Reprint of: Social Determinants of Health: Enhancing Health Equity

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NUTRITION AND DIETETICS practitioners traditionally focus on modifying behavior to improve patient outcomes, but the Academy of Nutrition and Dietetics (Academy) also recognizes the role of social determinants of health (SDOH) when examining root causes of chronic diseases, such as high blood pressure, coronary heart disease, hepatitis, and stroke, particularly for minority and underserved populations.[1]

The World Health Organization defines SDOH as "conditions in which people are born, grow, live, work and age," and the Centers for Disease Control and Prevention offers a similar definition, which includes "conditions in the places where people live, learn, work, and play that affect a wide range of health risks and outcomes."[2-4] These determinants are tethered to the "distribution of money, power, and resources at global, national, and local levels." According to the Academy's *Racial and Ethnic Health Disparities and Chronic Disease Issue Brief* (Brief), which was released in January 2021, "Social determinants are most responsible for health inequities, the unfair and avoidable differences in health status seen within and between communities.[5] Specific to the nutrition and dietetics field, poverty and racial segregation limit access to healthful foods and safe neighborhoods."

A current example of an SDOH-related pathway, witnessed by registered dietitian nutritionists (RDNs) and other health care professionals, transpired during the coronavirus disease 2019 (COVID-19) pandemic, which has affected Black Americans at a disproportionate rate due to several factors, including systemic care delays and reduced access to testing, as well as differences in employment, with many minorities working public-facing jobs without paid leave.[5-7] According to data released by the Centers for Disease Control and Prevention and published in the *New York Times*, both Black and Latino individuals have been "disproportionately affected by the coronavirus" throughout the United States across all age groups and in multiple settings, including urban, suburban, and rural areas. These data also reveal that Black and Latino people have been "nearly twice as likely to die from the virus as white people." The data also show that Native American people were "far more likely to become infected than white people" and that in Arizona and other counties people who identified as Asian were 1.3 times as likely as white individuals to become infected."[8]

Along with these demonstrated inequities, COVID-19 has resulted in an increase in food insecurity, with many families experiencing reduced access to affordable, nutritious food for the first time, and compounding the issue for those already struggling. According to the Academy's Brief, "Prior to the COVID-19 pandemic, more than 37 million people in the United States were affected by food insecurity; now more than 54 million people are projected to experience food insecurity due to the pandemic."[5]

This article identifies the 5 domains of SDOH as characterized in Healthy People 2030, provides guidance for managing health data ethically, and outlines recommendations for addressing health disparities tied specifically to SDOH.

THE 5 DOMAINS OF SDOH

The Healthy People 2030 initiative, released in August 2020 by the US Department of Health and Human Services, places increased attention on SDOH over the next 10 years. A primary aim of the plan is to "create social, physical, and economic environments that promote attaining the full potential for health and well-being for all."[9,10] The initiative identifies the following 5 domains of SDOH[9,10]: Education, Economic Stability, Social and Community Context, Health and Health Care, and the Built Environment

The Academy's Brief provides an overview of each domain as it "relates to health disparities, access to and consumption of culturally acceptable, healthful food, and the development of non-communicable chronic diseases with nutrition implications."[5]

"Everyone is impacted by the social determinants of health as they are outlined in the Healthy People 2030

This article is a reprint of a previously published article. For citation purposes, please use the original publication details; J Acad Nutr Diet. 2021;121(6):1175-1178.

This article is reprinted as part of a supplement supported by the Academy of Nutrition and Dietetics with funding from Abbott Nutrition, a Division of Abbott.

DOI of original article: https://doi.org/10.1016/j.jand.2021.02.030

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plan," said Sharon Cox, MA, RDN, LDN, FAND, Director, Academy House of Delegates and member Board of Directors. Cox is also strategist and cofounder of Cox Duncan Network, LLC, a minority-owned consulting firm based in Charlotte, NC. "These determinants are formed by the distribution of, and access to, life-enhancing resources such as food, housing, economic and social relationships, transportation, education, and health care. Unfortunately, in communities of color, we are seeing disparities and the inequitable distribution of these resources, and as a result, an increase in morbidity and mortality."

