FOOD SYSTEMS AND CANCER SURVIVORSHIP

in Hispanic Communities

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INTRODUCTION

Currently, there are approximately 18 million cancer survivors—defined as all individuals with a history of cancer from the time of diagnosis through the remainder of their life—living in the United States. Because of demographic trends including population growth and aging, as well as medical advances, the number of cancer survivors, is expected to grow to 26 million by 2040.[1] Given the links between diet, cancer experiences, and racial and ethnic disparities,[2] the food system is one important area of intervention to improve rates of survivorship and quality of life among Hispanic cancer survivors.

The Food is Medicine pyramid offers a framework for understanding the wide spectrum of potential programs that may support the health needs of Hispanic cancer survivors.[3] Interventions at the top of the pyramid may be intensive and tailored to address the dietary needs of individuals with a diet-related health condition, such as cancer survivors undergoing treatment. Interventions further down on the pyramid are less intensive and seek to impact the food options of an entire community. This brief will discuss five types of programs across this spectrum that present promising opportunities to improve the lives of Hispanic and all cancer survivors.

Key Takeaways

- Barriers to nutritious foods are an important, albeit overlooked, factor that may contribute to worse survivorship experiences among Hispanic groups.
- National, state, and local stakeholders have several opportunities to work together to establish and support multiple interventions that help address the dietary needs of Hispanic cancer survivors and build a more equitable food system:
    - Food is Medicine programs offer promising pathways for addressing the unique dietary needs of Hispanic cancer survivors.
    - Nutrition incentive programs can increase the number of fruits and vegetables consumed by Hispanic cancer survivors and reach a broader group of Hispanic cancer survivors.
    - Population-level healthy food initiatives—such as policies related to institutional food procurement, community gardens and local food production, and the food retail environment—may also make it easier for Hispanic cancer survivors to access healthy food options, improve working conditions for Hispanic food chain workers, and help supply the food needed to support more targeted interventions.

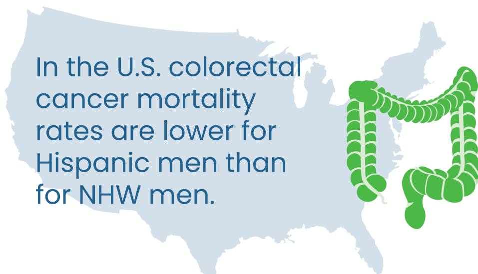
Cancer Rates in Hispanic Communities

Cancer is the leading cause of death among Hispanics.

Cancer is the leading cause of death among Hispanics.[4] Hispanic communities have higher incidence rates and higher mortality rates than the general population for certain cancers, including stomach, liver, and cervical cancer.[5,6] Hispanic individuals are generally less likely than non-Hispanic White (NHW) individuals to receive a cancer diagnosis at an early stage, when treatment is less intensive and more likely to succeed,[7] and may experience longer treatment delays.[8,9] Among the Hispanic population, the percentage of people who have survived cancer five years after diagnosis is similar to or slightly lower than in the NHW population.[10] However, Hispanic cancer survivors experience poorer quality of life—as measured by emotional, social, and physical functioning—than NHWs and other racial and ethnic groups.[11,12,13]

Cancer screening, occurrence, and outcome rates vary significantly by place of birth, duration of U.S. residence, and Hispanic heritage.[14,15] For example, overall cancer mortality rates are higher for U.S.-born Hispanic individuals than foreign-born Hispanic individuals.[16] On the other hand, foreign-born Hispanic individuals have higher rates of certain cancers, such as liver cancer,[17] and may be less likely to engage in cancer screening.[18]

Several cancer trends in Puerto Rico also differ significantly from trends elsewhere in the United States.[19] For example, in the continental U.S. and Hawaii, colorectal cancer mortality rates are lower for Hispanic men than for NHW men. But men living in Puerto Rico—where the population is 99% Hispanic—experience colorectal cancer mortality rates that are 40% higher than NHW men living in the continental U.S. or Hawaii.[20]



40%
higher colorectal cancer mortality rate for Hispanic men in Puerto Rico than for NHW men in the continental U.S. or Hawaii.

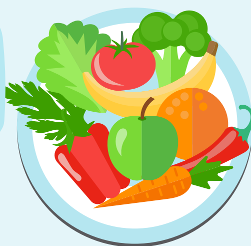
Food Environments, Diet, and Cancer Survivorship

Barriers to nutritious foods are an important, albeit overlooked, factor that may contribute to worse survivorship experiences among Hispanic groups.[21] An estimated 18% of cancer cases in the U.S. are attributable to the combined effects of unhealthy diet, excess body weight, alcohol consumption, and physical inactivity.[22,23] Studies suggest that improvements in diet could prevent 47% of colorectal cancers and that reduction in excess body fat could lower the risk of 11 types of cancers.[24,25] Obesity and type 2 diabetes, chronic diseases that are influenced by diet and are more common among Black and Hispanic populations, are also independent cancer risk factors.[26]

47%

of colorectal cancers can be prevented by improvements in diet.

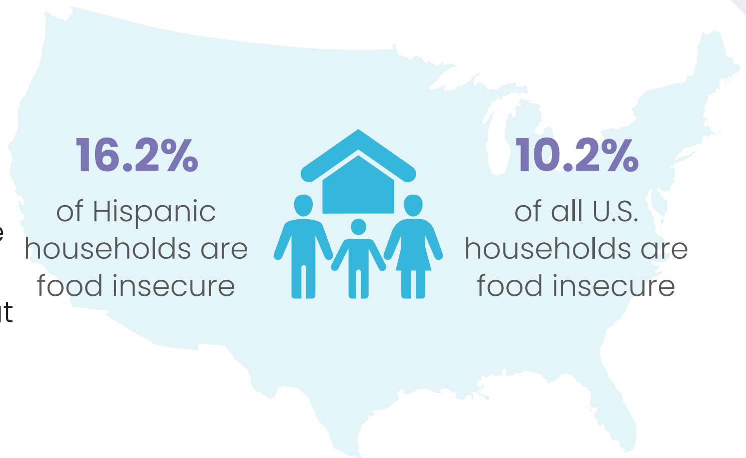
A growing body of evidence also suggests that diet can influence cancer treatment results, cancer recurrence, and the development of other chronic diseases among cancer survivors.[27,28,29,30,31] For example, reduced muscle mass in cancer survivors is associated with reduced tolerance to treatments, impaired quality of life, and reduced survival.[32,33] Food insecurity among cancer survivors, which may itself be the result of their higher medical expenses,[34,35] may also force individuals to make difficult tradeoffs between consuming nutritious meals and skipping or delaying medical treatment.[36,37] Cancer survivors are also at greater risk of developing diet-related conditions such as hypertension and type 2 diabetes that increase their risk of developing cardiovascular disease and other cancers.[38] Cancer survivors who maintain healthy diet patterns are 17-18% less likely to die from cancer or other causes.[39] On the other hand, communities that have low access to healthy foods and high access to unhealthy foods have significantly higher rates of obesity-related cancer mortality.[40] Additionally, the ability to control and improve dietary intake may serve as an important source of motivation for cancer survivors, potentially improving cancer treatment completion rates.[41] Cancer survivors experiencing food insecurity also more frequently report negative mental health symptoms.[42]



17-18%

lower probability dying from cancer for cancer survivors when maintaining a healthy diet.

Studies have documented that communities with large Hispanic populations and low-income neighborhoods are less likely to have access to retailers that carry healthy and culturally relevant foods.[43,44] These communities may also have higher concentrations of smaller retailers that stock foods with poor nutritional quality, fast-food outlets, and advertising space promoting unhealthy foods.[45,46] Hispanic households are also more likely to be food insecure, even when controlling for confounding variables such as socioeconomic and employment status.[47,48] Approximately 16.2% of Hispanic households are food insecure, defined as having being uncertain of having or unable to acquire enough food to meet the needs of all household members because they had insufficient money or resources for food, compared with 10.2% of all U.S. households.[49] Households that are food insecure are less likely to adhere to the U.S. Department of Agriculture's dietary guidelines.[50] Furthermore, several studies suggest that Hispanic cancer survivors are more likely to be food insecure than NHW cancer survivors, especially among young cancer survivors.[51,52,53,54] Other considerations associated with food insecurity include younger age, lower English proficiency, lower income, lower education, increased work-related disability, and lack of health insurance,[55,56] all of which are factors among Hispanic populations.[57]



In addition to being at a higher risk of experiencing food insecurity and barriers to food access, Hispanic individuals are more likely to report dietary patterns associated with higher cancer risk.[58] However, like cancer rates, nutrition and food security trends also vary between Hispanic subgroups.[59,60] For example, evidence suggests that Hispanic individuals that recently immigrated to the U.S.[61] and communities with a higher concentration of immigrants consume lower rates of high-fat foods.[62] Through the process of acculturation, as well as increased exposure to discrimination, healthy eating may decline over an individual's lifetime and across generations.[63,64]

Decades of exclusion have contributed to the inequities in food access and security experienced among Hispanic cancer survivors and their families.[65] Government institutions, health care systems, and community-based organizations working to reduce cancer disparities and improve the long-term care of cancer survivors should therefore consider how they can help create more equitable food systems.

