹³¹ Also needed is evidence to inform national health behavior guidelines and ensure that guidelines consider social circumstances so that disadvantaged groups are able to engage in recommended behaviors. New methods and measures are likely to be needed for these focused areas of research. In addition, this work will require greater attention to diversity and inclusion in outreach and recruitment for research studies, with adequate representation of disadvantaged participants.¹¹⁸

A solutions-focused research agenda must include support for studying the large-scale translation, dissemination, and implementation of evidence-based approaches for addressing social circumstances to improve cancer-related outcomes within and outside of health care delivery settings. Such research should integrate methodologies from implementation science, comparative effectiveness research, and systems science.^{132,133} Evaluations of macrosocial policies and programs should elucidate specific components vital to effectiveness and provide short-term and long-term guidance for implementation, tailoring, and adaptation.¹³⁴

Implement focused training for health care providers

Patient-provider communication is critical in health care and influenced by biases, cultural beliefs, stereotypes, and learned behaviors.¹³⁵ Given the growing diversity of the US population and the sensitive nature of some challenges and barriers patients face, more focused training and skill development for practitioners and practitioners in training could enhance awareness and sensitivity of cultural contexts

and implicit biases.¹³⁶ Communication training should be implemented across diverse provider groups, including clinicians, health systems, health plans, and public health practitioners. Trainings can incorporate resources to help providers inquire about essential needs, such as patients' food insecurity, transportation challenges, and financial hardship. Provider advice should consider patients' social circumstances, although more research to identify evidence-based communication strategies for this purpose may be needed.

Focused training can encompass strategies beyond individual patient encounters. These strategies can include leveraging providers' organizational and individual credibility and influence for improvements in their community, state, or nationally. For example, a recent *New England Journal of Medicine* case study on structural racism and breast cancer care³² offers insight into structural inequities and how health care providers can address them: 1) assess health disparities within their own practice; 2) help change the accepted explanatory narrative; and 3) support strategies that foster systemic changes.

Recommendations to Address Institutional Environments

Improve access to high-quality care

Changes in health policy in recent decades have played an important role in improving access to care, especially among disadvantaged populations. Most notable was the ACA, enacted in 2010. The ACA contained multiple provisions related to the availability of health insurance coverage, including incentives for states to expand Medicaid eligibility to 138% of the federal poverty level for low-income adults with and without children. As of May 2019, 37 states and the District of Columbia have adopted Medicaid expansion under the ACA.¹³⁷ Since 2014, patients with cancer and survivors in expansion states were more likely to be insured, have access to care, and be diagnosed at an earlier stage of disease than those in nonexpansion states.¹³⁸⁻¹⁴¹ In addition, the greatest gains were noted among persons with lower education and income, as well as groups that previously faced the highest cost barriers to care.^{138,139} This evidence indicates that supporting the underlying law and Medicaid expansion under the ACA should continue to advance cancer health equity. In 2019, the American Cancer Society (ACS) Cancer Action Network (ACS CAN) launched *Medicaid Covers Us*, a public education campaign to foster an open dialogue about the role and value of Medicaid in the lives of countless Americans and their families, as well as what it means for communities across the country. This public education campaign is supported by a grant provided by the Robert Wood Johnson Foundation to the ACS and funding from the ACS and ACS CAN. ACS CAN is investing additional funding to support ongoing advocacy work across the country.

Equity in health services provision requires concomitant equity in access to technology. Ever-emerging medical technologies hold promise for vastly reshaping the landscape of clinical cancer prevention, diagnosis, treatment, and survivorship. In addition, patient portals, clinical decision support tools, and other digital health tools can help reduce health care disparities.¹⁴²⁻¹⁴⁴ Yet these technological resources—and, consequently, their benefits—remain inequitably distributed, with lower availability or adoption observed among disadvantaged populations.¹⁴⁵ Implications include inequitable access to timely and high-quality cancer diagnosis and treatment, which contributes to worsening disparities in cancer.¹⁴⁶ Because underlying social inequities drive inequities in care, ensuring equitable access to innovations and enhancing interoperability for information sharing across platforms should be a core component of any comprehensive health equity-focused strategy.¹¹⁸