An individual's health status is determined by a combination of factors ranging from genetics to medical/clinical services, to the social and physical environment, as well as by personal behavior and lifestyle choices. A study conducted by the University of Wisconsin Health Institute found that 20% of a patient's overall health is determined by services rendered by a physician and 30% is determined by individual lifestyle choices and behaviors (such as smoking, poor diet, lack of exercise, and alcohol abuse).[11] Notably, the study found that 80% of an individual's overall health is the result of socioeconomic status, physical environment, biology, and health behaviors.[11,12]

"Physical environment, social and economic factors drive most of those health outcomes, and even though these have not always been our focus in the past, they need to be focus areas in some key aspects of our work," said Cox, noting that the health profession has traditionally examined downstream or midstream determinants. "The downstream approach is dealing one on one with individuals who are sick or injured using the biomedical approach to care. For food and nutrition professionals, this means providing high-quality clinical care to address chronic diseases, nutrition support before or after surgery, or when you work with dialysis patients. And that is where medical nutrition therapy comes in, which is an example of downstream care. The midstream approach focuses on the lifestyle and behavior of an individual and includes health promotion and prevention using a behaviorist approach. Examples of grassroots and community efforts include translating the dietary guidelines to meet the targeted population, cooking demonstrations, and more. We must demonstrate cultural humility and competency in all our interactions," explained Cox.

If downstream care is defined as clinical care and service to the patient, and midstream care is related to modifying patient behavior, upstream determinants are those that occur at the macro-level and are those overarching factors that are largely outside the control of the individuals. Care involves a review of the conditions in which individuals are born, grow, live, work, and play—all of which are related to addressing SDOH.

"Upstream is the global or high-level condition in which you live," said Jennifer Covich Bordenick, chief executive officer, eHealth Initiative Foundation, a nonprofit organization that convenes health care leaders to identify and share best practices related to health care technology and innovation. "Upstream is understanding where a person comes from—what neighborhood do they live in? How old are they? What's their job? Upstream, midstream, and downstream are all important when working to improve patient health and outcomes."

ETHICS AND HEALTH DATA

"Health care equity has always been a critical issue, but what is so powerful now is the fact that we're able to collect some of this data now electronically and look at it next to other clinical data," said Bordenick. "And I think that's why people are starting to notice the role of social determinants in health care more. Twenty years ago, you couldn't run an algorithm and identify homeless at-risk communities, people who didn't have access to food. You couldn't pull up that data and identify 900,000 people in your community that might be at risk and then go reach out to them."

The use of SDOH data includes considerable ethical responsibility to ensure this information is protected and used solely for improving outcomes and community health. "It's important to leverage this data appropriately and to verify that it is hosted in an environment that meets ongoing compliance standards," noted Cox. "It's also important to ensure that there is no bias in the predictability of the models formed from this data."

The Guiding Principles for the Ethical Use of Social Determinants of Health Data document—developed by the eHealth Initiative Foundation through a cross-industry collaborative of health care stakeholders—was released in June 2019.[13,14] This document urges organizations to "consider the potential impact of the use of SDOH on vulnerable populations and ensure the data is collected and used in a fair, unbiased, and scientific manner."[13,14] The guidelines encourage users to create standards for collecting and protecting data in accordance with all applicable federal and state laws and to develop best practices that address accessing, storing, and tracking of SDOH data.

The document outlines the following 5 guiding principles for the appropriate use of SDOH data for customizing health services and interventions[13,14]:

- **Care Coordination:** Identify individuals with SDOH needs, coordinate and deliver more holistic care, and facilitate connections to additional interventions or services, consistent with privacy and security protections
- **Recognizing Risk Through SDOH Analytics:** Identify risk through the use of analytic tools in order to develop population health management interventions for individuals and communities
- **Mapping Community Resources and Identifying Gaps:** Assess individual SDOH needs against available community resources to identify gaps that address health and wellness
- **Service and Impact Assessment:** Assess the impact of SDOH interventions and services
- **SDOH as a Tool for Customizing Health Services and Interventions:** Use SDOH as a guide for quality discussions with individuals (or their designated guardians) and caregivers to jointly decide which services and interventions are the best fit