Food is Medicine Programs

01

Food is Medicine (FIM) programs include a wide range of interventions that provide foods that support health and include a nexus to the health care system.[66]

Common types of programs include:

1. medically-tailored meals,
2. medically-tailored groceries, and
3. produce prescription vouchers.[67]

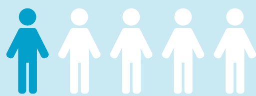
Medically-tailored meals are typically offered to people living with severe illnesses that make it difficult to shop or cook.[68] Medically-tailored groceries—which may also be called food boxes, food pharmacies, or clinic-based food pantries[69]—and produce prescription vouchers are less intensive interventions that are typically offered to individuals with diet-related health risks or conditions who are food insecure and unable to prepare meals for themselves.[70] Programs are typically supported by a combination of private donations, state or local government grants, and federal programs, such as the Gus Schumacher Nutrition Incentive Program (GusNIP), or a state Medicaid plan.

Medically tailored meal programs, which have been the most rigorously tested, and medically-tailored groceries, are associated with improvements in food security and health outcomes.[71,72] Emerging research on produce prescriptions also confirms their potential to improve food security and dietary intake.[73] By improving the food security and nutrition of individuals with diet-related health conditions and risks, FIM programs may reduce disparities in cancer treatment outcomes among Hispanic cancer patients and the health of long-term Hispanic cancer survivors.

Nutrition Incentive Programs

02

Government nutrition assistance programs, such as the federal Supplemental Nutrition Assistance Program (SNAP), help millions of Hispanic households afford food.[74,75]



1 in 5

SNAP participants are Hispanic[76]

An estimated one in five SNAP participants are Hispanic.[76] Nevertheless, this support does not fully address food insecurity experienced by the general population, Hispanic populations,[77] or cancer survivors.[78] Among cancer patients who receive SNAP assistance, for example, a significant number report food insecurity.[79] Moreover, food insecurity metrics also fail to measure the challenges that families may face in affording nutritious food options,[80] which are especially important for cancer survivors both during treatment and remission.

One method of improving the quality of food and quantity of the food purchased by households experiencing food insecurity is to create incentives for these households to purchase fruits and vegetables. Nutrition incentive programs seek to improve diet quality by providing financial incentives to purchase fruits and vegetables at farmers markets or grocery stores.[81] In addition to increasing the consumption of fruits and vegetables, some incentive programs, such as Double Up Food Bucks, also maintain the goal of expanding market opportunities for local farmers.[82] This additional goal can help increase the supply of fruits and vegetables available in local retailers and support small-scale farms.[83] Nutrition incentive programs commonly focus on supporting, or exclusively offer subsidies to, SNAP participants and may be partially funded by the federal Gus Schumacher Nutrition Incentive Program (GusNIP), in addition to state, local, or private resources.[84]

Several studies confirm that nutrition incentives improve food security, increase purchases of fruits and vegetables, and provide economic benefits to participants.[85,86,87,88] In addition to improving the quality of food consumed by Hispanic cancer survivors in active treatment, nutrition incentives can also improve the long-term health trajectory of cancer survivors and help prevent cancer occurrence across Hispanic populations.

Population-level Healthy Food Policies and Programs

03

There are several opportunities for public and private actors at the local, state, and national level to support population-level interventions that increase Hispanic cancer survivors' access to healthy food environments. Three areas of population-level intervention include **values-based food purchasing, community gardens and local food production,** and **healthy retail policies.**

Values-based Food Purchasing

Public and private institutions, such as state and local governments, schools, early childcare facilities, prisons and jails, hospitals, and charitable food distribution centers, impact the quality of food available in their communities through their food purchasing and food service choices. Institutions serving Hispanic populations and cancer survivors, such as hospitals, schools, and early childcare centers, can improve the quality of food served and sold at the worksites and community settings they host by adopting value-driven food procurement and service policies that prioritize healthy food options.[89]

Studies of institutions that have adopted healthy food procurement policies confirm that they increase the purchase of healthy food and decrease the purchase of unhealthy foods.[90] Research also shows that both federal and private facilities that have adopted the Food Service Guidelines for Federal Facilities have experienced improved health outcomes among employees.[91]

Revisions to school and early childcare policies may be particularly impactful because Black and Hispanic childhood cancer survivors are at an increased risk for cardiovascular disease, obesity, and secondary cancers[92,93] and consume many of their calories in school or childcare environments.[94] School nutrition policy interventions have also been found to narrow disparities in child obesity.[95]

Institutions may also consider incorporating additional priorities into these policies that promote equity, environmental sustainability, and local food production, such as prioritizing businesses that provide a living wage to their workers and limit their exposure to heavy food polluters.[96] Incorporating such a value could help improve the wages and working conditions of Hispanic farmworkers and other Hispanic individuals working within the food chain, which in turn could help improve their diets, reduce their cancer risks, and increase their ability to successfully complete cancer treatment.[97] Several model procurement and food service policies are already available for public and private institutions to adopt, including the Good Food Purchasing Standards[98] and the Food Service Guidelines for Federal Facilities.[99]

Community Gardens and Local Food Production

Local food production initiatives such as community gardens and small-scale farms can improve community health by increasing the opportunities for residents to enjoy the physical and mental health benefits of healthy eating, creating settings for health and nutrition education, improving the environmental sustainability of the community's food system, and supplying healthy food to local food retailers and distribution programs.[100]

A randomized control trial studying health impacts of community gardens found that participants increased their consumption of fiber and engaged in more physical activity, both of which are known to reduce the risk of cancer and chronic disease.[101] Participants, more than a third of which were Hispanic and more than half of which were from households with low incomes, also experienced reductions in their levels of stress and anxiety.[102] Low-income immigrants participating in the study also reported that they were able to use their plot to grow food from their home country.[103] Other non-randomized studies suggest that community gardens are associated with higher fruit and vegetable intake, improvement in psychosocial measures, and positive community outcomes.[104,105]

Community and personal gardens have also been incorporated into various programs to support cancer survivors maintain a healthy diet. A series of non-randomized studies of these programs suggest that these gardening initiatives succeed in helping cancer survivors learn about healthy eating habits and consume more fruits and vegetables.[106,107,108,109]

Healthy Retail Policies

Healthy retail policies seek to increase the supply of healthy food options available at local retailers. A wide range of potential policies fall into this category. Local governments can facilitate or incentivize the development of healthy retail businesses—as well as community gardens and local food production—through revisions to their land use, zoning, abandoned property, licensing or leasing, and marketing policies and funding choices.[110] Ordinances that require retailers to stock certain items, limit where unhealthy food items are located, or require retailers to accept SNAP and WIC benefits, for example, may increase the consumption of healthy foods and combat harmful disparities in unhealthy food advertising.[111] Local governments can also make it easier for small growers to sell or donate their harvests by adopting cottage food laws that facilitate the safe sale of lightly processed foods or broadening protections for donation activities to include gleaned produce.[112]

Given the diversity of potential interventions and program structures, evaluating healthy food retail policies presents some challenges. Existing literature generally suggests that interventions in the retail environment are linked to improvements in diet-related health outcomes and increases in both the purchase and consumption of healthier foods.[113,114] However, the use tax credits, zoning incentives, and other financial strategies to encourage the opening of new grocery stores or improvement of existing stores in under-resourced neighborhoods—commonly referred to as healthy food financing initiatives (HFFI)—have shown mixed impacts on the dietary quality and food insecurity of community members.[115,116,117,118,119,120] Additional research is needed to understand when and how HFFI can support the improvement of food environments.

