



BEST PRACTICES IN ADDRESSING FOOD AND NUTRITION SECURITY WITH POLICY, SYSTEMS AND ENVIRONMENTAL (PSE) CHANGE PROJECTS

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Introduction

According to the U.S. Department of Agriculture (USDA), there is a strong association between food insecurity and poor nutrition; those who experience food insecurity are at a higher risk of developing diet-related diseases such as obesity, diabetes and hypertension.¹ Food security focuses on ensuring that everyone has enough for an active, healthy life at all times, while nutrition security ensures that everyone has consistent access to safe, healthy and affordable foods essential to optimal health and well-being.¹ According to the USDA, nutrition security builds on food security by focusing on the quality of our diets and how that can reduce diet-related diseases. Furthermore, food security also focuses on equity and long-standing health disparities.

Poor nutrition is the leading cause of morbidity in the U.S. and is associated with increased risk of chronic diseases, such as obesity, diabetes and heart disease, as well as higher health care costs, decreased academic achievement, lower productivity and widening health disparities.¹ Disparities in diet-related chronic diseases and food insecurity are experienced by low-income, rural and minority populations.² Addressing these issues requires comprehensive public health approaches that aim to change policies, systems or environments. Policy, systems and environmental (PSE) change strategies are broad public health approaches that support healthy behaviors and address influences that go beyond the individual.³ The Centers for Disease Control and Prevention (CDC) and USDA Food and Nutrition Service (FNS) recommend PSE strategy approaches to address chronic diseases, including those resulting from poor diets and obesity.³

Altarum, a nonprofit health research and consulting company, was contracted by the Iowa Department of Health and Human Services (HHS) (legacy Iowa Department of Public Health) to conduct an environmental scan and prepare a report highlighting PSE change strategies aimed at improving food and nutrition security. The purpose of this report is to (1) identify best practices in addressing food and nutrition insecurity with PSE change projects, and (2) identify the nutrition and food security work that states have undertaken. The findings from this report detail evidence of best practices and recommendations for Iowa HHS and other states interested in addressing this important issue.



Methodology

Altarum conducted an environmental scan from December 2021 through April 2022 to identify peer-reviewed publications and grey literature including documents, tools, guides, and other sources of information.

The following research questions guided the environmental scan:

1. How are states and other stakeholder groups addressing food insecurity through statewide, regional and local* PSE changes? Who are the key stakeholders involved in these efforts?
2. What are short- and long-term outcomes of State Nutrition Action Councils (SNACs) and state-level food charters and food policy councils? What metrics are being used to measure short- and long-term outcomes?
3. What literature, tools and guidance are available on how to adopt and implement food security PSE strategies and which strategies are most impactful?

Inclusion criteria for the scan included:

- ▲ Dates: Published in 2010 or later
- ▲ Language: English
- ▲ Origin: U.S.
- ▲ Study type: Any, including editorial comments, consensus statements and other non-experimental study categories

Exhibit I provides a list of search terms that were used to identify pertinent articles and publications in peer-reviewed and grey literature.

Exhibit I. Key search terms

Search terms

- ▲ State Nutrition Program + Policy, Systems and Environmental Change
- ▲ SNAP-Ed + Policy, Systems and Environmental Change
- ▲ State Nutrition Program + Food Insecurity
- ▲ SNAP-Ed + Food Insecurity
- ▲ State Food Charter + Policy, Systems and Environmental Change
- ▲ State Food Charter + Food Insecurity
- ▲ State Food Plan + Policy, Systems and Environmental Change
- ▲ State Food Plan + Food Insecurity
- ▲ State Food Alliance + Policy, Systems and Environmental Change
- ▲ State Food Alliance + Food Insecurity
- ▲ Food Policy Council + Policy, Systems and Environmental Change
- ▲ Food Policy Council + Food Insecurity
- ▲ State Nutrition Action Council
- ▲ State Nutrition Action Council + USDA
- ▲ SNAC + USDA
- ▲ Low-Income Population + Food Insecurity
- ▲ Food Insecurity + Health Equity
- ▲ Food Insecurity + Equity

* "Local" refers to large metropolitan areas comparable to states. Scan will not look at small city or small metro local or regional implementation of PSE strategies, such as what is occurring within food banks or smaller-scale food systems organizations or stakeholder groups.

Peer-Reviewed Publications

Altarum conducted a search of full-text, peer-reviewed publications using PubMed and Google Scholar. Throughout the search, Altarum expanded, modified and/or made minor changes to the search terms, as needed, based on relevancy of search results. Additional relevant items cited in identified publications but not resulting from key search terms were included as appropriate. The initial search yielded 1,271 articles. After an initial review, articles that did not meet the established inclusion criteria or had an international focus were excluded from the search. A total of 36 resources were identified as meeting established criteria and were included in the peer-reviewed literature review.

Grey Literature

Altarum searched the grey literature to identify documents, tools, guides, plans and other sources of information that were not peer-reviewed. This search included identifying and searching key websites and databases for pertinent information (e.g., <https://snaped.fns.usda.gov>, www.foodpolicynetworks.org). In addition, Altarum searched for the presence of a food policy council or network, food charter and SNAC across all 50 states and D.C. using a variety of methods. The Food Policy Council Directory⁴ was used as a starting reference point to complete a thorough scan for food policy councils or networks for each state, D.C. and seven select large cities. Similarly, the *Participatory State and Regional Food System Plans and Charters in the U.S.*⁵ was used as a starting point in gathering information on food charters by state. A thorough Google search and review of the USDA FNS website, Supplemental Nutrition Assistance Program-Education (SNAP-Ed) state and implementing agency websites, SNAP-Ed impact reports and a SNAC success story report was conducted to gather details on SNACs.

Synthesis of Findings

Altarum cataloged all resources identified in the scan in an Excel spreadsheet. An initial review was conducted of the literature and resources to:

- ▲ Identify the resources containing information most pertinent to the research questions.
- ▲ Scan the citations list of the most relevant articles to identify any sources of information that may have been missed in the initial scan process.
- ▲ Assess whether there was a need to limit the articles and resources for inclusion in the report to a shorter time frame (e.g., past five years instead of past 10 years), based on this rapidly changing landscape and/or the volume of information collected.
- ▲ Assess whether literature and resources gathered sufficiently addressed the focus of the scan.

The following section is a summary of key findings from the scan and recommendations for areas of future exploration.



Effective PSE Strategies to Address Food Insecurity

Key Findings

- ✓ Food insecurity tends to be higher in low-income, rural and minority households; disparities were only heightened by the COVID-19 pandemic.
- ✓ Many strategies and interventions have demonstrated promising results improving food security status, dietary quality or other key outcomes.
 - **Federal, state and local policies** play an important role in addressing food and nutrition insecurity. Applying a systems approach and engaging stakeholders across sectors to better align policies should be an area of focus for future efforts.
 - **PSE strategies delivered through community-based programs** are promising approaches in a variety of settings. Strong community partnerships are effective for achieving community-wide change. Building local capacity through community workshops, technical assistance and training is important for implementing successful PSE strategies.
 - **Nutrition incentive programs** provide extra food dollars to help low-income shoppers include more healthy fruits and vegetables in their diet.
 - **Federal Assistance programs** reduce food insecurity. Prior research has shown that the Supplemental Nutrition Assistance Program (SNAP) is effective at reducing food insecurity, but its effects on dietary quality are less clear. Changes made to federal nutrition assistance programs introduced during the pandemic, including increased eligibility and expanded benefits, offer innovative solutions for the future.
 - **Clinical approaches** have potential to reduce food insecurity. Food insecurity screenings and referrals within the health care setting are feasible and effective when providers are trained, and a referral system has been established. Food prescription programs have the potential to decrease food insecurity among patients identified as food insecure through routine screening.
- ✓ Improving our understanding of food insecurity among diverse populations will help to design effective interventions and approaches to address well-known health disparities.

Link Between Food Security, Diet Quality and Obesity

Poor nutrition is the leading cause of morbidity in the U.S. and is associated with increased risk of chronic diseases, such as obesity, diabetes and heart disease, as well as higher health care costs, decreased academic achievement, lower productivity and widening health disparities.^{1, 2, 6} Low-income populations are disproportionately affected by diet-related diseases, in part due to limited access to healthy foods.⁷ Rates of food insecurity tend to be higher in low-income, rural and minority households and other underserved populations.^{2, 8} Inequalities in access to nutritious foods play an important role in driving health disparities, including diet-related diseases such as obesity, heart disease and other chronic conditions.⁹ During the COVID-19 pandemic, risk of being food-insecure was highest among Black, Hispanic and Asian adults. While the pandemic exacerbated health disparities and food insecurity, these disparities have existed long before the pandemic.¹ Access to nutritious foods and physical activity opportunities are examples of social determinants of health (SDOH). SDOH are conditions in the environment where people are born, live, learn, work, play and worship, and they have a major impact on health, well-being and quality of life.¹⁰ One's neighborhood and built environment can have a major effect on access to foods to support a healthy eating pattern.

The body of evidence has grown substantially since researchers originally questioned whether food insecurity causes obesity, yet the mechanism behind this relationship is not well understood.⁸ According to Brown et al., additional research and policy considerations are needed to understand underlying mechanisms, risks and effective strategies to mitigate the impact of obesity related food insecurity on health. Despite the established connection between food insecurity, diet quality and obesity, individual studies rarely examine the effect of all three in tandem with one another.⁸

The following sections highlight PSE strategies designed to address food and nutrition security, as well as diet-related diseases associated with food insecurity. Key outcomes and measures are described, as well as limitations associated with assessing food and nutrition security within the context of other health outcomes.



Implementing Impactful Food Security PSE Strategies

Key Outcomes and Measures

Based on the review of the peer-reviewed literature, there are a number of outcomes and measures associated with food insecurity PSE interventions. Researchers commonly assess food and nutrition security, as well as other closely related outcomes, such as dietary quality, obesity, participation in assistance programs and food systems or food environments. **Exhibit 2** depicts some of the common outcomes, measures and instruments associated with PSE interventions aimed at reducing food insecurity.

Exhibit 2. Common outcomes and measures associated with food insecurity PSE interventions

Outcome	Measure	Instruments
Improved food and nutrition security	Household food security status	<ul style="list-style-type: none"> ▲ USDA Household Food Security Survey Module (10 or 18 questions) ▲ Six-Item Short Form of the USDA Food Security Survey Module ▲ Hunger Vital Signs (2-item screener)
Improved dietary quality	Dietary scores Fruit and vegetable consumption	<ul style="list-style-type: none"> ▲ Healthy Eating Index ▲ Surveys (e.g., National Cancer Institute Fruit and Vegetable Intake Screener)
Reduction in obesity	Body mass index	<ul style="list-style-type: none"> ▲ Self-reported surveys
Increased eligibility or access to assistance programs	Participation in assistance programs	<ul style="list-style-type: none"> ▲ Self-reported surveys
Improved food systems or food environments	Food access landscape	<ul style="list-style-type: none"> ▲ Nutrition Environment Measures Survey in Stores (NEMS-S)

Researchers have described several limitations with instruments used to measure food and nutrition security. Brown et al. noted that it is difficult to quantify the severity and duration of exposure to food insecurity. There are a range of situations that cause households to cycle in and out of food insecurity throughout the course of a year and current tools do not distinguish between acute and chronic food insecurity, nor do they adequately capture food insecurity among different subgroups or cultures.⁸ Furthermore, there are few longitudinal surveys that assess food insecurity at different time points, and many studies measure food insecurity at the household level rather than individual level.⁸ Gregory and Todd examined how receipt of SNAP benefits affect response to a 12-month household food insecurity module and found that the probability of being classified as having very low food security is higher just before and just after households receive their monthly benefit, leading to an under-reporting of food hardship in the middle of the month.¹¹

Brown et al. suggests going beyond studying outcomes for effectiveness, and instead, systematically targeting implementation outcomes, such as acceptability, adoption, appropriateness, cost, feasibility, fidelity and sustainability for effective delivery approaches.⁸

Despite these limitations, data are extensively collected and available on household food insecurity status in the U.S. Less information is available on nutrition security and diet quality.