Enhance standards relevant to patients' social circumstances

Various stakeholders, such as community health centers, hospitals, payers, and public health departments, should champion health equity by assessing and addressing social determinants. Standard assessment of social factors should be integrated into electronic medical records (EMRs) and assessed in both primary and specialist settings by members of the care team. Standardizing measures ensures that stakeholders can track both the assessment and mitigation of social determinants. A variety of validated questionnaires exist, including the Accountable Health Communities Screening Tool¹⁴⁷ and the Protocol for Responding To and Assessing Patients' Assets, Risks, and Experiences (PRAPARE).¹⁴⁸ Screening patients for social risks should be coupled with strategies to address them, as screening for a condition without the capacity to ensure referral and linkage to appropriate treatment may be unethical.¹⁴⁹⁻¹⁵¹ Therefore, cross-sectoral partnerships and other coordinated approaches are vital.

National Cancer Institute-designated cancer centers/comprehensive cancer centers and Commission on Cancer-accredited facilities can lead and model health equity-focused cancer control through more accreditation standards and strategies relevant to social determinants. These entities could enhance standards requiring routine outreach to and engagement with disadvantaged patients to understand their social circumstances and identify resources to address needs beyond access to health care. For example, providers could inquire about patients' housing circumstances and refer those living in suboptimal conditions (which could compromise their ability to fight infection and disease) to housing programs that can help reduce risk exposure. Metrics on these activities could be linked to cancer registry data and/or payment to help monitor population-level impact. Given limited provider time, focused dialogue and decision making

around feasibility and enforcement will be needed. As mentioned above, cross-sector collaboration will be instrumental to sufficiently address patients' social circumstances.

Enhance navigation and service integration

Approaches that use nonphysician members of the health care team to assess and address barriers to health care have been instrumental in supporting patients across the cancer care continuum.^{152–156} Navigation services provide opportunities to address key informational and service gaps in health care. Patient navigators and community health workers have been shown to be effective in community health centers among disadvantaged patients.^{157,158} Financial navigation programs are increasingly available,^{156,159–162} and may mitigate some of the financial consequences of cancer,¹⁶³ which disproportionately impact disadvantaged patients. Ultimately, eradicating social inequalities will drastically reduce the need for individual-focused interventions, yet these interventions are critically needed in the interim.

Recommendations to Address Living Environments

Enhance surveillance data and data integration

To enable monitoring of trends, data on social factors should be routinely integrated into surveillance data. Social factors that are actionable, such as social policy indicators and access to resources, should be prioritized. One approach is to expand efforts to create point-of-care access to community-level data, known as community vital signs.¹⁶⁴ Some resources can be created from existing data, such as the Social Deprivation Index or the Yost Index, which are composite measures of area-level deprivation from the US Census.¹⁶⁵ Collecting new data on social factors could augment existing data and be linked to other data sets. New linkages, including those between nationally representative household survey data (eg, the National Health Interview Survey) and housing data from the Department of Housing and Urban Development and Medicaid claims data, can be used to explore key issues related to social factors. As one example, the linked Surveillance, Epidemiology, and End Results–Medicare Health Outcomes Survey (SEER-MHOS) data set¹⁶⁶ could be enhanced with additional data linkages and new survey items on social variables. In addition, the National Academies of Science, Engineering, and Medicine recommended collecting some information about social risks that are less likely to change, such as educational attainment and nativity, at Medicare enrollment.¹²⁰ Integrating social data will require increasing the capacity of cancer registries to enhance data linkage,¹⁴⁶ such as county-level data from the Area Health Resources Files.