POLICY DEVELOPMENT CONSIDERATIONS

Access

Health Insurance

17.7%
of Hispanic individuals do not have health insurance

19.4%
Central American heritage

20.3%
Mexican heritage

While they display promising potential to help address cancer disparities, FIM programs that require health insurance coverage may fail to reach a significant number of Hispanic cancer survivors. Hispanic individuals have among the highest uninsured rates among U.S. demographic groups. An estimated 17.7% of Hispanic individuals do not have health insurance, 12 percentage points higher than NHW individuals.[121] Some Hispanic subgroups experience even higher uninsured rates. For example, 19.4% of individuals that identify as Central American and 20.3% of individuals that identify as Mexican do not have health insurance.[122]

Hispanic individuals may not have insurance because they work in jobs that do not provide health insurance, live in states that did not expand Medicaid to include those with modest incomes, or otherwise do not qualify for Medicaid or Medicare coverage.[123] Hispanic workers are also less likely to receive employer-sponsored insurance than NHW workers.[124] Compared to lower-income NHW adults, a larger percentage of lower-income Hispanic adults live in states that have not expanded Medicaid.[125] Medicaid and Medicare eligibility restrictions based on immigration status, such as the 5-year waiting period for lawful permanent residents and the lifetime bar on DACA recipients and people without documentation, also limit insurance access among Hispanic immigrants.[126,127] Hispanic immigrants that do qualify for Medicaid and Medicare may also chose not to enroll due to concerns and confusion related to federal public charge rules.[128]

FIM programs that may only be accessed in clinical settings, even if they do not require insurance, potentially reach fewer Hispanics due to less frequent access of health services than the general population, in part due to lower rates of insurance coverage and other factors such as language and cultural barriers.[129,130]

It is important to note, however, that programs do not need to be located within a health care setting or include the active involvement of a medical provider in order to meet the FIM definition. Programs can be structured to allow eligibility to be determined in a community setting, such as a food pantry, based on a previous medical diagnosis without the involvement of a health care provider.[131,132] This model was common in some of the first medically-tailored meal programs, which were created to help address wasting experienced by people living with HIV.[133]

SNAP Enrollment

4 million

estimated number of Hispanic individuals who are eligible for SNAP benefits

Many nutrition incentive programs are only open to people participating in the Supplemental Nutrition Assistance Program (SNAP).[134] Such programs may fail to reach the estimated four million Hispanic individuals who are eligible for SNAP benefits but do not participate, in part due to inadequate outreach and misinformation regarding potential immigration consequences.[135,136]

Nutrition incentive program open to SNAP participants are also unavailable for some individuals due to the same immigration status-based restrictions that apply to Medicaid and Medicare[137] or individuals with certain drug felony convictions.[138] Studies also suggest that awareness of nutrition incentive programs among SNAP participants is also low.[139] Consequently, nutrition incentive programs that do no incorporate SNAP enrollment outreach and do not offer participation alternatives for those that are ineligible for SNAP may further embed health disparities. State and local funding streams may be used to expand nutrition incentive programs to individuals who are not eligible for SNAP. For example, Boulder, Colorado is using tax revenue from a sugar-sweetened beverage tax to support nutrition incentive programs for residents enrolled in SNAP and those who are ineligible for SNAP.[140]

Limitations on Food Options

FIM programs and nutrition incentives, as well as population-level food policies, may seek to encourage healthy eating by limiting the types of foods that patients or residents may choose from. For example, a medically-tailored groceries program may provide a limited set of foods for participants to select from. While tailoring foods to support nutritional needs is generally good, a program that is too restrictive may unintentionally restrict access to culturally relevant foods or foods that may better meet the needs of individuals who are unable to cook (either due to a health condition, equipment limitations, or time constraints) such as prepared foods.

A FIM program that is currently undergoing revisions to address some of these concerns is the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC). The WIC food package meets the definition of a medically tailored groceries program and its monthly voucher for fruits and vegetables also meets the definition of a produce prescription.[141,142] In November of 2022, the U.S. Department of Agriculture's Food and Nutrition Service began the rulemaking process to make changes to the foods prescribed under the WIC program.[143] The proposed rule change includes, among other things, revisions that would give participants a greater variety of fruits, vegetables, and whole grains to accommodate individual and cultural preferences such as quinoa and blue cornmeal.[144] It also includes greater flexibility for WIC state agencies to authorize canned, dried, and frozen legumes, fruits, and vegetables.[145]

Implementation and Enforcement

To address health disparities among cancer survivors, values-based food purchasing and healthy retail policies must be successfully implemented and equitably enforced. Assessing implementation progress and enforcement practices, however, can pose a challenge for program implementers and advocates. In 2012, the city of Los Angeles and the Los Angeles Unified School District Board of Education were the first of several jurisdictions and school districts to adopt the Good Food Purchasing Standards.[146,147,148] However, advocates report that jurisdictions that have adopted these standards, and related policies, have varying levels of commitment to implementation and may be reluctant to share the sourcing information necessary to understand an institution's progress.[149] *Procuring Food Justice*, a report by the Food Chain Workers Alliance and HEAL Food Alliance, offers recommendations for how to improve implementation and enforcement of values-based food procurement policies.[150] The Center for Science in the Public Interest's *Public Policy and the Grocery Store: Improving Access to Healthy Foods* toolkit offers implementation considerations and model language for local policymakers drafting healthy retail ordinances.[151]

Community Engagement and Assessments

Stakeholders interested in supporting food system interventions should prioritize meaningful engagement with all potentially impacted communities throughout every phase of program planning, implementation, and evaluation. Community members offer vital insight into the problems they face, as well as knowledge of cultural norms and context. Engagement with cancer survivors should also be prioritized, given their unique challenges and the potential for stigma around survivorship status to impact their participation in certain programs.[152] Sustained community partnerships can help ensure that an intervention is successful, durable, and does not unintentionally perpetuate inequities.

Working with community members to complete an assessment of their food system, assets, and needs may be an important first step to building trust among stakeholders and identifying potential areas of opportunity. While Hispanic populations are generally more likely to live in under-resourced areas, their communities may also have important assets such as community action groups, farmers' markets, and community gardens that an initiative can support and build upon.[153] Non-profit hospitals are also required under federal law to complete community health needs assessments (CHNAs) every three years.[154] States can help ensure CHNAs include community perspectives by requiring hospitals to consult certain groups, such as medically-underserved communities.[155] Hospitals can use these assessments as an opportunity to ensure they engage Hispanic groups and provide them with the opportunity to inform how health systems design and support food system interventions.

The Equitable Food Access Initiative in Indianapolis, Indiana offers one example of a recent community-based planning process.[156] Funded by LISC Indianapolis, the Anthem Foundation, and the City of Indianapolis, this initiative is working to develop an equitable food access strategy through monthly convenings that include members of eight communities with low food access, city leaders, subject matter experts, and civic organizations.[157] The Healthy Food Policy Project's Food Access Policy Change Through Authentic Resident Engagement resource also offers guidance on principles for inclusive, equity-driven community engagement.[158]

Coordination and Partnership

States, local governments, public health departments, and health care systems can also offer support by coordinating partnerships across organizations to make it easier for programs to access funding, share resources, and utilize collective buying approaches.[159] This may be especially important to the success of initiatives that seek to improve the food items sold by small stores and support small farms unable to source products or meet an institution's procurement requirements due to their size.[160,161] Government agencies, as well as stakeholders including, health care facilities, churches, and schools, can also offer to provide space, funding, and coordination support for the initiative.[162]

Legal Considerations

Jurisdictions seeking to support systems change through the passage of a local ordinance should confirm whether such a law is preempted by federal or state law. While state restrictions on local food policies are not common, a growing number of states have enacted potentially relevant laws preempting certain local laws related to nutrition labeling content or criteria; consumer incentive items; "food-based health disparities"; taxation, distribution, or serving of food and beverages; portion size; food safety; menus; taxes; and marketing.[163,164] In locations where preemption is not yet an issue, community stakeholders may want to prepare to counteract future attempts to preempt local innovation.[165]

Both public and private organizations supporting food system interventions may also need to consider Medicaid and Medicare requirements, patient privacy, and liability protections. For example, programs that involve private or public insurance funding,

such as FIM programs, will need to ensure relevant activities are properly coded, referrals comply with the federal Anti-Kickback Statute, and food assistance does not violate Medicaid and Medicare beneficiary inducements. Federal and state agencies may consider reviewing where they may be able to revise related requirements or issue guidance that supports the success of FIM and nutrition incentive programs.[166]

Program administrators should also consider whether it is necessary to require recipients to provide a form of identification, whether that information will be shared with other entities, and how they can minimize potential concerns about the federal "public charge" rule and immigration enforcement risks. Programs that involve patient referrals must also ensure they comply with the Health Insurance Portability and Accountability Act (HIPAA).

In addition, food production, procurement, and service programs should take steps to protect volunteers, staff, and the organizations involved from liability related to potential injuries or food safety. ChangeLab Solutions' *Legal & Policy Strategies for Health Care & Food System Partners* offers additional discussion and resources on how stakeholders can ensure compliance with these types of legal requirements.