PROMISING PRACTICE

Better coordination of federal, state and local policies is needed to address food insecurity. Applying a systems approach and engaging stakeholders across sectors to better align policies should be an area of focus for future efforts.

PSE Strategies and Interventions

The following section highlights strategies and interventions that have demonstrated promising results improving food security status, dietary quality or other key outcomes. The strategies fall under several broad topics, including federal, state and local policies; community-based programs and approaches; nutrition incentive programs; federal assistance programs; and clinical approaches. The names of these strategies and interventions have been bolded throughout the following text for greater emphasis.

FEDERAL, STATE AND LOCAL POLICIES

Many researchers agree that federal, state and local policies have an important role to play in addressing food and nutrition insecurity. According to DeWitt et al., policy considerations in addition to environmental change are necessary for improved healthy food access, particularly in rural communities. The authors indicate that policies that dictate federal nutrition program funding and allocation must consider SDOH within vulnerable populations.¹² Further, SNAP benefits alone are not sufficient to eliminate food insecurity in rural regions; therefore, stronger policies are needed to improve food access among vulnerable populations. Stenmark et al. recommend prioritizing advancing organization, state and federal policy to better support food security in partnership with other sectors, such as business and government agencies.¹³ Zhang et al. examined SNAP participation data among households with children and concluded that state policy tools, such as broad-based categorical eligibility (removing the asset tests for most households and simplifying the application process) along with simplified reporting, can encourage SNAP participation and reduce the probability of food insecurity.¹⁴ Houghtaling et al. caution that national solutions are needed to improve food access and food environments among those who rely on SNAP-authorized stores for healthy food access, suggesting that health disparities will persist until food environments improve.¹⁵

Little is known about best practices for implementation of policy efforts requiring cooperation across sectors.¹⁶ Harries et al. described a methodology to establish eligibility for healthy food financing programs in underserved communities, including qualitative assessment of community fit and the use of national data sources that are locally verified. The authors indicate that their findings have broad implications for programs assessing need within a community and implementing public-private PSE strategies, as well as assessing need to allocate limited public and private financing resources.

Barnhill et al. recommend implementing innovative local and state programs, taking new approaches to overcome political obstacles to effect policy and considering new research approaches to better understand how food systems behave and how they affect consumption and obesity.¹⁷ The authors point out that the U.S. food system is poorly aligned with the Dietary Guidelines for Americans, with not enough fruit and vegetables produced and a surplus of energy-dense foods and sugar sweetened beverages. Barnhill et al. suggest applying a systems approach to address obesity, diet quality and food insecurity since numerous nutrition and food policies and programs exist, yet have never been fully coordinated. To design coordinated approaches with aligned policies, it is important to understand how whole systems work and how individual policies function within the larger system.¹⁷ The authors believe that food policy councils across the U.S. that engage stakeholders from various food systems sectors (at the state, local and regional level) to address food access, food security, economic development, land-use planning and procurement can have a key role in improving food systems. While federal- and state-level policies can have a large role in shaping the healthfulness of the food system, Rose et al. highlight the role local governments can play in transforming the food system through planning and policy efforts.¹⁸



COMMUNITY-BASED PSE APPROACHES

PSE strategies delivered through community-based programs offer promising approaches aimed at addressing food and nutrition security and related outcomes (e.g., diet quality, obesity) in a variety of settings. The CDC and USDA FNS recommend PSE strategy approaches to address chronic diseases, including those resulting from poor diets and obesity.³ Yet planning, implementing and evaluating broad community-based approaches can be difficult,¹⁹ especially since individuals do not always know if they were impacted by a PSE strategy and it is difficult to account for other non-PSE factors that may explain behavior change.³ Additionally, PSE strategies are implemented across a variety of different settings and there is lack of funding and time to rigorously evaluate these initiatives.²⁰ Furthermore, PSE strategies are too broad to allow for meaningful comparisons or documentation of progress²¹ and change can be a lengthy, complex process that involves multiple steps and engagement from various sectors.²² Nevertheless, researchers have successfully evaluated PSE strategies aimed at chronic disease prevention with varying degrees of rigor. Since 2014, the USDA FNS has required states to use public health approaches, operationalized through PSE strategies, as part of the **SNAP-Ed** program.²³ In 2016, the *SNAP-Ed Evaluation Framework and Interpretive Guide* was released to help SNAP-Ed implementing agencies in planning and evaluating these comprehensive public health interventions.²⁴ The following studies provide examples of promising practices for implementing PSE strategies in general, as well as their potential to impact food and nutrition security.

Molitor and Doerr examined dietary behaviors and diet quality among caregivers of children in relation to the number of SNAP-Ed PSE change interventions implemented in their neighborhood and found caregivers in neighborhoods with PSEs had higher Healthy Eating Index scores and greater adherence to the Dietary Guidelines for Americans.³ The goal of this study was to determine whether the empirical evidence supports the continued investment in PSE strategies by the CDC and USDA FNS. According to Molitor and Doerr, this is the strongest evidence to date in support of the beneficial impacts of PSE strategies.

Caldwell et al. examined the effect of SNAP-Ed on self-reported health behaviors and body mass index (BMI) among SNAP-Ed eligible adults in Los Angeles County after 24 implementing agencies delivered nutrition education and implemented PSEs throughout the county.²⁵ The researchers found participating in a SNAP-Ed class was associated with higher fruit and vegetable consumption, increased water consumption and more vigorous physical activity. Yet adults who experienced food insecurity had worse health behavior outcomes, including consuming more sugar sweetened beverages and energy dense, low nutrient foods. The authors suggest programs and interventions should work to maximize enrollment of eligible populations into nutrition assistance programs including SNAP, the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) and senior meal programs, and that county and local agencies should play a more proactive role in coalition efforts that seek to address broader inequalities in

PROMISING PRACTICE

Strong **community partnerships** that leverage resources and coordinate efforts are effective for achieving community-wide change. Building local capacity through community workshops, technical assistance and training is important for implementing successful PSE strategies.

poverty, housing and food insecurity.²⁵ Caldwell et al. also noted the limitation of being unable to capture the direct effects of PSE strategies on self-reported health behaviors because the questionnaire did not specifically ask participants about exposure to a PSE change strategy.



The Louisiana State University Agricultural Center noted early successes implementing the **Healthy Communities Model** through the CDC High Obesity Program grant, a community-participatory obesity prevention intervention using a combination of PSE strategies and direct education.²⁶ The implemented PSE strategies included park revitalization, stenciling play spaces, healthy retail initiatives, Smarter Lunchroom initiatives, community and school gardens, initiating and supporting farmers markets, downtown beautification projects, Complete Streets demonstrations and Complete Streets rural plan development. While the scope of the study did not provide evidence supporting effectiveness of each intervention, the authors noted PSE strategies, combined with education, are known to support healthy behavior change and obesity prevention in a community-based setting.²⁶

PSE strategies delivered in early childcare settings have been shown to have a positive impact on healthy eating and active living policies. Using a community-based participatory research approach, Slining et al. evaluated LiveWell Greenville, a community coalition of over 200 nonprofit, government and corporate partners working to promote PSE change in childcare centers.²⁷ The authors concluded that a tailored, participatory intervention has the potential to improve childcare center healthy eating and physical activity policies. Individually-tailored technical assistance and the community-based participatory research approach were cited as critical to the success of the pilot intervention. Smith et al. examined the National Early Care and Education Learning Collaboratives, an initiative aimed at promoting healthy environments, policies and practices in the early childcare education setting, and found that self-assessment and action planning and train-the-trainer models within the learning collaboratives were successful in promoting positive change in the childcare setting.²⁸

Shah et al. explored local health department leaders' experience planning, implementing and evaluating SNAP-Ed PSE strategies in California. They found that leaders were excited to implement PSE strategies, but many lacked knowledge or capacity to implement such efforts.¹⁹ The authors concluded that both knowledge and practical skills are needed to better implement PSE interventions. Furthermore, local leaders require more guidance and support for determining which interventions to implement and how to successfully implement these interventions, along with how to develop partnerships to leverage funds, synergize efforts and increase access to healthy foods. More reliable measures are needed to assess individual capacity to plan and implement PSE interventions.²⁹ Fritz et al. examined a community workshop model that included coordination among various community stakeholders and found this to be an effective approach to implementing PSE change to support healthier communities.³⁰ According to Fritz et al., a shared approach to accomplish change is more effective than working independently.

Sreedhara et al. examined community health improvement plans (CHIPs) and their ability to advance PSE change. Content analysis of 75 CHIP documents containing healthy eating and physical activity PSE strategies found that most plans included a PSE solution while fewer plans included comprehensive PSE strategies. Furthermore, engagement of diverse, multidisciplinary actors was not present in the plans and there tended to be a focus on individual-level strategies rather than environmental-level. The authors indicate that few resources are available to guide communities and local public health systems through the development of effective PSE strategies, yet community workshops, technical assistance and trainings have been shown to be successful in this area.³¹

In Chicago, **mutual aid organizations** have employed distinct approaches to addressing food security. According to Lofton et al., mutual aid organizations are rooted in grassroots community organizing and serve to address gaps and respond to the needs of the community.³² With regard to addressing food access and security, mutual aid organizations support the local food system by building social, human and financial capacities.³² Approximately 40 mutual aid organizations addressed food security in Chicago during the COVID-19 pandemic through a variety of strategies such as food distribution and financial assistance. According to the authors, one component of mutual aid is advocating for systematic change to address the root cause of disparities, including food insecurity; thus, mutual aid is a solution until systematic change is achieved. The authors indicate that the result of this work has been to shift the food system within Chicago to one that centers on equity, sovereignty and health.