In addition, data can and should be used to guide integrated services for patients and communities. Because collecting data on social determinants could lead to improved patient and population health outcomes,¹⁶⁷ EMR systems

that capture data on social determinants should be used. Existing systems, such as the Epic EMR (Epic Systems Corporation) are equipped to collect social determinants data, and new diagnostic/billing codes are being developed by UnitedHealthcare (UnitedHealth Group) and the American Medical Association to help standardize data collection through EMR systems.¹⁶⁸ When implementing EMR systems that collect social determinants data, health care entities should allocate sufficient resources to ensure adequate staff training, recognize that the timing of data collection impacts how and when social determinants data can be used, and identify how to efficiently integrate tools into existing workflow processes.¹⁶⁹ In addition to EMRs, health systems can better understand and take action to address patient and community needs through Community Health Needs Assessments, which are required of tax-exempt hospitals and can improve coordination of hospital community benefits. Combining a hospital's Community Health Needs Assessments with a health department's community needs assessment can maximize resource allocations and coordination and potentially lead to better health outcomes. Patient councils could be used in these efforts to ensure that patient and community needs remain central to solution identification and implementation. Finally, tax-exempt hospitals could increase the percentage of their community benefit dollars dedicated to help build the capacity of communities to address social determinants of health.

Increase cross-sectoral collaboration

Ongoing engagement of nonhealth sectors can help to advance cancer health equity. Because deprived service environments contribute to disparities in cancer and stem from widespread upstream social inequities, ensuring that essential services are available locally is a matter of health equity. Strategies such as Health in All Policies approaches and tools such as Health Impact Assessments can strengthen these sectors' ability to improve health. Health in All Policies is an approach used to ensure that all decision makers are aware of the health, equity, and sustainability consequences of policy considerations as policies are developed in different sectors; the concept recognizes that good health is impacted by decisions made by non-health-related sectors.¹⁷⁰ Health Impact Assessments can be used to analyze a proposed policy, plan, project, or program before it has been developed or adopted and factor in how decisions positively and negatively impact different populations and communities.^{171,172}

Examples of cross-sector collaborations exist, with health entities addressing issues outside the health care system. Housing for Health, a program of the Los Angeles County Department of Health Services, provides housing to Department of Health Services patients with complex health issues who are experiencing homelessness. An evaluation of the program found that inpatient services decreased

by approximately 75% among participants and, after accounting for housing costs, participants' total social service and health care costs decreased by approximately 20%.¹⁷³ Humana (a for-profit health insurance company) is partnering with Lyft (a transportation/ridesharing network company) to help address missed medical appointments because of transportation barriers by coordinating nonemergency transportation for qualifying members.¹⁷⁴ The ACS partners with a variety of private transportation vendors, including Lyft, Ride Health, and UZURV (in which the ACS pays for transportation services), and lodging partners across the country, including Extended Stay America (which provides free and/or deeply discounted hotel stays away from home) to help patients with cancer minimize barriers to care during cancer treatment. To help improve extensive and equitable access for disadvantaged patients with cancer, increasing the reach of these types of transportation and lodging programs should be a high priority.

Collaborative, cross-sectoral research is needed to better understand how potentially modifiable neighborhood and other structural barriers impact cancer survivors across the cancer continuum. Few studies have addressed the nonmedical consequences of cancer that impact daily living such as food insecurity. Future research should aim to identify, for example, effective policy action to address food insecurity among patients with cancer, intervention strategies that promote lifelong healthy eating habits, and justice strategies that provide access to healthy food options across communities. Similarly, research is needed to address access barriers to convenient and safe places to be physically active in communities. Other needs, such as those related to education, transportation, safety, finances, and housing, should be similarly investigated. Importantly, health care providers screening for social risks and referring patients to community services are increasing, yet research is needed to identify effective policy-level or community-level strategies that lead to longer term and sustainable solutions and reduce the burden on patients and families.