CASE STUDIES

Expanding the Reach of FIM Programs

Two programs based in the city of New York offer examples of how FIM programs can be structured to increase access for uninsured Hispanic cancer survivors, meet the cultural preferences of Hispanic communities, and incorporate local agricultural initiatives. In 2011, Memorial Sloan Kettering Cancer Center's Immigrant Health and Cancer Disparities Service launched a series of medically-tailored food pantries. The program, Food to Overcome Outcome Disparities (FOOD), is supported by a mix of funding from private foundations, donors, as well as partnerships with charitable food organizations, community-based agriculture, and local government agencies.[167] FOOD pantries provide patients with enough groceries for several meals each week.[168] All patients who report a food need may access the pantry, regardless of insurance, income, or immigration status.[169] The pantries are also stocked with culturally relevant food items.[170] Testing by the center has shown that the FOOD pantries significantly improved food security among cancer patients.[171] The center has also established a partnership with the Green Box Machine, a non-profit based in Bronx, NY.[172] Students participating in the Green Box Machine's school-based gardening education program. Provide produce for the FOOD pantries.[173]

Another important example of a FIM project that is seeking to remove barriers to participation and support local agricultural initiatives, as well as incorporate community leadership, is The Corbin Hill Food Project Produce Prescription Program. The Corbin Hill Food Project is one of the first community-based organizations to receive a GusNIP produce prescription grant.[174] This grant seeks to center the perspectives of community members and provide them with an opportunity to make decisions regarding the food programs that support their health.[175] The program seeks to achieve these goals, in part, by (1) seeking the ongoing receipt of feedback of a community council made up of participants tasked with assessing the program's implementation,[176] (2) minimizing participation barriers, and (3) providing culturally centered nutrition education.[177,178] In addition to leading new produce prescriptions, the Corbin Hill Food Project works to aggregate and distribute produce from small-scale producers.[179]

Increasing the Consumption of Healthy Foods and Food Assistance Program Enrollment Through a Retail Collaboration

In El Paso County, Texas, the Paso del Norte Institute for Healthy Living coordinated a community assessment in 2017 that focused on access to healthy and affordable food. Based on this assessment, which included key informant interviews and community member surveys, and a stakeholder convening, a coalition called the In-Store Programming and Outreach Coalition (IPOC) was formed to develop partnerships with food retailers and increase participation in SNAP. Together, coalition members, including the local health department, WIC office, and clinical staff from UTHealth Center for Community Health Impact, coordinated educational programing, food assistance program enrollment outreach, and health screenings inside three local grocery stores each week. First-person accounts from coalition participants, grocery store management, and community members suggest that this collaboration has helped to increase the purchase of healthy foods, enrollment in assistance programs, and diagnosis of health-related food conditions in El Paso County.[180]

CONCLUSION

Building on examples such as those discussed in this brief, national, state, and local stakeholders have several opportunities to work together to support interventions across each level of the Food is Medicine pyramid and build a more equitable food system that meets the needs of Hispanic cancer survivors and the communities that support them. Food is Medicine programs offer promising health care-based pathways for addressing the unique needs of cancer survivors. Nutrition incentive programs and other improvements to government nutrition assistance have the potential to improve the nutritional quality of foods consumed by all households with low incomes. Institutional policy changes, food retail upgrades, and local agriculture initiatives may also help increase access to fruits and vegetables, promote equity and sustainability, and help supply the food needed to support the more targeted interventions. These and other policy interventions, strengthened by community engagement and culturally congruent outreach, are promising tools to address disparities in cancer occurrence and cancer survivorship and promote healthy communities.

RESOURCES FOR FURTHER ACTION AND LEARNING

Cancer Survivorship

American Cancer Society: Nutrition and Physical Activity Guideline for Cancer Survivors
This article provides evidence-based nutrition and physical activity guidelines for cancer survivors.

National Alliance for Hispanic Health: Hablemos sobre la vida con cáncer / Let's Talk About Living With Cancer. This bilingual booklet provides information and resources on cancer survivorship for individuals who have been recently diagnosed with cancer and their families.

Food System Interventions

Centers for Disease Control and Prevention, Division of Nutrition, Physical Activity, and Obesity: State and Local Strategies. This webpage offers information and links to resources on nutrition incentives, produce prescriptions, and food service guidelines.

Center for Science in the Public Interest: Public Policy and the Grocery Store: Improving Access to Healthy Foods. This report includes summaries of academic research, case studies, and model policies related to improving the retail food environment.

ChangeLab Solutions: Legal & Policy Strategies for Health Care and Food System Partners
This guide offers additional information on strategies discussed in this brief and how community members, community-based organizations, health systems, and local governments can work together to promote equitable access to food.

ChangeLab Solutions: Consequences of Preemption for Public Health & Equity
This fact sheet provides information about how preemption may impact local policies that seek to address food-related disparities and promote healthy eating.

[1] https://cancercontrol.cancer.gov/ocs/statistics

[2] See infra notes 20 – 52 & accompanying texts.

[3] Mozaffarian, D., Blanck, H.M., Garfield, K.M. et al. A Food is Medicine approach to achieve nutrition security and improve health. Nat Med 28, 2238–2240 (2022). https://doi.org/10.1038/s41591-022-02027-3

[4] American Cancer Society. *Cancer Facts & Figures for Hispanic/Latino People 2021-2023.* Atlanta: American Cancer Society, Inc. 2021. https://www.cancer.org/content/dam/cancer-org/research/cancer-facts-and-statistics/cancer-facts-and-figures-for-hispanics-and-latinos/hispanic-latino-2021-2023-cancer-facts-and-figures.pdf.

[5] *Id.*

[6] Llanos AAM, Ashrafi A, Ghosh N, et al. Evaluation of Inequities in Cancer Treatment Delay or Discontinuation Following SARS-CoV-2 Infection. *JAMA Netw Open.* 2023;6(1):e2251165. doi:10.1001/jamanetworkopen.2022.51165

[7] American Cancer Society. *Cancer Facts & Figures for Hispanic/Latino People 2021-2023.* Atlanta: American Cancer Society, Inc. 2021. https://www.cancer.org/content/dam/cancer-org/research/cancer-facts-and-statistics/cancer-facts-and-figures-for-hispanics-and-latinos/hispanic-latino-2021-2023-cancer-facts-and-figures.pdf.

[8] Llanos AAM, Ashrafi A, Ghosh N, et al. Evaluation of Inequities in Cancer Treatment Delay or Discontinuation Following SARS-CoV-2 Infection. *JAMA Netw Open.* 2023;6(1):e2251165. doi:10.1001/jamanetworkopen.2022.51165.

[9] Fasano GA, Bayard S, Gillot T, Hannibal Z, Pedreira M, Newman L. Disparities in Time to Treatment for Breast Cancer: Existing Knowledge and Future Directions in the COVID-19 Era. *Curr Breast Cancer Rep.* 2022;14(4):213-221. doi:10.1007/s12609-022-00469-9.

[10] *Id.*

[11] Yanez, B., McGinty, H. L., Buitrago, D., Ramirez, A. G., & Penedo, F. J. Cancer Outcomes in Hispanics/Latinos in the United States: An integrative review and conceptual model of determinants of health. *Journal of Latina/o psychology.* 2016; 4(2), 114. doi:10.1037/lat0000055.

[12] Amelie G. Ramirez, Kipling J. Gallion, Arely Perez, Edgar Munoz, Dorothy Long Parma, Patricia I. Moreno, Frank J. Penedo, Improving quality of life among latino cancer survivors: Design of a randomized trial of patient navigation,Contemporary Clinical Trials, Volume 76, 2019, Pages 41-48, ISSN 1551-7144, https://doi.org/10.1016/j.cct.2018.11.002. (https://www.sciencedirect.com/science/article/pii/S1551714418305202)

[13] Joshua P. Kronenfeld, Kristi D. Graves, Frank J. Penedo, Betina Yanez, Overcoming Disparities in Cancer: A Need for Meaningful Reform for Hispanic and Latino Cancer Survivors, *The Oncologist*, Volume 26, Issue 6, June 2021, Pages 443–452, https://doi.org/10.1002/onco.13729.

[14] Haile R, John E M., Levine A J, et al. A Review of Cancer in U.S. Hispanic Populations. *Cancer Prev Res (Phila)* 1 February 2012; 5 (2): 150–163. https://doi.org/10.1158/1940-6207.CAPR-11-0447.

[15] Miller, K. D., Ortiz, A. P., Pinheiro, et al. Cancer Statistics for the US Hispanic/Latino Population. *CA: a Cancer Journal for Clinicians.* 2021; 71(6), 466-487.