NUTRITION INCENTIVE PROGRAMS

According to the National Grocers Association Foundation, **nutrition incentive programs** provide extra food dollars to help low-income shoppers include more fruits and vegetables in their diet. These programs are provided by retailers who are then reimbursed by their partner grant agency.³³ The National Institute of Food and Agriculture (NIFA) has invested in nutrition incentive programs which aim to increase the purchase of fruits and vegetables among low-income consumers participating in SNAP by providing incentives at the point-of-purchase.⁷ The overarching goal of nutrition incentive programs is to not only increase fruit and vegetable intake among low-income populations, but also to address food insecurity. The Agriculture Improvement Act of 2018 (or the 2018 Farm Bill) allows NIFA to provide competitive grants for the **Gus Schumacher Nutrition Incentive Program** (GusNIP, formerly the Food Insecurity Nutrition Incentive (FINI) program). **Double Up Food Bucks** (DUFb) is another nutrition incentive program with its roots in Michigan, but it has also expanded into many other states.³⁴

Parks et al. sought to describe the factors that are related to fruit and vegetable consumption and food insecurity among SNAP participants in a nutrition incentive program by surveying consumers who participated in DUFB at Michigan farmers markets and grocery stores. Data were collected from participants over multiple years using validated measures. The authors found longer program participation was related to greater likelihood of higher levels of fruit and vegetable consumption and lower levels of food insecurity compared to those who participated in DUFB for a shorter duration.⁷ The authors noted that incentive programs, such as DUFB, are useful models for the delivery of financial incentives to visit farmers markets and grocery stores to purchase fruits and vegetables in areas with limited healthy food access.⁷



PROMISING PRACTICE

Offering households with lower incomes extra food dollars to purchase fruits and vegetables, known as a **nutrition incentive**, helps address food and nutrition security, more so than financial incentives on their own.

Another promising approach for addressing food and nutrition security is **community-supported agriculture** (CSA).³⁵ CSA is a farm share that is purchased by an individual or household at the beginning of a growing season, then the farm provides an allotment of produce on a regular basis during the growing season.³⁵ Because purchasing a farm share may not be feasible for individuals with lower incomes, Berkowitz et al. conducted a study in Massachusetts to determine if a subsidized CSA share could improve diet quality among individuals with lower incomes and a BMI greater than 25. Study participants were recruited primarily from federally qualified health centers and a randomized-control trial was conducted from May 2017 to December 2018. Individuals were randomly assigned to the intervention group (received a \$300 financial subsidy to purchase a full or small CSA membership) or the control group (received healthy eating information and financial incentives that equaled the value of the CSA subsidy). This design tested the benefit of the CSA membership itself, rather than the financial value of the membership. This study found that subsidized CSA shares significantly improved diet quality and reduced food insecurity in the intervention group compared with the control group that received financial incentives. The authors suggest these findings have substantial implications for health and public policy. Subsidized CSA memberships could be part of health care plans that offer “wellness” benefits, or public health and business groups may support this type of intervention as part of public health programming or business development.³⁵



PROMISING PRACTICE

Changes made to federal nutrition assistance programs introduced during the pandemic, including **increased eligibility and expanded benefits**, offer innovative solutions for the future.

There is evidence that providing families with lower incomes with a **summer monthly benefit** helps reduce food insecurity among households with children.

FEDERAL ASSISTANCE PROGRAMS

SNAP is the nation's largest hunger safety net program. Prior research has shown that **SNAP** is effective at reducing food insecurity, but its effects on dietary quality are less clear.³⁶ Zhang et al. suggest findings have been inconsistent with regard to the effect of SNAP participation on food insecurity, especially among households with children.¹⁴ When assessing the impact of SNAP on food insecurity and dietary quality, Andreyeva et al. point to several methodological issues, such as selection bias, since households most in need of food assistance and diet improvement are more likely to participate in SNAP.³⁶

Zhang et al. investigated the effects of SNAP participation on food insecurity among households with children using data from a large U.S. national survey and found that SNAP participation reduced the probability of food insecurity among adults but increased the probabilities of low food security and very low food security among children.¹⁴ According to DeWitt et al., SNAP participation provides an avenue to food security, yet it is compounded by additional factors, such as economic disparities in rural regions - rurality and geographic location are important factors to consider when it comes to food security and SNAP participation.¹²

Houghtaling et al. conducted an assessment of the food access landscape among SNAP-authorized stores in Louisiana using the NEMS-S.¹⁵ The researchers found Louisiana SNAP-authorized stores scored low overall, with no food access disparities found between urban and rural settings, providing additional evidence that poor food environments are likely one factor driving health disparities among southern regions in the U.S. According to the authors, prioritizing healthy food retail strategies in SNAP-authorized stores among both urban and rural Louisiana communities with lower income are warranted.¹⁵

Many researchers agree that SNAP benefits are often too low and that greater benefit amounts are needed. According to Balasuriya et al., changes implemented during the COVID-19 pandemic offer lessons for the development of future nutrition assistance programs. This includes expanded benefit eligibility, increased benefit levels for many recipients and waived or extended paperwork deadlines and interview requirements.⁹ Currently, benefits are too low, leaving many families food insecure despite participation, SNAP eligibility cut-offs exclude many food insecure families and there is a need to create slower phase-out periods for benefits as income rises.⁹

Pandemic Electronic Benefit Transfer (P-EBT) was also an innovative solution introduced during the pandemic amidst school and childcare closures.⁹ P-EBT provides money on an electronic benefit transfer (EBT) card for students who are eligible for free or reduced-cost school meals, or who attend a school that provides subsidized meals to all students, as well as children in daycare and childcare centers.⁹ Innovative and urgent policy solutions such as these were implemented virtually overnight at the start of the pandemic and, according to Balasuryia et al., serve as a catalyst for creating the next generation of food safety net programs. This includes the removal of administrative barriers to enrollment, use of streamlined procedures to access food and uncoupling receipt of benefits from physical presence in schools.

Kenney et al. interviewed school food authorities in 12 of the largest school districts in the U.S. and noted the many complex challenges schools faced during the COVID-19 pandemic school closures. School food authorities reported that the rollout of the P-EBT program was helpful and necessary for preventing hunger in the community, but depressed their revenue and ability to maintain financial solvency.³⁷ Kenney et al. concluded that the financial model for the school meal program should be reconsidered, as school food service programs are a linchpin of the federal nutrition safety net. One suggestion was to operate the school meal program similarly to WIC - which does not require individual WIC agencies to operate their budgets based on how many families fully redeem their WIC benefits - rather than require schools to rely on per-meal reimbursements for revenue. Immediately adopting universal school meals during times of emergency is one approach that seems to work well for schools, as those schools with the community eligibility provision (CEP) experienced a more seamless transition since they did not have to go through the process of identifying eligibility of students receiving a meal.³⁷ Before the USDA authorized waivers to serve all children regardless of income, districts without CEP described the logistical and financial burden of checking student eligibility.³⁷



McLoughlin et al. prepared a similar case study focused on four large urban school districts during the COVID-19 pandemic, investigating the strategies adopted at the beginning of the pandemic and the degree to which the districts promoted equitable access to emergency nutrition programming through an equity lens.³⁸ The authors found that districts used multiple strategies to encourage participation in the National School Lunch Program, but only reached a portion of the normal student population. All districts took steps to increase access to healthy options by providing at least one meal per day for students, displaying food safety information, and advertising that all children eat for free. Additional measures could be taken in the future, such as providing multiple days' worth of meals, serving adults and posting menu information.³⁸ Developing community partnerships is also recommended to improve meal distribution and equitable access.³⁸ According to the authors, the need to provide equitable access to meals during a public health emergency cannot be understated.

Collins et al. examined data from the **Summer Electronic Benefit Transfer for Children (SEBTC)** – a program created by Congress and the USDA designed to address children's food security issues in the summer.³⁹ During the summer of 2012, households in 14 sites were assigned to receive a summer monthly benefit of \$60 per eligible child or be in a control group that did not receive any benefits. Households were surveyed in the spring before the school year ended and again in the summer. Eligible households received an EBT card for the summer months – the benefit was roughly equivalent to increasing SNAP by 25%. Researchers found that SEBTC resulted in increased food expenditures, improved food security status of households and moderate improvements in three of eight child nutrition outcomes (including increased fruit and vegetable consumption and consumption of dairy products).³⁹

CLINICAL APPROACHES

Health care entities, which include hospitals, health systems and clinics, are attempting to address food insecurity within the communities they serve.⁶ Most health care professionals have not received training to assess food insecurity and lack systems for referring food insecure patients to federal or community-based programs that provide resources, yet many medical professional organizations recommend **food insecurity screening and referrals** to resources as part of broader efforts within the medical community to address SDOH.¹³

The range of programs being implemented by hospitals and health care entities to address food insecurity within the U.S. is lacking.⁶ Lundeen et al. conducted a landscape assessment of health care entity-based programs in the U.S. that screen patients for food insecurity and connects them with food resources. Twenty-two health care entity-based programs were identified for the assessment and telephone interviews were conducted with the program managers in 2016. Program implementation was found to occur in a variety of settings and target patients of all ages. The stated goals of many of these programs are to reduce food insecurity, increase access to and consumption of healthy foods and fruits and

PROMISING PRACTICE

Food insecurity screenings and referrals within the health care setting are feasible and effective when providers are trained and a referral system has been established.

Food prescription programs have the potential to decrease food insecurity among patients identified as food insecure through routine screening.

vegetables, reduce chronic disease and improve health outcomes, provide education on healthy eating and reduce hospital readmissions. The most commonly implemented intervention is referral to a list of food resources. In some cases, a patient navigator, case manager or social worker helps to connect patients with food and nutrition security resources. The programs receive funding from various sources, including operating budgets of health care entities, community benefit funds, foundations, private donations, USDA grants, food banks and other city, state and federal government funds; however, sustainability of funding was uncertain and may depend on identifying other sources. The programs have tracked data on patient health outcomes including BMI, waist circumference, blood pressure, blood glucose, hemoglobin A1c, cholesterol and hospital readmissions. Patient survey data include changes in food security status, diet quality, fruit and vegetable consumption and knowledge and self-efficacy around healthy eating.⁶ Lundeen et al. suggest more evidence is needed regarding the effectiveness of health care entity-based programs' ability to improve food security and health outcomes.



Stenmark et al. describe lessons learned from the Kaiser Permanente Colorado food insecurity pilot **screening and referral program**, which had the goal of promoting food and nutrition security and health outcomes.¹³ Kaiser Permanente Colorado launched a food insecurity screening and referral program in two pediatric clinics where parents were screened for food insecurity at check-in using a two-item screener. Researchers found that clinical teams were often unaware that food insecurity was prevalent in their health care system and that it contributed to reduced diet quality, poorer health outcomes and increased health care utilization.¹³ Multiple strategies were employed to address knowledge barriers and increase clinician comfort in talking with patients about food insecurity. The pilot also implemented an active referral process that offered parents more support in accessing resources. In 2017, approximately 6% of the program's referrals resulted in SNAP enrollment. The

authors indicate there is opportunity for further improvement in this area, and suggest additional research is needed to identify the most effective models at enrolling Medicaid beneficiaries into SNAP, WIC, other federal nutrition programs and other food resources.¹³

While health care entities are increasingly screening for food insecurity as part of standard care, practitioners are hesitant to screen patients without an adequate way to provide assistance.⁴⁰ **Food prescription programs** may be a feasible way to increase access to fresh and healthy foods and address food insecurity among patients identified as food insecure through routine screening. Participants recruited from a school-based health clinic in Texas were screened for eligibility and received 30 pounds of fresh produce plus four healthy, nonperishable food items every two weeks for up to 12 visits at a local food pantry. Pre- and post-surveys were administered to program participants and they reported a 94% decrease in prevalence of food insecurity at the end of the program. The researchers concluded that this pilot demonstrated the feasibility of clinic-based food prescription programs to address food insecurity.⁴⁰



Funding Opportunities

Funding opportunities for addressing food and nutrition security range from large-scale federal research projects to smaller, grassroots-funded initiatives. As previously noted, the National Institutes of Health (NIH) has invested in research focused on obesity and the cross-cutting issue of food insecurity, obesity and nutrition over the past 10 years with the NIH being the largest funder of nutrition research.⁸

NIFA has invested in nutrition incentive programs which aim to increase the purchase of fruits and vegetables among low-income consumers participating in SNAP by providing incentives at the point-of-purchase. GusNIP is a competitive grant program overseen by NIFA that funds:

- ▲ Nutrition incentive programs
- ▲ Produce prescription programs
- ▲ Training, technical assistance, evaluation and information centers cooperative agreements

Nonprofit organizations and government agencies are eligible to apply for GusNIP funds and are encouraged to collaborate with partners across the health care and food system.