Already such approaches are being employed, including the EveryONE Project Tool Kit, a resource for family physicians to promote health equity, screen for social determinants of health, and use best practices for engaging with communities to address social determinants of health.¹⁷⁵ Health care setting-based food insecurity interventions include assessing this need during intake (or by a social worker, patient navigator, or case manager) and, if needed, providing referrals to food resources, such as soup kitchens and food banks, and federal programs such as the Supplemental Nutrition Assistance Program (SNAP).⁴⁶ Some health care entities host onsite food pharmacies or food pantries, provide food tailored to medical needs, or provide coupons or vouchers for fresh produce.^{46,176}

In addition, health systems can partner with financial capability service providers to offer financial coaching and other services to improve financial security for patients, which can help patients pay for future out-of-pocket health care expenses or other basic needs.¹⁷⁷

Cross-Cutting Recommendations

At the leadership level, commit to eliminating disparities

The elimination of health-related disparities resulting from socioeconomic inequities must be acknowledged at the leadership/governance level of health service and other organizations. Without a commitment from leaders who allocate funding, prioritize actions, and foster accountability, addressing social determinants will be challenging. Practice, policy, and research leaders must provide infrastructure, resources, and support for more targeted social determinants-focused work.

Proactively partner with disadvantaged communities and/or patients

Centrally important to addressing social determinants is proactively and consistently partnering with disadvantaged communities and/or patients to identify and implement sustainable solutions, in consideration of both community needs and assets. A long-term goal should be to transform existing systems and approaches to achieve cancer health equity, rather than solely supporting individual patient needs or helping individuals to better navigate flawed systems (which are interim strategies). The utility of partnering with disadvantaged communities is well documented.^{178,179}

Consistently monitor progress and provide feedback

Ongoing evaluation and feedback are vital to advancing cancer health equity. Equity measures can be defined and incorporated into quality improvement plans used by health systems, such as the proportion of disadvantaged, age-eligible patients who have completed age-appropriate cancer screening.¹⁸⁰ In addition, routine analysis of equity in cancer care and prevention can identify critical gaps (eg, time to first postscreening clinic appointment, time between diagnosis and treatment, proportion of patients offered curative treatment for disadvantaged vs advantaged groups). Regular feedback to providers can inform focused action for process improvement.¹⁸⁰

A critical need is identifying which public policies can be effective or detrimental in contributing to underlying causes of cancer incidence and mortality inequities. Especially crucial are routine efforts to identify and address potential and actual unintended consequences of policies. These include policies focused on health/cancer as well as those not inherently health-focused. In research, cost-effectiveness and budget impact analyses on new and evidence-based interventions at multiple levels, including the policy level, should

be consistently integrated into evaluations and reported to stakeholders.

Conclusions

The ACS recently set a challenge goal to reduce age-adjusted cancer mortality rates by 40% by 2035, recognizing that achieving this goal will require health behavior change at the population level as well as focused interventions for disadvantaged populations.¹⁸ Improving cancer outcomes for all, and especially for disadvantaged populations, can be better achieved by incorporating a social determinants of health framework into cancer practice, research, and policy across the cancer continuum. This blueprint presented a framework and recommendations to accelerate cancer control progress and achieve health equity. Examining and addressing the fundamental causes (eg, inequitable distribution of resources and power) of the underlying causes (eg, adequacy of and access to health insurance coverage) can lead to action that supports individuals and greater population impact and equitable cancer outcomes.

Although many health systems across the country solely address individual patient needs, others are moving toward a population health approach (eg, Accountable Health Communities¹⁸¹). Reflecting current needs and trends, in September 2019 the National Academies of Science, Engineering, and Medicine released a report on integrating social care into healthcare delivery.¹⁸² Creative solutions that are codesigned with multiple sectors and driven by community values and perspectives can inform targeted, multilevel interventions that address and improve the social circumstances of patients and communities. The cancer control continuum comprises a range of intervention targets, from prevention and screening to survivorship and end-of-life care. Just as current cancer control efforts must target this entire continuum of influence, so must future cancer control efforts target the entire social determinants continuum of influence, including social-structural factors. Failure to embrace this perspective will inevitably contribute to the perpetuation, and potentially widening, of cancer disparities. ■

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