[16] Yanez, B., McGinty, H. L., Buitrago, D., Ramirez, A. G., & Penedo, F. J. Cancer Outcomes in Hispanics/Latinos in the United States: An integrative review and conceptual model of determinants of health. *Journal of Latina/o psychology.* 2016; 4(2), 114. doi:10.1037/lat0000055.

[17] *Id.*

[18] Yanez B, McGinty HL, Buitrago D, Ramirez AG, Penedo FJ. Cancer Outcomes in Hispanics/Latinos in the United States: An Integrative Review and Conceptual Model of Determinants of Health. *J Lat Psychol.* 2016;4(2):114-129. doi:10.1037/lat0000055

[19] Miller, K. D., Ortiz, A. P., Pinheiro, et al. Cancer Statistics for the US Hispanic/Latino Population. *CA: a Cancer Journal for Clinicians.* 2021; 71(6), 466-487.

[20] American Cancer Society. *Cancer Facts & Figures for Hispanic/Latino People 2021-2023.* Atlanta: American Cancer Society, Inc. 2021. https://www.cancer.org/content/dam/cancer-org/research/cancer-facts-and-statistics/cancer-facts-and-figures-for-hispanics-and-latinos/hispanic-latino-2021-2023-cancer-facts-and-figures.pdf.

[21] Wolf P.G., Sanchez-Flack J.C., Buscemi J., Marian L, et al. Support Policies that Foster a Healthy Food Environment and Incentivize Healthy Food Purchases to Mitigate Cancer Inequities, *Translational Behavioral Medicine,* Volume 11, Issue 12, December 2021, Pages 2123–2126, https://doi.org/10.1093/tbm/ibab081.

[22] Islami F, Goding Sauer A, Miller KD, et al. Proportion and number of cancer cases and deaths attributable to potentially modifiable risk factors in the United States. CA Cancer J Clin. 2018;68(1):31–54; https://www.cancer.org/content/dam/cancer-org/research/cancer-facts-and-statistics/annual-cancer-facts-and-figures/2022/2022-cancer-facts-and-figures.pdf.

[23] Zhang FF, Cudhea F, Shan Z, et al. Preventable Cancer Burden Associated With Poor Diet in the United States. *JNCI Cancer Spectr.* 2019;3(2):pkz034. Published 2019 May 22. doi:10.1093/jncics/pkz034.

[24] Islami F, Goding Sauer A, Miller KD, et al. Proportion and number of cancer cases and deaths attributable to potentially modifiable risk factors in the United States. CA Cancer J Clin. 2018;68(1):31–54.

[25] World Cancer Research Fund/American Institute for Cancer Research. Diet, Nutrition, Physical Activity and Cancer: A Global Perspective. Continuous Update Project Expert Report. 2018. https://www.wcrf.org/diet-and-cancer/.

[26] American Cancer Society. *Cancer Facts & Figures for Hispanic/Latino People 2021-2023.* Atlanta: American Cancer Society, Inc. 2021. https://www.cancer.org/content/dam/cancer-org/research/cancer-facts-and-statistics/cancer-facts-and-figures-for-hispanics-and-latinos/hispanic-latino-2021-2023-cancer-facts-and-figures.pdf.

[27] Keaver L, Yiannakou I, Folta SC, Zhang FF. Perceptions of Oncology Providers and Cancer Survivors on the Role of Nutrition in Cancer Care and Their Views on the "NutriCare" Program. Nutrients. 2020;12(5):1277. Published 2020 Apr 30. doi:10.3390/nu12051277.

[28] Raber M, Jacson A, Basen-Engquist K, et al, Food Insecurity Among People With Cancer: Nutritional Needs as an Essential Component of Care, *JNCI: Journal of the National Cancer Institute,* Volume 114, Issue 12, December 2022, Pages 1577–1583, https://doi.org/10.1093/jnci/djac135.

[29] Steck SE, Murphy EA. Dietary patterns and cancer risk. *Nat Rev Cancer.* 2020;20(2):125-138. doi:10.1038/s41568-019-0227-4.

[30] Castro-Espin C, Agudo A. The Role of Diet in Prognosis among Cancer Survivors: A Systematic Review and Meta-Analysis of Dietary Patterns and Diet Interventions. *Nutrients.* 2022;14(2):348. Published 2022 Jan 14. doi:10.3390/nu14020348.

[31] Coughlin, S. S. "Food insecurity among cancer patients: a systematic review." Int J Food Nutr Sci 8.1 (2021): 41-45.

[32] *Id.*

[33] American Cancer Society. Nutrition for People with Cancer. https://www.cancer.org/content/dam/CRC/PDF/Public/6711.00.pdf.

[34] Raber M, Jacson A, Basen-Engquist K, et al, Food Insecurity Among People With Cancer: Nutritional Needs as an Essential Component of Care, *JNCI: Journal of the National Cancer Institute*, Volume 114, Issue 12, December 2022, Pages 1577–1583, https://doi.org/10.1093/jnci/djac135.

[35] American Cancer Society Cancer Action Network. The Costs of Cancer in the Hispanic/Latino Community. https://www.fightcancer.org/policy-resources/costs-cancer-hispaniclatino-community-0.

[36] McDougall JA, Anderson J, Adler Jaffe S, et al. Food Insecurity and Forgone Medical Care Among Cancer Survivors. JCO Oncol Pract. 2020;16(9):e922-e932. doi:10.1200/JOP.19.00736.

[37] *Id.*

[38] *Id.*

[39] Morze J, Danielewicz A, Hoffmann G, Schwingshackl L. Diet Quality as Assessed by the Healthy Eating Index, Alternate Healthy Eating Index, Dietary Approaches to Stop Hypertension Score, and Health Outcomes: A Second Update of a Systematic Review and Meta-Analysis of Cohort Studies. *J Acad Nutr Diet.* 2020;120(12): 1998-2031e1915.

[40] Bevel MS, Tsai M, Parham A, Andrzejak SE, Jones S, Moore JX. Association of Food Deserts and Food Swamps With Obesity-Related Cancer Mortality in the US. *JAMA Oncol.* Published online May 04, 2023. doi:10.1001/jamaoncol.2023.0634.

[41] Keaver L, Yiannakou I, Folta SC, Zhang FF. Perceptions of Oncology Providers and Cancer Survivors on the Role of Nutrition in Cancer Care and Their Views on the "NutriCare" Program. Nutrients. 2020;12(5):1277. Published 2020 Apr 30. doi:10.3390/nu12051277

[42] Camacho-Rivera M, Islam JY, Rodriguez DR, Vidot DC, Bailey Z. Food Insecurity Disparities and Mental Health Impacts Among Cancer Survivors During the COVID-19 Pandemic. *Health Equity.* 2022;6(1):729-737. doi:10.1089/heq.2021.0120.

[43] Houghtaling B, Greene M, Parab KV, Singleton CR. Improving Fruit and Vegetable Accessibility, Purchasing, and Consumption to Advance Nutrition Security and Health Equity in the United States. *International Journal of Environmental Research and Public Health.* 2022; 19(18):11220. https://doi.org/10.3390/ijerph191811220.

[44] Wolf P.G., Sanchez-Flack J.C., Buscemi J., Marian L, et al. Support Policies that Foster a Healthy Food Environment and Incentivize Healthy Food Purchases to Mitigate Cancer Inequities, *Translational Behavioral Medicine,* Volume 11, Issue 12, December 2021, Pages 2123–2126, https://doi.org/10.1093/tbm/ibab081.

[45] Houghtaling B, Greene M, Parab KV, Singleton CR. Improving Fruit and Vegetable Accessibility, Purchasing, and Consumption to Advance Nutrition Security and Health Equity in the United States. *International Journal of Environmental Research and Public Health.* 2022; 19(18):11220. https://doi.org/10.3390/ijerph191811220.

[46] Wolf P.G., Sanchez-Flack J.C., Buscemi J., Marian L, et al. Support Policies that Foster a Healthy Food Environment and Incentivize Healthy Food Purchases to Mitigate Cancer Inequities, *Translational Behavioral Medicine,* Volume 11, Issue 12, December 2021, Pages 2123–2126, https://doi.org/10.1093/tbm/ibab081.

[47] Morales DX, Morales SA, Beltran TF. Racial/Ethnic Disparities in Household Food Insecurity During the COVID-19 Pandemic: a Nationally Representative Study. *J Racial Ethn Health Disparities.* 2021;8(5):1300-1314. doi:10.1007/s40615-020-00892-7.