Considerations for Special Populations

As previously mentioned, rates of food insecurity tend to be higher in low-income, rural and minority households, and other underserved populations. Approximately 18 million children were living in food insecure households in 2020, disproportionately impacting racial and ethnic minorities.⁹ Improving our understanding of food insecurity among diverse populations will help to design effective interventions and approaches to address known health disparities.⁸ It is also important to understand the impact of COVID-19 on communities of color, as Black, Hispanic and Asian adults were at the highest risk of being food insecure during the pandemic.³²

According to DeWitt et al., the burden of obesity and food insecurity are major public health concerns that coexist within rural communities. Rural communities face higher rates of food insecurity than urban communities and have higher rates of SNAP participation.¹² DeWitt et al. examined rural obesity prevalence and risk of chronic disease in an Appalachian county in Kentucky as part of the multi-year High Obesity Program project funded by the CDC. The study identified gaps in community resources to establish new partnerships that address obesity and food insecurity. Findings from the assessment were shared with a community coalition to identify efforts to reduce food insecurity within the community. In 2019, community residents participated in a survey designed to measure fruit and vegetable intake, household environmental measures, food purchasing practices and demographic characteristics. The researchers found that SNAP participation was associated with food insecurity compared to those not participating in SNAP. According to the authors, SNAP participation does not equate to consistent nutritional nourishment in this rural Appalachian community and that rural communities struggle with food accessibility within the retail food landscape. Tailored interventions for rural communities are needed to implement sustainable solutions.¹²

Haynes-Maslow et al. examined SNAP-Ed PSE strategies being implemented in rural communities.²⁰ The researchers looked at nutrition-related SNAP-Ed PSE strategies, the barriers to implementing these strategies and common best practices and innovative solutions to overcoming barriers. They surveyed and interviewed staff across 15 states. Based on the results, the most common PSE strategies being implemented were gardens, school wellness-based initiatives, healthy food retail, farmers markets and

food pantries. The main challenges were funding and the level of PSE understanding among staff and stakeholders. The researchers noted that finding creative solutions and partnering with appropriate organizations were essential to overcoming challenges to implementing PSE strategies in rural settings. Furthermore, PSE strategies have the benefit of overcoming transportation and infrastructure barriers in rural communities. The authors concluded that future research is needed to determine whether these strategies are effective at changing health-related behaviors.

Native Americans are more likely to live in rural areas with limited food access and higher rates of food insecurity than the general population.⁴¹ Indigenous food systems were obstructed with the emergence of colonization, resulting in the health disparities seen today among Native Americans.⁴¹ Native American communities have higher rates of obesity and diabetes than any other race or ethnic group in the U.S. and face challenges to food and nutrition security due to limited infrastructure, long distances to food retail and lack of access to high-quality, low-cost options.⁴¹ According to Byker Shanks et al., understanding food environments in Native American communities is key to eliminating health disparities and restoring indigenous food systems. Byker Shanks et al. used a community-based participatory research approach to document food environment experiences among residents of the Flathead Reservation in Montana. Among those who participated in this study, half reported low or very low food security status and the other half reported high or marginal food security. A large number of the respondents also participated in federal assistance programs (most commonly SNAP and WIC). Based on the results of the study, the researchers concluded that to achieve improved food and nutrition security among Native American communities, change is needed among multiple sectors.⁴¹



Research Gaps

Several researchers have highlighted gaps in the literature regarding food and nutrition security. Because most researchers identify areas where further study is needed, the following is a snapshot of higher-level recommendations from the literature and is not all-encompassing.

To address gaps in the literature regarding food and nutrition security, researchers call for greater coordination and investment in nutrition research at the federal level, further examination of food assistance programs and their effect on household food insecurity and greater emphasis on evidence-based practices.

Brown et al. noted a gap in understanding of the impact of food insecurity on pregnant and lactating women, children and other vulnerable populations; a lack of longitudinal studies to better understand the complexity of the relationship between food insecurity, diet and obesity; and an understanding of effective multilevel intervention strategies that could have greater impact on food insecurity and diet-related conditions.⁸ The authors reported that the NIH is seeking innovative applications to address these research gaps and that the *Strategic Plan for NIH Nutrition Research* will continue to prioritize an understanding of the link between food insecurity and obesity. Fleischhacker et al. stated that federal investment in nutrition research has remained flat or declined for several decades while diet-related conditions and their impact on society have increased.² The NIH is the largest funder of nutrition research, with the

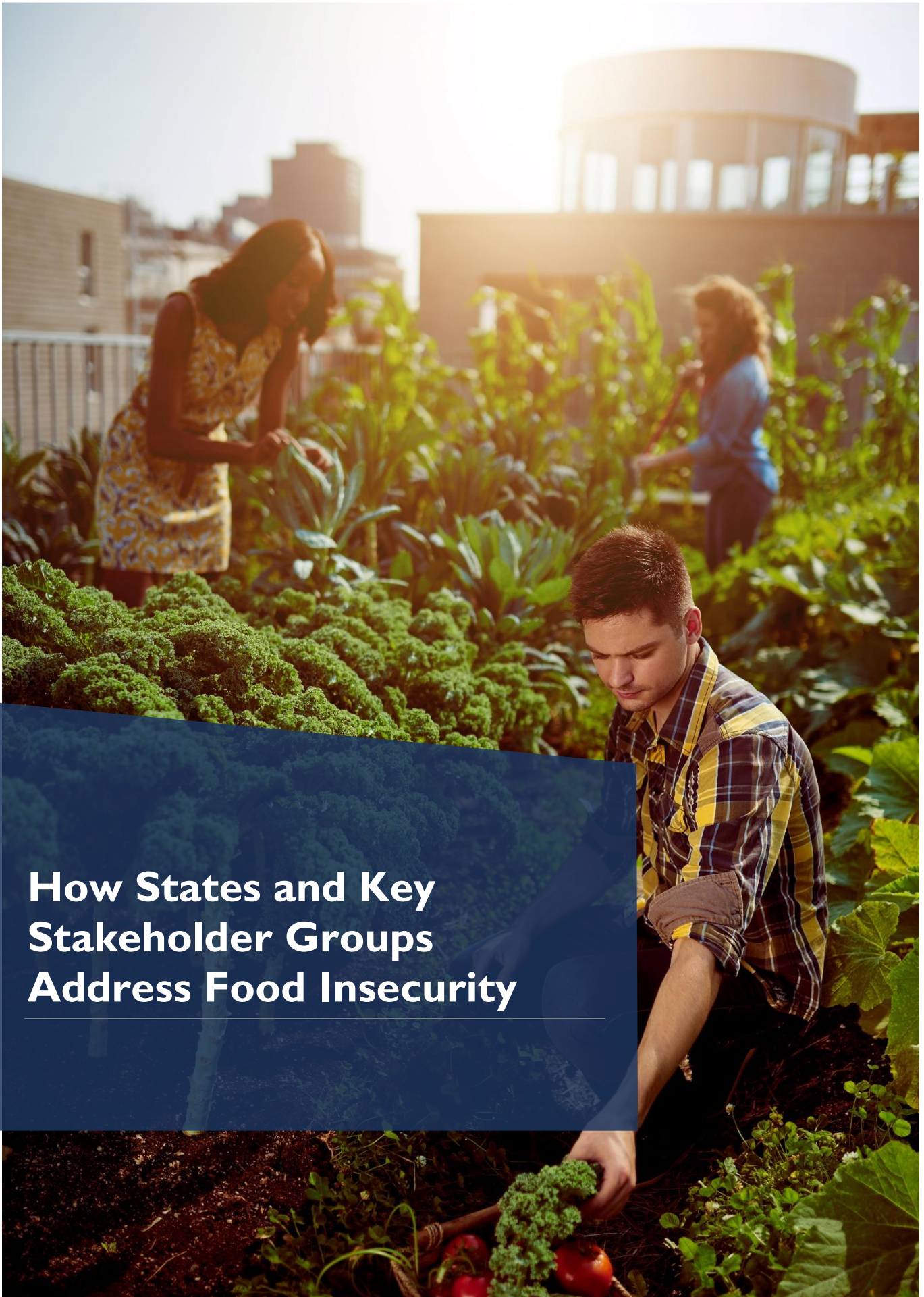
USDA being the second largest funder. According to Fleischhacker et al., greater coordination and investment in nutrition research is needed at the federal level to address challenges and opportunities.

Zhang et al. noted the literature is limited in terms of the effect of SNAP participation on food insecurity among households with children, and results are often inconsistent.¹⁴ Future assessment is needed to examine the effect of SNAP on household food insecurity along with other food assistance programs, such as WIC.

When evaluating PSE strategies, Thompson et al. explained that the categories are generally too broad for meaningful comparison to document progress and, therefore, argue that a lexicon on intervention type, content and impact based on agreed upon terms can help address a gap in public health research.²¹ According to Naja-Riese et al., the *SNAP-Ed Evaluation Framework* was designed to address the gap between knowledge and practice to support evidence-based interventions designed to improve food security and health.²⁴ Zwald et al. suggested using stories as a tool to assess and evaluate public health policies and practices to bridge the gap between practitioners, researchers and policy makers.²² Stories may not be used often because of the perceived subjectivity and reliance on quantitative outcomes in public health, yet stories can be used as a tool to share PSE outcomes and complement quantitative results – a method that has been successfully employed by the Division of Nutrition, Physical Activity and Obesity at the CDC and state health departments.²²

According to Anderson Steeves et al., food environment interventions have become more prevalent to address the obesity epidemic; however, they highlight key gaps in the literature regarding evidence-based practices for these interventions. The authors recommended pilot studies are needed to gain insight into evidence-based implementation practices to improve the food environment.⁴²

In terms of clinical approaches to reduce food insecurity, Lundeen et al. proposed more evidence is needed about the effectiveness of health care entities in improving food security and health outcomes and decreasing health care utilization.⁶ Stenmark et al. also suggested more evaluation is needed of models that successfully connect patients who are food insecure with SNAP, WIC and other federal nutrition programs and other food resources.¹³



How States and Key Stakeholder Groups Address Food Insecurity

Collaboration across diverse sectors and stakeholder groups is often used as a key strategy in creating systemic improvements. Three key collaborative strategies for addressing food-related issues include networks such as food policy councils and SNACs, as well as guidance documents such as food charters. These networks and charters engage a multitude of stakeholders and implement a wide variety of activities and initiatives to best meet the needs of food systems and address food-related issues at various geographic levels.