The Academy/Commission on Dietetic Registration Code of Ethics, which includes a preamble, 4 principles, and 32 standards, reflects the values and ethical principles guiding the nutrition and dietetics profession. Principle 2, "Integrity in personal and

organizational behaviors and practices (Autonomy)" states that nutrition and dietetics practitioners shall "Safeguard patient/client confidentiality according to current regulations and laws," which would include protecting against the disclosure of patient health information without consent as outlined in the Health Insurance Portability and Accountability Act, also known as HIPAA.[15]

Safeguarding patient confidentiality and privacy is a key ethical consideration when working with SDOH data, but it does not stop there—health care professionals are also ethically bound to use those data to close care gaps by mapping community resources and programs to local populations in a private and secure manner.[16]

CUSTOMIZE INTERVENTIONS TO ENSURE HEALTH EQUITY

"Our ability to map to community resources is a critical area for us as food and nutrition professionals, as is our ability to customize those services, which speaks to ensuring equity for these communities by providing culturally appropriate resources," noted Cox.

"I think the more understanding we can have about the reality in which we live—that there are these implicit biases and that there are certain sensitivities that people are not aware of for a lot of different communities and populations—the better we can serve these groups," added Bordenick, underscoring the importance of customized health services and interventions.

Mapping resources to communities based on SDOH data could seem like a daunting task, but many state and payer-level organizations are supporting programs aimed at helping connect people to these resources. "There are groups that are actually running algorithms and doing analytics to identify people that have food insecurity issues, who are at risk for COVID-19, or are at risk for heart disease or other conditions," said Bordenick. "This work is happening all around us. You don't have to start from scratch. You probably just need to connect to a program that's in your area." Federal food assistance programs, including the Supplemental Nutrition Assistance Program; the Special Supplemental Nutrition Program for Women, Infants, and Children; and Child Nutrition Programs are intended to reduce food insecurity in the United States, as are other regional and state-level services.

It is important to note that these federal food assistance programs are informed by recommendations, such as the *2015-2020 Dietary Guidelines for Americans*,[17] which often lack cultural appropriateness and may not resonate with many Black, Latino, Asian, and Native American consumers. According to the Academy Brief, "The lack of culturally appropriate Dietary Guidelines affects food assistance programs, making it more challenging for food insecure populations to improve their intake."[5]

TAKE ACTION TO ADDRESS SDOH

Simply promoting healthy lifestyle choices will not eliminate health disparities. Instead, individual nutrition and dietetics practitioners, along with the Academy, public health organizations, and other partners in the areas of education, transportation, and housing, are encouraged to take action to support culturally appropriate programs that reduce health inequity.

The Academy's recommendations to address health disparities that are a result of SDOH align with the measures featured in President Biden's Executive Order on racial equity, signed January 26, 2021, which addresses access to health care and other areas of concern.[1,18] According to the Brief, "the Academy advocates for a broad range of policies to target social determinants of health and address these racial and ethnic health disparities, including economic stability and access to healthful food, adequate access to health care and reducing barriers to education."[5]

CONCLUSIONS

SDOH are the personal, social, economic, and environmental factors that influence health status and outcomes and are a driving factor of health inequities. The Academy supports investigating the root causes of health disparities by examining the SDOH, which often play a role in the etiology and amplification of chronic disease.[1]

"I see addressing the social determinants of health as a critical issue for the Academy and something that has to be addressed for us to achieve our overall vision," said Cox. "And the [Academy's] vision, of course, is 'a world where all people thrive through the transformative power of food and nutrition.'"

"For too long, I think when we talked about health care, we were focused on what was happening in clinicians' offices, but health really begins in our homes, in our neighborhoods, in our schools, in our communities, and in our workplaces," said Bordenick. "Where you're born, where you grow up, where you live, where you work, your age, your race, your ethnicity—all of those things influence your health. Social determinants of health are all of those personal, social and economic factors that really influence you."

By cultivating an understanding of SDOH and developing ethically responsible best practices for the use of health data, innovative care delivery strategies can be employed to improve the health and quality of life for a community's most underserved populations.

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STATEMENT OF POTENTIAL OF CONFLICT INTEREST

No potential conflict of interest was reported by the author.

FUNDING/SUPPORT

There was no funding to disclose.