[48] U.S. Department of Agriculture. Key Statistics & Graphics. https://www.ers.usda.gov/topics/food-nutrition-assistance/food-security-in-the-u-s/key-statistics-graphics/

[49] *Id*

[50] Fejerman L, Ramirez AG, Nápoles AM, Gomez SL, Stern MC. Cancer Epidemiology in Hispanic Populations: What Have We Learned and Where Do We Need to Make Progress?. *Cancer Epidemiol Biomarkers Prev.* 2022;31(5):932-941. doi:10.1158/1055-9965.EPI-21-1303

[51] Robien K, Clausen M, Sullo E, et al. Prevalence of Food Insecurity Among Cancer Survivors in the United States: A Scoping Review. *J Acad Nutr Diet.* 2023;123(2):330-346. doi:10.1016/j.jand.2022.07.004.

[52] Raber M, Jacson A, Basen-Engquist K, et al, Food Insecurity Among People With Cancer: Nutritional Needs as an Essential Component of Care, *JNCI: Journal of the National Cancer Institute,* Volume 114, Issue 12, December 2022, Pages 1577–1583, https://doi.org/10.1093/jnci/djac135.

[53] American Cancer Society Cancer Action Network. The Costs of Cancer in the Hispanic/Latino Community. https://www.fightcancer.org/policy-resources/costs-cancer-hispaniclatino-community-0.

[54] Gany F, Leng J, Ramirez J, Phillips S, Aragones A, Roberts N, et al. Health-Related Quality of Life of Food-Insecure Ethnic Minority Patients With Cancer. J Oncol Pract 2015;11(5):396–402 doi 10.1200/JOP.2015.003962.

[55] Coughlin, S. S. "Food insecurity among cancer patients: a systematic review." *Int J Food Nutr Sci* 8.1 (2021): 41-45.

[56] Mavegam Tango Assoumou BO, Coughenour C, Godbole A, McDonough I. Senior food insecurity in the USA: a systematic literature review. Public Health Nutr. 2023;26(1):229-245. Doi:10.1017/S1368980022002415.

[57] Joshua P. Kronenfeld, Kristi D. Graves, Frank J. Penedo, Betina Yanez, Overcoming Disparities in Cancer: A Need for Meaningful Reform for Hispanic and Latino Cancer Survivors, *The Oncologist,* Volume 26, Issue 6, June 2021, Pages 443–452, https://doi.org/10.1002/onco.13729.

[58] Fejerman L, Ramirez AG, Nápoles AM, Gomez SL, Stern MC. Cancer Epidemiology in Hispanic Populations: What Have We Learned and Where Do We Need to Make Progress?. *Cancer Epidemiol Biomarkers Prev.* 2022;31(5):932-941. doi:10.1158/1055-9965.EPI-21-1303.)

[59] Siega-Riz AM, Pace ND, Butera NM, et al. How Well Do U.S. Hispanics Adhere to the Dietary Guidelines for Americans? Results from the Hispanic Community Health Study/Study of Latinos. *Health Equity.* 2019;3(1):319-327. Published 2019 Jul 11. doi:10.1089/heq.2018.0105

[60] https://www.ers.usda.gov/amber-waves/2016/july/food-insecurity-and-hispanic-diversity/

[61] Abraído-Lanza AF, Echeverría SE, Flórez KR. Latino Immigrants, Acculturation, and Health: Promising New Directions in Research. *Annu Rev Public Health.* 2016;37:219-236. doi:10.1146/annurev-publhealth-032315-02154

[62] *Id.*

[63] *Id.*

[64] Lara M, Gamboa C, Kahramanian MI, Morales LS, Bautista DE. Acculturation and Latino health in the United States: a review of the literature and its sociopolitical context. *Annu Rev Public Health.* 2005;26:367-397. doi:10.1146/annurev.publhealth.26.021304.144615

[65] ChangeLab Solutions. *Blueprint for Changemakers.* 2019. https://www.changelabsolutions.org/product/blueprint-changemakers.

[66] Downer S, Clippinger E, Kummer C. *Food is Medicine Research Action Plan.* 2022. 24. https://www.aspeninstitute.org/wp-content/uploads/2022/01/Food-is-Medicine-Action-Plan-Final_012722.pdf.

[67] *Id.* at 25.

[68] *Id.* at 36.

[69] *Id.* at 30.

[70] *Id.* at 30-34.

[71] *Id.* at 5, 62-65.

[72] Ishaq O, Vega RM, Zullig L, Wassung A, Walters D, Du NBL, Ahn J, Leichman CG, Cohen DJ, Gu P, Chachoua A, Leichman LP, Pearl K and Schiff PB. Food as medicine: A randomized controlled trial (RCT) of home delivered, medically tailored meals (HDMTM) on quality of life (QoL) in metastatic lung and non-colorectal GI cancer patients. *Journal of Clinical Oncology.* 2016;34. DOI: 10.1200/jco.2016.34.26_suppl.155.

[73] *Id.* at. 6, 72-78.

[74] Perez-Lopez D. *Who Are the Millions Who Receive Nutrition Assistance?.* U.S. Census Bureau. Mar. 10, 2020. https://www.census.gov/library/stories/2020/03/who-are-the-millions-who-receive-nutrition-assistance.html.

[75] Unidos US. *Latinos Remain Disproportionately Impacted by Food Insecurity. USDA Can Make Progress on Equity and Racial Justice.* Sept. 28, 2022. https://unidosus.org/blog/2022/09/28/latinos-remain-disproportionately-impacted-by-food-insecurity-usda-can-make-progress-on-equity-and-racial-justice/.

[76] *Id.*

[77] U.S. Department of Agriculture. Key Statistics & Graphics. https://www.ers.usda.gov/topics/food-nutrition-assistance/food-security-in-the-u-s/key-statistics-graphics/

[78] Raber M, Jacson A, Basen-Engquist K, et al, Food Insecurity Among People With Cancer: Nutritional Needs as an Essential Component of Care, *JNCI: Journal of the National Cancer Institute*, Volume 114, Issue 12, December 2022, Pages 1577–1583, https://doi.org/10.1093/jnci/djac135.

[79] Gany F, Melnic I, Ramirez J, et al. Food Insecurity among Cancer Patients Enrolled in the Supplemental Nutrition Assistance Program (SNAP). *Nutr Cancer.* 2021;73(2):206-214. doi:10.1080/01635581.2020.1743867.

[80] Nisbett N., Harris J., Backholer K., Baker P., Jernigan V.B.B., Friel S. Holding No-one Back: The Nutrition Equity Framework in Theory and Practice. Glob Food Sec. 2022;32. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9425110/.

[81] University of Wisconsin Population Health Institute. Fruit & vegetable Incentive Programs. 2023. https://www.countyhealthrankings.org/take-action-to-improve-health/what-works-for-health/strategies/fruit-vegetable-incentive-programs.

[82] *Id.*

[83] *Id.*

[84] U.S. Department of Agriculture. *Gus Schumacher Nutrition Incentive Program.* https://www.fns.usda.gov/snap/gusnip-grant-program.

[85] Engel, K.; Ruder E.H. (2020). Fruit and vegetable incentive programs for Supplemental Nutrition Assistance Program (SNAP) participants: A scoping review of program structure. *Nutrients*, 12(6):1676. https://doi.org/10.3390/nu12061676.

[86] Verghese, A.; Raber, M.; Sharma, S. (2019). Interventions targeting diet quality of Supplemental Nutrition Assistance Program (SNAP) participants: A scoping review. *Prev. Med.,* 119, 77–86. https://doi.org/10.1016/j.ypmed.2018.12.006

[87] Parks, C. A.; Stern, K. L.; Fricke, H. E.; Clausen, W.; Yaroch, A. L. (2020). Healthy Food Incentive Programs: Findings from Food Insecurity Nutrition Incentive Programs across the United States. *Health Promot.* Pract., 21(3), 421–429. https://doi.org/10.1177/1524839919898207.

[88] Thilmany, D.; Bauman, A.; Love, E.; Jablonski, B.B.R. *The Economic Contributions of Healthy Food Incentives.* 2021. https://www.spur.org/sites/default/files/2021-02/economic_contributions_incentives_2_2_21.pdf.

[89] ChangeLab Solutions. *Modeling Healthy Institutional Purchasing & Sales.* 2021. https://www.changelabsolutions.org/sites/default/files/2021-05/CLS-BG243-3-Modeling-Healthy-Institutional-Purchasing-Sales_FINAL_ACCESS_20210525.pdf.