The following sections detail state and varying stakeholder group efforts through food policy councils and food charters, as well as SNACs, to address food insecurity and food systems. The following section focuses primarily on states; however, select large city food policy councils were also identified for review. Seven large city food policy councils and their efforts to address food insecurity are described below. The select large cities include:

- ▲ Berkeley, CA
- ▲ Los Angeles, CA
- ▲ San Diego, CA
- ▲ Denver, CO
- ▲ Boston, MA
- ▲ New York City, NY
- ▲ Philadelphia, PA

The presence of these collaboratives, key stakeholders engaged, overarching objectives, activities and strategies to accomplish the objectives, as well as outcomes and measures are described in detail. Highlights on select states are presented throughout the following chapter. Two states that were categorized as high performers, California and the District of Columbia (D.C.), and two states similar in size and demographic makeup to Iowa, Kansas and Nebraska, are highlighted.



Food Policy Councils

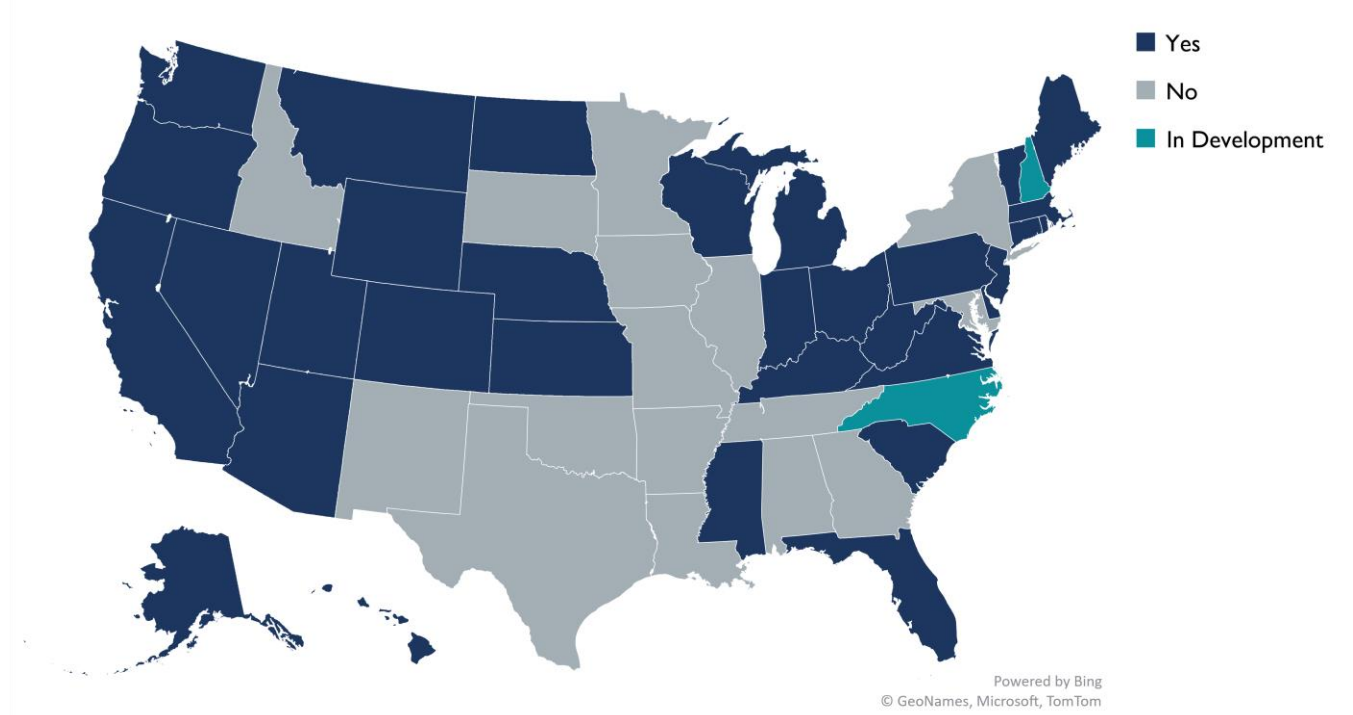
Key Findings

- ✓ State-level food policy councils regularly convene local-, county- and regional-level food policy councils that are predominantly responsible for implementing PSE change strategies.
- ✓ Organizing into working groups or subcommittees by topic area helps facilitate engagement and maximize impact.
- ✓ PSE interventions and associated projects have resulted in increased access to healthy foods, reduced food insecurity, overall health improvements and improvements to the food system.

Vermont was the first state to implement a food policy council in 1995. Today, nearly two-thirds of all states and D.C. (n=33) have an active food policy council or network (**Exhibit 3**). Connecticut and Massachusetts each have two state-level councils. New Hampshire and North Carolina state-level councils are currently in development. The majority of state-level and select large city food policy councils have launched within the past decade.

In addition to state-level councils, food policy councils are present at varying geographic levels within individual states. A total of 44 states reported councils at smaller-scale levels, including 32 (73%) at the regional-level, 33 (75%) at the county-level, 31 (70%) at the city-level and 3 (7%) Tribal and Indigenous food policy councils.⁴

Exhibit 3. Presence of state-level food policy council



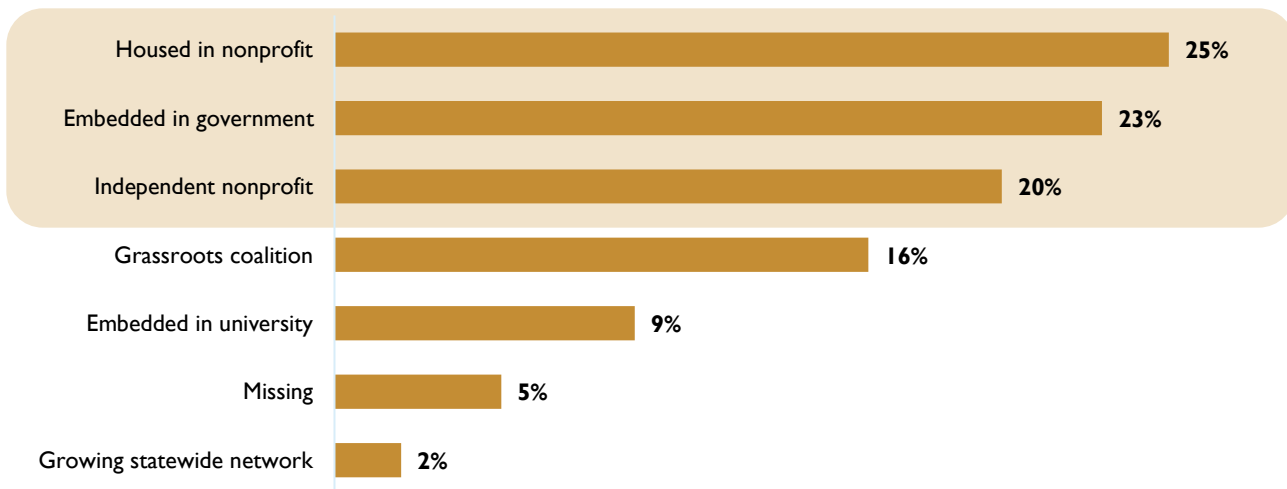
Note: Select large city food policy councils are not currently displayed in the state map due to their differing geographic levels.

Key Stakeholders

GOVERNANCE STRUCTURE

The varying governance structure of the food policy councils was documented in the Food Policy Council Directory.⁴ The Food Policy Council Directory is a comprehensive resource containing information such as website addresses, governance structure, top priorities, and notable accomplishments for food policy councils, and is updated with information collected on surveys every 12 to 18 months. One-quarter of food policy councils are housed within nonprofit organizations (**Exhibit 4**). These nonprofits have at least one staff member dedicated to the food policy council, often serving in a coordination capacity as a project manager. In one state, Rhode Island, the nonprofit representative is the director of the state's food policy network.

Exhibit 4. Governance structure of state-level and select large city food policy councils (n=44)



SUPPORTING ORGANIZATIONS

State and large city food policy councils engage an extended network of supporting partners. On average, representatives from 16 types of organizations join to further the goals and objectives of the food policy council (**Exhibit 5**).

Government officials at both the state and local levels are the most commonly involved supporting partners of food policy councils. Officials are engaged across a wide variety of agencies, including the Departments of Administrative Services, Aging, Agriculture, Commerce, Consumer Services, Economic Development, Education, Energy, Environmental Conservation (or Protection), Health, Human Services, Labor, Planning, Social Services and Transportation, as well as city council members.

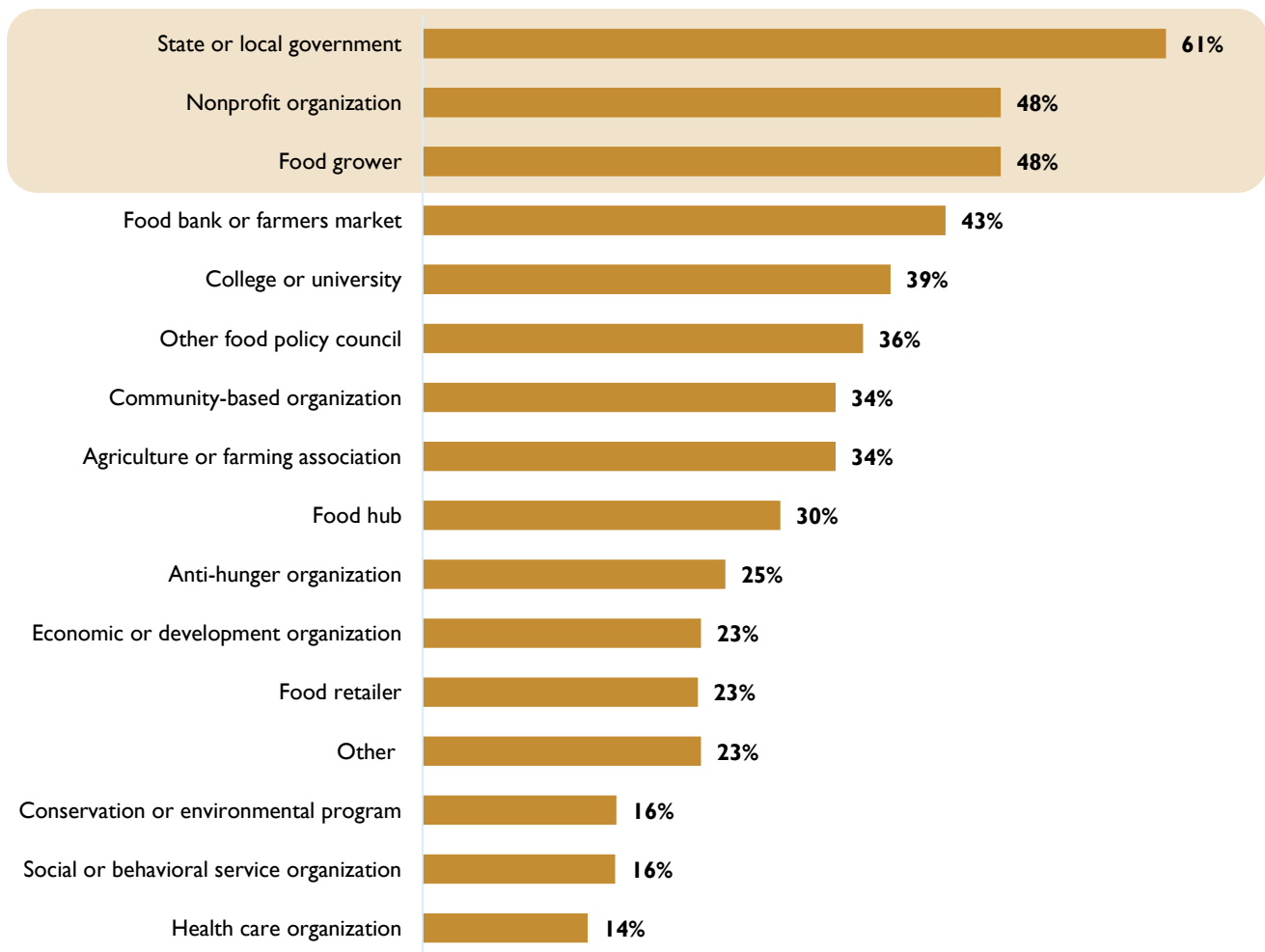
Nearly 50% of food policy councils engage nonprofit organizations and food growers throughout their respective states. Partners from other sectors of the food industry include distributors such as:

- ▲ Food banks and farmers markets (43%)
- ▲ Agriculture or farming associations (34%)
- ▲ Food hubs (30%)
- ▲ General food retailers (e.g., grocery stores) (23%)

Other types of organizations include restaurants, local school districts and USDA FNS programs (WIC, SNAP-Ed, and Team Nutrition).



Exhibit 5. Supporting organizations of state-level and select large city food policy councils (n=44)



The most common objectives of state-level and select large city food policy councils are:

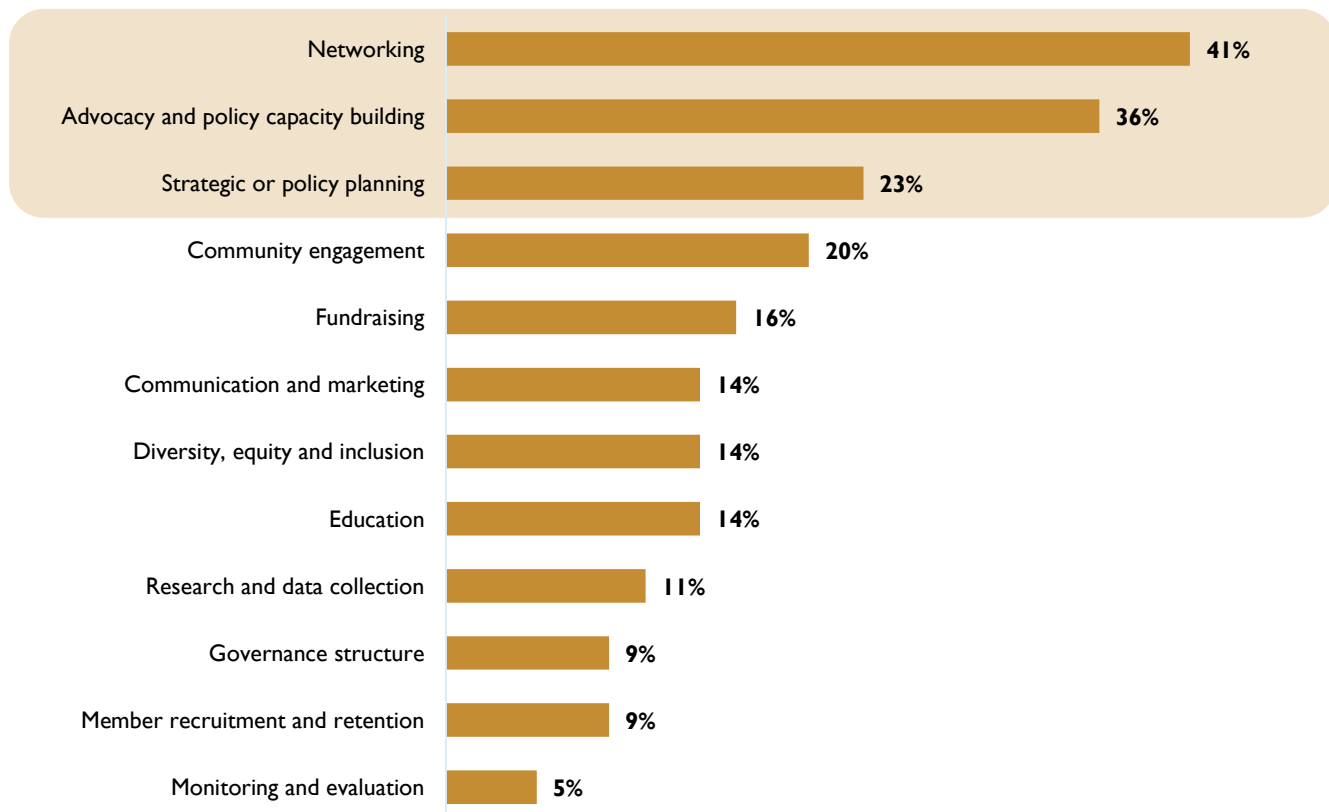
- ▲ Strengthening the collaboration between local food policy councils.
- ▲ Improving the food system.
- ▲ Increasing access to healthy food.
- ▲ Addressing health equity.

Organizational Structure and Priority Objectives

More than half of all state-level councils operate as conveners of other food policy councils operating at varying geographic levels, including regional-, county- and city-level, as well as Tribal or Indigenous councils. These state-level councils serve to organize and inform food policy councils and connect them with other state groups working to improve food systems. Meetings are typically held on a monthly or quarterly basis to connect members, share information and provide a space for councils to discuss challenges and lessons learned. Food policy councils at the regional-, county-, city- and Tribal-levels are primarily responsible for implementing PSE programs and projects, whereas state-level food policy councils serve as the vehicle for amplifying other councils' efforts and help to build the case for support, including additional funding and resources at the state level.

The most commonly identified organizational priorities of these state-level food policy councils include networking, advocacy and policy capacity building, as well as strategic or policy planning (**Exhibit 6**).⁴

Exhibit 6. Organizational priorities of state-level and select large city food policy councils (n=44)

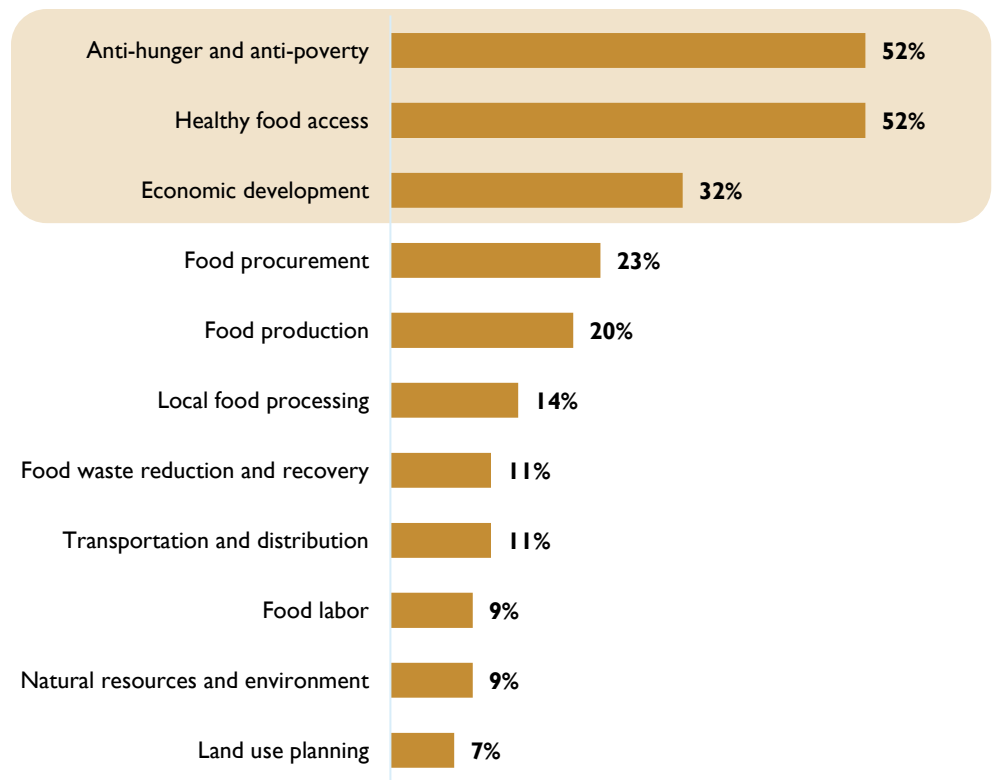


PROMISING PRACTICE

Organizing council members into **working groups or committees** around priority topic areas of the food policy council helps to drive member and partner engagement and progress on PSE interventions and associated strategies.

Approximately one-third of all state-level and select large city food policy councils coordinate their membership around working groups, task forces, committees or cross-cutting teams to advance their mission and drive progress throughout their state and within the food system. These subgroups include advocacy and/or policy, communications (e.g., outreach and education), workforce development, food access and distribution, food production and processing, food waste, diversity, equity and inclusion, fundraising and conference planning. Anti-hunger and anti-poverty, healthy food access and economic development are the most common policy priorities of state-level and select large city food policy councils (**Exhibit 7**).⁴

Exhibit 7. Policy priorities of state-level and select large city food policy councils (n=44)



Resource Development and Sharing

Nearly all active state-level and select large city food policy councils have a website or online presence. In addition to providing detailed information on the specific food policy council, the sites serve as a resource repository housing tools and information for members and other similarly focused organizations to access. These resources frequently include materials developed directly by the food policy council such as those listed below.

- ▲ Massachusetts developed white papers on institutional procurement and recommendations for securing funding for the Healthy Incentives Program.⁴³
- ▲ Colorado developed issue briefs focused on stimulus dollars, baseline state and federal spending, universal school meals, agriculture workers, meat processing, agricultural land conservation and institutional procurement.⁴⁴
- ▲ D.C. created and published the D.C. Federal Nutrition Program Toolkit, which educates residents on federal nutrition programs including SNAP, WIC, the National School Lunch Program and senior meals, and clearly describes the enrollment process for each.⁴⁵

Numerous food policy councils have embedded links to food access maps on their websites. These maps present the geographic location of Child and Adult Care Food Program (CACFP) and Summer Food Service Program (SFSP) feeding sites, as well as food banks and farmers markets throughout the state. Meeting minutes and recordings are also easily accessible for review.

In addition to internal resources, some food policy councils provide links to key external resources. These include resources from the CDC and Community Food Strategies on how to develop and implement food policy councils, as well as information from the USDA on the economics of local food systems.

State Highlight: Kansas

Background: The Kansas Food Action Network is a statewide network comprised of 26 current and emerging local food, farm and policy councils. The network serves as a convener, connecting and supporting other councils as they address the local food system.⁴⁶

Key Accomplishments:

- ✓ The network has developed and shared a variety of tools and resources to be used by local councils throughout Kansas, including an annual report template, hunger action month proclamation template, funding guide and COVID resources.

- ✓ The network has also led opinion polling throughout the state to test support of policies that increase access to healthy foods and locally produced foods.

Other Collaborative Strategies:

- ✓ SNAC – Kansas SNAC

PSE Interventions and Associated Projects

The following section highlights PSE interventions and associated strategies of state-level and select large city food policy councils. In several instances, specific PSE strategies and outcomes were not described on food policy councils' websites. Rather, these projects and accomplishments were highlighted on the Food Policy Council Directory.⁴

STATE AND LOCAL POLICIES

State-level and select large city food policy councils have organized around a variety of policy priorities to increase access to, and consumption of, healthy foods and beverages. These policies are implemented in the broader community as well as within schools to improve the health and well-being of youth and adults.

The policies enacted throughout state and community settings impact varying aspects of the food industry, including retail, production, processing and waste. Food policy councils have achieved successful passage of food retail policies and ordinances, such as:

- ▲ California passed guidance increasing the percentage of farmers markets accepting EBT throughout the state to address food insecurity and increase accessibility for low-income families from 30% to 100%.⁴
- ▲ Montana, Nebraska and Denver each passed cottage food laws. These laws allow individuals such as food growers to produce and sell non-hazardous foods directly to consumers. Non-hazardous foods include foods that do not require refrigerators to keep them safe from pathogens.^{4, 47}
- ▲ Los Angeles passed sidewalk vending legislation to continue the progress in initiating a permit program for street vending.⁴⁸
- ▲ Boston passed a policy categorizing farmers markets as essential services during the COVID-19 pandemic to reduce the likelihood of food insecurity among residents.⁴⁹
- ▲ Philadelphia instituted a sugar-sweetened beverage tax to uphold nutrition standards.⁵⁰

Food policy councils were also successful in passing food producing, processing and waste policies and legislation.

- ▲ Denver passed the Denver Food Producing Animals Ordinance (2011) permitting residents to maintain up to eight chickens and/or ducks and up to two goats on a single property.⁴⁷
- ▲ Boston passed an article in 2013 allowing urban farming in residential areas which addressed a known barrier to commercial scale urban agriculture throughout the city.⁴⁹
- ▲ Nevada's food waste legislation established the Food for People Not Landfills Program to increase food security by decreasing food waste and redirecting excess consumable food to hungry Nevada communities.⁵¹

PROMISING PRACTICE

State food policy councils that are not led by a government office are more successful in implementing PSE initiatives when regularly **engaging policy makers or legislators** in collaborative discussions or recruiting those individuals to participate on the council.

Within schools, food policy councils have been successful in advocating for and implementing policies which are summarized below.

- ▲ Philadelphia passed an ordinance which provided equitable access to water within city school districts.⁵⁰
- ▲ Nevada passed legislation for creating and maintaining gardens at select Nevada schools.⁵¹
- ▲ Berkeley food and nutrition policies transformed school lunch programs by removing processed and frozen foods to freshly prepared, organically grown local meals.⁵²
- ▲ Nebraska legislation created a farm to school program through partnership with the Nebraska Department of Education.⁴

SYSTEMS CHANGE STRATEGIES

Few systems-change strategies were described by state-level and select large city food policy councils. Most commonly, these councils engaged or supported in the development, endorsement and/or implementation of food charters or plans. Other key system changes included training and technical assistance opportunities and creating or updating policy agendas.

Food Charters and Plans. State and select large city food policy councils and partnering organizations comprising those councils are frequently engaged with the development and implementation of food charters and plans. Eleven of the state-level food policy councils we reviewed referenced the development and implementation of their state food charter as a major strategy their food policy council has prioritized to improve their food system. Three additional states referred to their state's food charter or plan on their food policy council website. However, food charters and plans are collaborative strategies that are not exclusive to food policy councils. As such, we describe these guidance documents separately, and in more detail, later in this chapter.

Training and Technical Assistance Opportunities. Food policy councils have provided a variety of learning opportunities for various professionals across the food system, including farmers, grocers, students and local residents.

Providing training and technical assistance is a PSE strategy detailed by West Virginia's food policy council, the West Virginia Food and Farm Coalition. The coalition developed a program to provide grassroots support for farmers and food-based businesses and placed coordinators at various locations throughout the state. To date, five foodshed coordinators have been hired and centrally located to cover 17 counties to provide systematic support for farmers and food-based businesses and organizations. Additionally, the coalition created the West Virginia Rural Grocer Network to ensure rural grocers are set up for success. The coalition provides technical assistance, peer support and equipment aimed at increasing healthy food access to local residents and sourcing locally grown products.⁵³

The Los Angeles Food Policy Council has established and operates a 10-week virtual leadership development course, the Food Leaders Lab. The program provides training and coaching on food justice, systems change and community health for local residents with lived experiences navigating food justice issues. The Food Leaders Lab explores food systems dynamics and anti-hunger and food security case studies.⁴⁸

In October 2020, the North Carolina Local Food Council launched the Remote Internship to Support Enterprises for Local Foods program which connects college students to local food organizations, such as providing support to farms and fisheries.⁵⁴

The Rhode Island Food Policy Council established free workshops to train food producers on how to build new markets working with a variety of partners including produce and livestock farmers as well as local food businesses. More than 70 businesses have participated in the workshops.⁵⁵

Policy Agendas. In addition to food charters, policy agendas are sometimes produced and used by state and select large city food policy councils. Although informing or influencing policy is an overarching goal of more than half of all food policy councils, we only found references to policy agendas on the dedicated websites of six councils. Florida, Ohio, Nevada, South Carolina, Los Angeles, and Philadelphia detailed their council's accomplishment of developing and/or updating a policy agenda. These policy agendas are typically based on recommendations from the council membership and align policy priorities with members' shared vision for the food system.

The policy agenda for the Ohio Food Policy Network (OFPN) was readily available online. The state policy agenda focuses on four areas: (1) local farms, (2) access and education, (3) infrastructure and (4) institutions. Policies and priorities outlined throughout the agenda were informed by OFPN's membership during agenda-setting sessions from 2017-2020.⁵⁶



USDA FNS NUTRITION ASSISTANCE PROGRAMS

Numerous food policy councils have been associated with expanding access to USDA FNS nutrition assistance programs through advocacy efforts and implementation of nutrition incentive programs. In addition, many took a lead role coordinating state-level responses due to the COVID-19 pandemic. With expansive membership, state-level food policy councils were well-positioned to move quickly in launching and supporting emergency food access efforts.

State Highlight: District of Columbia

Background: The DC Food Policy Council⁴⁵ was established as part of the Director Establishment Act of 2014. The council was developed as a convening body to increase food access, security and sovereignty by strengthening the local food system and economy.

PSE Initiative: To extend and expand access to emergency feeding and nutrition assistance programs.

Results:

- ✓ Coordinated the distribution of 90,000 bags of fresh groceries from April through October 2020 to residents at 13 public schools in partnership with local nonprofits.

- ✓ Assisted residents in accessing resources such as the P-EBT Program and the American Rescue Plan Act of 2021.
- ✓ Assisted residents in accessing SNAP and WIC benefits, resulting in the increased SNAP allotment of \$13 million in April 2021 from \$6 million in September 2020, and an increase to the fruit and vegetable cash value voucher of \$35 in September 2021 from \$9 in July 2021.

Other Collaborative Strategies:

- ✓ Food plan – DC Food Systems Assessment

In Pennsylvania, partnering agencies successfully advocated for waivers for the school feeding and SNAP programs. The Pennsylvania Feeding Taskforce and partnering agencies distributed 4.9 million meals to vulnerable and low-income populations throughout the state.⁴

The Oregon Community Food Systems Network was able to leverage their past advocacy efforts to secure emergency funding to address food insecurity that occurred as a result of the COVID-19 pandemic. The food policy council applied for and received a \$3.4 million USDA GusNIP COVID Response and Relief Grant.⁵⁷

COMMUNITY-BASED INTERVENTIONS AND APPROACHES

Select large city food policy councils are responsible for the development and implementation of community-based interventions and strategies aimed at improving access to food through increased production and affordability.

The Berkeley Food Policy Council aided in the development of the Spiral Gardens Community Food Security Project. This project resulted in increased access to fresh produce for elders, as well as increased greenspace in local neighborhoods to grow fresh produce themselves. Additionally, the Berkeley Food Policy Council and strategic partners developed the School Garden and Cooking Program, a school-based program which includes the maintenance of teaching gardens in coordination with nutrition education. The program has been well-received and is self-sustaining.⁵²

In collaboration with the Center for Good Food Purchasing, the San Diego Food System Alliance co-facilitates the Good Food Purchasing Program aimed at shifting the purchasing focus of large institutions to encompass five core values: local economy, environmental sustainability, valued workforce, animal welfare and nutrition. Additionally, the San Diego Food System Alliance implements the Wasted Food Prevention Program to reduce food waste throughout the county. Council members provide technical assistance, educational materials and

State-level and select large city food policy councils, state food charters and SNACs are primarily funded by:

- ✓ Foundations and funds
- ✓ Colleges and universities
- ✓ Local, state and federal government
- ✓ Individual donors

network development to government agencies, businesses and residents.⁵⁸

The Oregon Community Food Systems Network coordinates the implementation of Veggie Rx throughout the state. The produce prescription program is used as a medical treatment or preventative service for patients deemed eligible due to diet-related health risks, food insecurity or other challenges accessing healthy foods, and referred by a health care provider. Patients participating in the program are prescribed access to healthy produce through food retailers at low or no cost to the patient. The Veggie Rx program was piloted in five locations throughout Oregon in 2019. A total of 399 participants were enrolled and upon participation of the

multi-week intervention, the program was associated with statistically significant improvements for household food insecurity, self-reported health, social engagement and number of medications. The Oregon Community Food Systems Network has leveraged the program success to develop a strategic plan for enhancing and expanding the Veggie Rx program from 2021-2025.⁵⁷

Advocacy Efforts

Several state-level food policy councils have found success in advocating for and receiving additional funding at the state and federal levels to achieve key goals and objectives. On average, advocacy at the state level has resulted in \$1-2 million enhancements on program lines from the state budget, annually.