[90] Niebylski ML, Lu T, Campbell NRC, Arcand J, Schermel A, Hua D, Yeates KE, Tobe SW, Twohig PA, L'Abbé MR, Liu PP. Healthy Food Procurement Policies and Their Impact. *International Journal of Environmental Research and Public Health.* 2014; 11(3):2608-2627. https://doi.org/10.3390/ijerph110302608

[91] Abrahams-Gessel, Shafika, et al. "Implementing federal food service guidelines in federal and private worksite cafeterias in the United States leads to improved health outcomes and is cost saving." *Journal of public health policy* 43.2 (2022): 266-280. https://link.springer.com/article/10.1057/s41271-022-00344-y

[92] Zhao J, Han X, Zheng Z, Nogueira L, Lu AD, Nathan PC, Yabroff KR. Racial/Ethnic Disparities in Childhood Cancer Survival in the United States. Cancer Epidemiol Biomarkers Prev. 2021 Nov;30(11):2010-2017. doi: 10.1158/1055-9965.EPI-21-0117. Epub 2021 Sep 30. PMID: 34593561.

[93] Reeves TJ, Mathis TJ, Bauer HE, et al. Racial and Ethnic Disparities in Health Outcomes Among Long-Term Survivors of Childhood Cancer: A Scoping Review. *Front Public Health.* 2021;9:741334. Published 2021 Oct 29. doi:10.3389/fpubh.2021.741334

[94] Liu J, Micha R, Li Y, Mozaffarian D. Trends in Food Sources and Diet Quality Among US Children and Adults, 2003-2018. *JAMA Netw Open.* 2021;4(4):e215262. doi:10.1001/jamanetworkopen.2021.5262

[95] Micha R, Karageorgou D, Bakogianni I et al. Effectiveness of School Food Environment Policies on Children's Dietary Behaviors: A Systematic Review and Meta-analysis. PloS one. 2018;13(3):e0194555

[96] *Id.*

[97] https://gfpp.app.box.com/s/w74zifuai2lbdkk3jxd1u88579s4vj2v

[98] Center for Good Food Purchasing. *The Program.* https://goodfoodpurchasing.org/program-overview/.

[99] Centers for Disease Control. Food Service Guidelines. https://www.cdc.gov/nutrition/food-service-guidelines/index.html.

[100] ChangeLab Solutions. Supporting Local Food Production and Retail. https://www.changelabsolutions.org/sites/default/files/2021-05/CLS-BG243-4-Supporting-Local-Food-Production-Retail_FINAL_ACCESS_20210525_.pdf

[101] Litt JS, Alaimo K, Harrall KK, et al. Effects of a community gardening intervention on diet, physical activity, and anthropometry outcomes in the USA (CAPS): an observer-blind, randomised controlled trial. Lancet Planet Health. 2023;7(1):e23-e32. doi:10.1016/S2542-5196(22)00303-5.

[102] Litt JS, Alaimo K, Harrall KK, et al. Effects of a community gardening intervention on diet, physical activity, and anthropometry outcomes in the USA (CAPS): an observer-blind, randomised controlled trial. *Lancet Planet Health.* 2023;7(1):e23-e32. doi:10.1016/S2542-5196(22)00303-5.

[103] News Medical. *Community gardening could play an important role in preventing cancer and mental health disorders.* Jan. 6, 2023. https://www.news-medical.net/news/20230106/Community-gardening-could-play-an-important-role-in-preventing-cancer-and-mental-health-disorders.aspx

[104] Hume C, Grieger JA, Kalamkarian A, D'Onise K, Smithers LG. Community gardens and their effects on diet, health, psychosocial and community outcomes: a systematic review. *BMC Public Health.* 2022;22(1):1247. doi:10.1186/s12889-022-13591-1.

[105] Stluka S, McCormack LA, Burdette L, et al. Gardening for Health: Using Garden Coordinators and Volunteers to Implement Rural School and Community Gardens. *Prev Chronic Dis.* 2019;16:E156. doi:10.5888/pcd16.190117.

[106] Cases, M.G., Blair, C.K., Hendricks, *P.S. et al. Sustainability capacity of a vegetable gardening intervention for cancer survivors. BMC Public Health* 22, 1238 (2022). https://doi.org/10.1186/s12889-022-13644-5;

[107] Winkels RM, Artrip R, Tupinio M, Veldheer S, Dandekar SC, George DR. Opportunities for Growth: Evaluating the Feasibility of a Community Gardening Intervention Pairing Adolescent and Young Adult Cancer Survivors with Experienced Gardeners. *J Adolesc Young Adult Oncol.* 2020;9(1):115-119.

[108] *Spees CK, Joseph A, Darragh A, Lyons F, Wolf KN. Health behaviors and perceptions of cancer survivors harvesting at an urban garden. Am J Health Behav.* 2015;39(2):257-266. doi:10.5993/AJHB.39.2.12.

[109] Hilary Y Ma, Avni P Mody, Janelle Lustgarten, Lisa Ronning, Rebecca Verm, Thomas Garcia-Prats, Michelle Seitzinger; Abstract C032: A hospital farm: Using urban agriculture to address nutrition, physical activity, and food insecurity in cancer survivors. *Cancer Epidemiol Biomarkers Prev* 1 June 2020; 29 (6_Supplement_2): C032. https://doi.org/10.1158/1538-7755.DISP19-C032.

[110] *Id.*

[111] https://www.cspinet.org/sites/default/files/2023-03/Healthy%20Retail%20Toolkit%202023.pdf

[112] *Id.*

[113] Mah CL, Luongo G, Hasdell R, Taylor NGA, Lo BK. A Systematic Review of the Effect of Retail Food Environment Interventions on Diet and Health with a Focus on the Enabling Role of Public Policies. *Curr Nutr Rep.* 2019;8(4):411-428. doi:10.1007/s13668-019-00295-z .

[114] Wolgast H, Halverson MM, Kennedy N, Gallard I, Karpyn A. Encouraging Healthier Food and Beverage Purchasing and Consumption: A Review of Interventions within Grocery Retail Settings. *International Journal of Environmental Research and Public Health.* 2022; 19(23):16107. https://doi.org/10.3390/ijerph192316107 .

[115] Mah CL, Luongo G, Hasdell R, Taylor NGA, Lo BK. A Systematic Review of the Effect of Retail Food Environment Interventions on Diet and Health with a Focus on the Enabling Role of Public Policies. *Curr Nutr Rep.* 2019;8(4):411-428. doi:10.1007/s13668-019-00295-z

[116] http://salud-america.org/wp-content/uploads/2017/08/Better-Food-Research-Review.pdf

[117] Elbel B, Mijanovich T, Kiszko K, Abrams C, Cantor J, Dixon LB. The Introduction of a Supermarket via Tax-Credits in a Low-Income Area. *Am J Health Promot.* 2017;31(1):59-66. doi:10.4278/ajhp.150217-QUAN-733

[118] Dubowitz T, Ghosh-Dastidar M, Cohen DA, et al. Diet And Perceptions Change With Supermarket Introduction In A Food Desert, But Not Because Of Supermarket Use. Health Aff (Millwood). Nov 2015;34(11):1858-68

[119] Ortega AN, Albert SL, Chan-Golston AM, et al. Substantial improvements not seen in health behaviors following corner store conversions in two Latino food swamps. *BMC Public Health.* 2016;16:389. Published 2016 May 11. doi:10.1186/s12889-016-3074-1

[120] Allcott H, et al. Food Deserts and the Causes of Nutritional Inequality. *The Quarterly Journal of Economics.* 2019;134(4):1793-1844.

[121] https://www.census.gov/content/dam/Census/library/publications/2022/acs/acsbr-012.pdf

[122] https://minorityhealth.hhs.gov/omh/browse.aspx?lvl=3&lvlid=64

[123] https://www.commonwealthfund.org/publications/issue-briefs/2023/mar/inequities-coverage-access-black-hispanic-adults

[124] https://aspe.hhs.gov/sites/default/files/documents/68c78e2fb15209dd191cf9b0b1380fb8/ASPE_Latino_Health_Coverage_IB.pdf

[125] Id.

[126] National Immigration Law Center. Overview of Immigrant Eligibility for Federal Programs. Mar. 2023. https://www.nilc.org/issues/economic-support/overview-immeligfedprograms/.

[127] https://www.kff.org/racial-equity-and-health-policy/fact-sheet/health-coverage-and-care-of-immigrants/

[128] https://www.kff.org/uninsured/issue-brief/key-facts-about-the-uninsured-population/

[129] https://aspe.hhs.gov/sites/default/files/documents/68c78e2fb15209dd191cf9b0b1380fb8/ASPE_Latino_Health_Coverage_IB.pdf

[130] https://www.pewresearch.org/science/2022/06/14/hispanic-americans-experiences-with-health-care/

[131] Downer S, Clippinger E, Kummer C. Food is Medicine Research Action Plan. 2022. 24. https://www.aspeninstitute.org/wp-content/uploads/2022/01/Food-is-Medicine-Action-Plan-Final_012722.pdf.

[132] For a recent example of a medically tailored groceries program that was located in a food pantry and targeted uninsured individuals, see Seligman HK, Smith M, Rosenmoss S, Marshall MB, Waxman E. Comprehensive diabetes self-management support from food banks: A randomized controlled trial. Am J Public Health. 2018;108(9):1227-1234. doi:10.2105/AJPH.2018.304528

[133] Downer S, Clippinger E, Kummer C. *Food is Medicine Research Action Plan.* 2022. 24. https://www.aspeninstitute.org/wp-content/uploads/2022/01/Food-is-Medicine-Action-Plan-Final_012722.pdf.

[134] https://www.cspinet.org/sites/default/files/2022-11/Towards%20a%20more%20equitable%20Gus%20Schumacher%20Nutrition%20Incentive%20Program%20%28GusNIP%29-%20Recommendations%20for%20program%20reauthorization%20and%20implementation.pdf

[135] Unidos US. *Latinos Remain Disproportionately Impacted by Food Insecurity.* USDA Can Make Progress on Equity and Racial Justice. Sept. 28, 2022. https://unidosus.org/blog/2022/09/28/latinos-remain-disproportionately-impacted-by-food-insecurity-usda-can-make-progress-on-equity-and-racial-justice/.

[136] Ashbrook A, Beaudoin S, Decreases in Eligible Immigrants' SNAP Participation Show There's More Work to Be Done. Food Research & Action Center. Jan. 26, 2023. https://frac.org/blog/snap-eligible-immigrant-families-part-one.

[137] National Immigration Law Center. Overview of Immigrant Eligibility for Federal Programs. Mar. 2023. https://www.nilc.org/issues/economic-support/overview-immeligfedprograms/.

[138] Center for Science in the Public Interest. SNAP Access and Utilization. Mar. 2022. https://www.cspinet.org/sites/default/files/2022-03/SNAP_Access_and_Utilization.pdf.

[139] https://www.cspinet.org/sites/default/files/2022-11/Towards%20a%20more%20equitable%20Gus%20Schumacher%20Nutrition%20Incentive%20Program%20%28GusNIP%29-%20Recommendations%20for%20program%20reauthorization%20and%20implementation.pdf

[140] https://chlpi.org/wp-content/uploads/2013/12/Produce-RX-March-2021.pdf

[141] Downer S, Clippinger E, Kummer C. Food is Medicine Research Action Plan. 2022. 30. https://www.aspeninstitute.org/wp-content/uploads/2022/01/Food-is-Medicine-Action-Plan-Final_012722.pdf.

[142] https://chlpi.org/wp-content/uploads/2013/12/Produce-RX-March-2021.pdf 27

[143] https://www.usda.gov/media/press-releases/2022/11/17/usda-proposes-science-driven-updates-foods-provided-through-wic

[144] https://www.federalregister.gov/documents/2022/11/21/2022-24705/special-supplemental-nutrition-program-for-women-infants-and-children-wic-revisions-in-the-wic-food

[145] https://www.federalregister.gov/documents/2022/11/21/2022-24705/special-supplemental-nutrition-program-for-women-infants-and-children-wic-revisions-in-the-wic-food

[146] Daniels P and Delwiche A. *Future Policy Award 2018: The Good Food Purchasing Program.* Front. Sustain. Food Syst. 2022; 5:576776. doi: 10.3389/fsufs.2021.576776.

[147] City of Los Angeles. Executive Directive No. 24: Good Food Purchasing Policy. Oct. 24, 2012. https://lacity.gov/sites/g/files/wph1706/files/2021-04/villaraigosa_ed24.pdf.

[148] City of Los Angeles Unified School District Board of Education. *Resolution 035-14/15: Good Food Procurement 2014.* 2014. https://achieve.lausd.net/cms/lib/CA01000043/Centricity/Domain/126/Good_Food_2014.pdf

[149] https://procuringfoodjustice.org/

[150] https://procuringfoodjustice.org/

[151] https://www.cspinet.org/sites/default/files/2023-03/Healthy%20Retail%20Toolkit%202023.pdf

[152] Stolley, Melinda R; Beyer, Kirsten; Gann, Peter; Sheean, Patricia. Context is Key in Addressing Obesity and Lifestyle in Diverse Populations of Cancer Survivors. *Obesity.* 2017; 25, S25-S26. DOI:10.1002/oby.22019.

[153] *Id.*

[154] https://foodcommunitybenefit.noharm.org/resources/community-health-needs-assessment/engaging-community-understand-food-needs

[155] https://nashp.org/how-states-keep-community-at-the-center-of-hospitals-community-health-needs-assessments/

[156] Equitable Food Access Initiative. *About the Initiative.* https://www.equitablefoodaccess.org/about.

[157] *Id.*

[158] https://healthyfoodpolicyproject.org/authentic-resident-engagement

[159] Centers for Disease Control. *Priority Nutrition Strategy: Fruit and Vegetable Voucher Incentives and Produce Prescriptions.* https://www.cdc.gov/nutrition/state-and-local-strategies/priority-incentives-prescriptions.html. Last updated Dec 21 2022.

[160] https://www.sacurrent.com/food-drink/sprouting-up-after-a-slow-start-the-healthy-corner-stores-initiative-is-planting-oases-in-food-deserts-30990279

[161] https://www.cdc.gov/nccdphp/dnpao/state-local-programs/pdf/healthier-food-retail-guide-full.pdf

[162] *Id.*

[163] ChangeLab Solutions. *Consequences of Preemption for Public Health & Equity* https://www.changelabsolutions.org/sites/default/files/2020-08/Consequences_of_Preemption_FINAL_Accessible_20200710.pdf.

[164] Pomeranz JL, Zellers L, Bare M, Pertschuk M. State Preemption of Food and Nutrition Policies and Litigation: Undermining Government's Role in Public Health. *Am J Prev Med.* 2019;56(1):47-57. doi:10.1016/j.amepre.2018.07.027

[165] The Local Solutions Support Center offers updates on emerging preemption threats and resources for campaigns seeking to preserve local authority. Local Solutions Support Center. Resources. https://www.supportdemocracy.org/resources.

[166] See, e.g., recommendations on pages 45-46 of https://chlpi.org/wp-content/uploads/2013/12/Produce-RX-March-2021.pdf.

[167] Gany, F.M., Pan, S., Ramirez, J., & Paolantonio, L. (2020). Development of a Medically Tailored Hospital-based Food Pantry System. *Journal of Health Care for the Poor and Underserved* 31(2), 595-602. doi:10.1353/hpu.2020.0047.

[168] *Id.*

[169] Gany F, Bari S, Crist M, Moran A, Leng J. Food insecurity: Limitations of emergency food resources for our patients.J Urban Health. 2013; 90(3):552-8.

[170] *Id.*

[171] Gany F, Melnic I, Wu M, et al. Food to overcome outcomes disparities: food insecurity interventions to improve cancer outcomes. J Clin Oncol. 2022; doi:10.1200/JCO.21.02400.

[172] Garchitorena, M. Bringing Fresh Food to Underserved People with Cancer. June 28, 2019. https://www.mskcc.org/news/bringing-fresh-food-underserved-people.

[173] *Id.*

[174] Corbin Hill Food Project. *Press Release*: *Food As Medicine Project brings Farm Fresh Produce to Upper Manhattan and Bronx Residents.* May 17, 2022. https://corbinhill-foodproject.org/newsletters/2022/5/16/press-release-food-as-medicine.

[175] Corbin Hill Food Project. Press Release: Food as Medicine Project Centers Community Needs With Additional $500K Secured for Produce Prescription Program in Upper Manhattan and Bronx. Oct. 24, 2022. https://corbinhill-foodproject.org/newsletters/2022/10/13/press-release-food-as-medicine-project-enhancement-grant.

[176] *Id.*

[177] *Id.*

[178] https://nutritionincentivehub.org/news-events/news/corbin-hill-food-project-chfp

[179] https://procuringfoodjustice.org/

[180] Nyachoti DO, Redelfs AH, Brown LD, Garcia EB, Garcia E, Loweree CA, Del Rio K, Del Toro D, Vasquez D, Gallegos GA, Kelly MP, Whigham LD. Nutrition and Health Programming and Outreach in Grocery Retail Settings: A Community Coalition in Action. *Nutrients.* 2023; 15(4):895. https://doi.org/10.3390/nu15040895

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