- ▲ In 2019, Oregon received \$1.5 million to support the expansion of DUFB. It then leveraged those state funds to secure \$1.9 million for the federal USDA GusNIP in 2020.⁴
- ▲ As one of their two main projects, Hawaii's food policy council secured more than \$2 million to enhance and expand their DUFB program, Da Bux.⁵⁹
- ▲ In some instances, state food policy councils have been able to secure more substantial amounts of funding through their state advocacy efforts. For example, the two food policy councils in Massachusetts, the Massachusetts Food System Collaborative and Massachusetts Food Policy Council, have coordinated their efforts to successfully advocate for more than \$47 million for their food security infrastructure grant program since 2017.⁴
- ▲ In Utah, the food policy council received one-time state funding to create a food-hub start-up; however, the full funding award was not disclosed.⁶⁰

Food Policy Council Outcomes and Metrics

PSE interventions and associated projects implemented by state-level and select large city food policy councils have resulted in increased access to healthy foods, reduced food insecurity, overall health improvements and improvements to the food system. Food policy councils utilize a variety of metrics to measure outcomes, most commonly using program reach or enrollment numbers to evaluate progress. **Exhibit 8** presents the common outcome indicators and metrics used by state-level and select large city food policy councils.

Long-term outcomes were rarely documented by food policy councils. In some instances, food policy councils referenced metrics within state food charter or plan as the means to tracking progress throughout the state.

Exhibit 8. Common outcome indicators and metrics used by food policy councils to evaluate PSE interventions and associated projects

Outcomes	Metrics
Increased access to healthy food	<ul style="list-style-type: none"> ▲ Number and percentage of farmers markets that accept WIC, SNAP, etc. ▲ Number of food retailers (rural grocers, farmers markets, etc.) ▲ Total food sales ▲ USDA FNS program participation (SNAP, WIC, etc.) ▲ Number of CACFP and SFSP meals and/or snacks served ▲ Number of emergency meals served to families and seniors ▲ Reach or enrollment ▲ Policy changes such as local ordinances or state laws ▲ Secured funding amounts
Reduced food insecurity	<ul style="list-style-type: none"> ▲ Food insecurity rate (all persons and children under 18) ▲ Percentage of households that are food insecure or food secure
Improved food system	<ul style="list-style-type: none"> ▲ Amount of available greenspace ▲ Acres of land in agriculture for local farmers ▲ Percent of sales by distributors of local food ▲ Pounds of food waste ▲ Policy changes such as local ordinances or state laws
Improved health	<ul style="list-style-type: none"> ▲ Overweight and obesity rates (adult and youth) ▲ Diabetes prevalence ▲ Prevalence of multiple chronic diseases ▲ Healthy behaviors

Food Charters and Plans

Key Findings

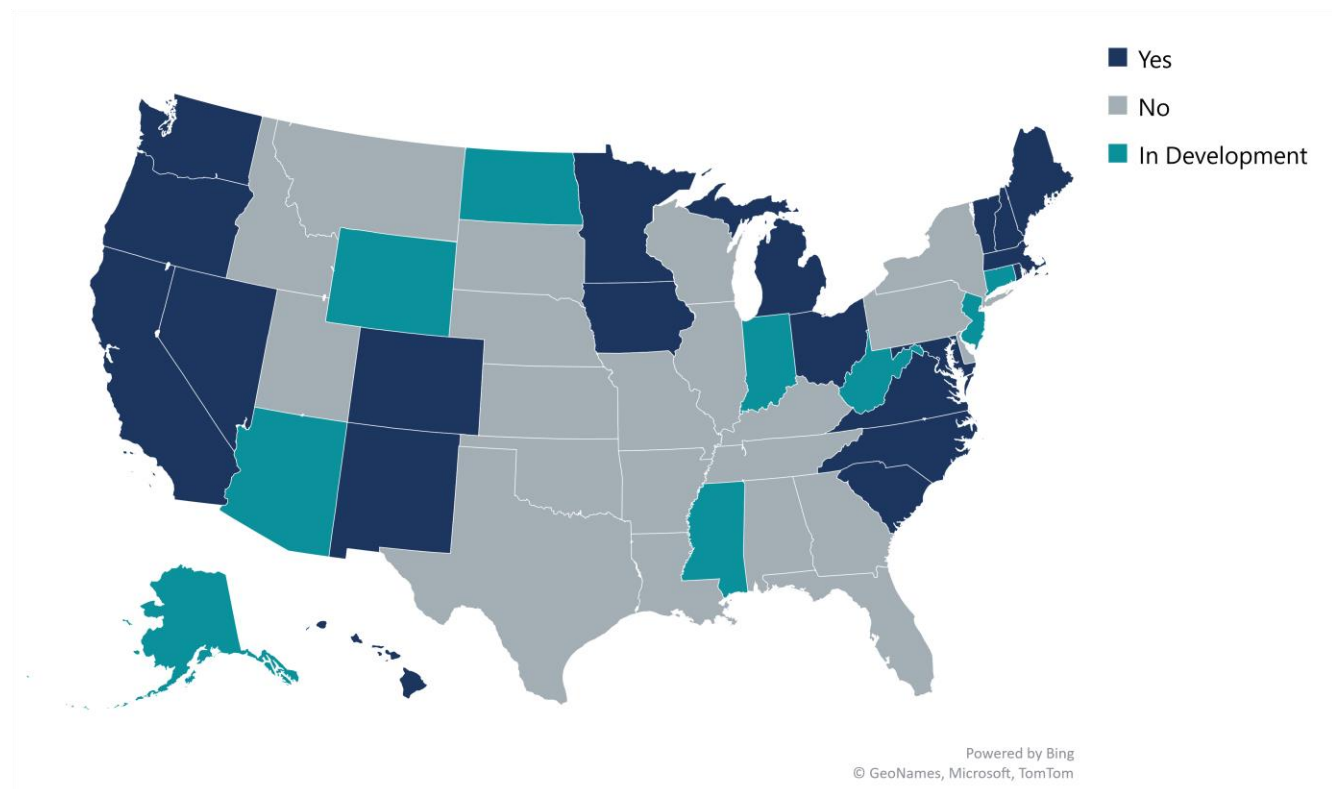
- ✓ State and regional food charters and plans have recently shifted from a focus on policy and systems change to a focus on health equity and food justice.
- ✓ Food charters are informed by a diverse group of stakeholders within the food system.
- ✓ Health outcomes of food charters and plans include: reduced food insecurity, increased access to healthy food, improved health and improved food agriculture systems.

Food charters and plans are detailed guidance documents designed to align visions, actions and strategies to improve and enhance the food system. The development of a food charter is a collaborative process that involves eliciting the input of a wide variety of stakeholders. Often, this process takes months, if not years, to complete and entails several methods of collecting input such as public meetings, online surveys and key informant interviews. Hundreds of informants contribute ideas and opinions, as well as specific strategies to

improve the state’s food system, including the successes and challenges that accompany those strategies. Food charters and plans are informed by a diverse group of stakeholders, including, but not limited to, food policy councils, educators, food and farm businesses, health care professionals, elected officials, funders, healthy food advocates, social justice advocates and community residents. State-level and select large city food policy councils and partnering organizations comprising those councils are also frequently engaged with the implementation of food charters.

The earliest food charter was launched in California in 2005. More than two-thirds of the active state food charters have been prepared in the past 10 years. Currently, 21 states have an active food charter or food plan. Additionally, nine states are currently in the process of developing a food charter (**Exhibit 9**). Although there was evidence that a state food charter was in development in Connecticut, no further details were identified. Michigan and Vermont are currently in the process of updating their existing food charters. Food charters and plans have also been developed at the regional level, including the Chesapeake Bay Watershed Region across Virginia, Maryland, D.C., Delaware, Pennsylvania and New York.

Exhibit 9. Presence of state food charter or plan



Food charters and plans most commonly seek to:

- ▲ Build an equitable and sustainable food system.
- ▲ Improve the health and well-being of individuals.
- ▲ Increase the collaboration and coordination among similarly focused organizations.

State and regional food charters and plans typically outline key goals, objectives and recommendations for organizations to collaborate around and contribute to. The most common priority goals detailed in food charters are summarized with various accompanying strategies below.

- ▲ Increasing awareness of and access to locally grown and healthy foods through strategies such as promoting healthy eating and nutrition education, expanding producers' access to larger-scale local markets, cultivating community gardens or implementing farm-to-school programming and education in schools.
- ▲ Increasing production of locally grown and healthy foods by reducing the municipal tax burden on farms, developing a farm-to-institution grant program to provide planning implementation and equipment to maximize locally grown foods or increasing investments to food storage, processing and distribution infrastructure.
- ▲ Enhancing the food and farm workforce sector by increasing sustainable economic development and creating jobs.
- ▲ Maximizing participation of federal nutrition programs throughout the state by developing statewide policies and incentives that increase access to nutrition programs or expanding and promoting programs at grocery stores, farmers markets or corner stores.

More recently prepared food charters and plans display a shift in focus from older charters. For those food charters created around 2017 and earlier, plans sought to address policy and systems change across different food sectors. Now, state food charters are taking an approach to address root causes and create institutional change with a focus on food justice. For example, the New Jersey food charter developed in January 2022 focuses on critical issues, including fresh food access and equity, climate change mitigation, adaptation and resilience, economic justice and sustainable food and agricultural waste. Further, the food charter was developed around three key principles: equity, justice and democracy to “ensure a food system that works for all and is most just in terms of addressing the historical and contemporary structures of disadvantage, marginalization, and exclusion”.⁶¹

Food Charter Outcomes and Metrics

Food charters and plans employ a variety of metrics to monitor the food system landscape throughout the state. **Exhibit 10** presents the frequently used outcome indicators and metrics within food charters.

“Where (food) plans were once more vague about outcomes, they are now seeking specific measurable goals and attach metrics. This has allowed organizations to focus on specific parts of the (food) plan without being overwhelmed.”

-Minnesota Food Charter Stakeholder,
following a 2019 convening of state and regional food charter stakeholders

PROMISING PRACTICE

Food policy councils who are directly involved in the development and implementation of a food charter or plan are more advanced at **implementing PSE strategies and more regularly develop and share resources** for other food policy councils and members.

Exhibit 10. Common outcome indicators and metrics presented in food charters and plans

Outcomes	Metrics
Reduced food insecurity	<ul style="list-style-type: none"> ▲ Food insecurity rate (all persons and children under 18) ▲ Percentage of households that are food insecure or food secure ▲ Percentage of population that is in poverty
Increased access to healthy food	<ul style="list-style-type: none"> ▲ Distance and distance distribution to food store ▲ Total food sales ▲ Number of farmers markets that accept WIC, SNAP, etc. ▲ SNAP participation, WIC participation ▲ School free or reduced-cost lunch participation ▲ Number of CACFP and SFSP meals and snacks served ▲ Fruit and vegetable consumption
Improved health	<ul style="list-style-type: none"> ▲ Overweight and obesity rates (adult and youth) ▲ Diabetes prevalence ▲ Prevalence of multiple chronic diseases
Improved food agriculture systems	<ul style="list-style-type: none"> ▲ Acres of land in agriculture ▲ Number of farms ▲ Acres of agricultural land preserved ▲ Percent of sales by distributors of local food
Improved workforce capacity	<ul style="list-style-type: none"> ▲ Employment rates ▲ Food sector employment, percentage of total workforce ▲ Number and type of workforce development programs

SNACs

Key Findings

- ✓ Representatives from state government agencies, including Departments of Health and Human Services, Education and Social Services, are key stakeholders leading and supporting SNAC initiatives.
- ✓ PSE interventions and associated strategies implemented by SNACs include: USDA FNS nutrition assistance programs, nutrition incentive programs and community-based interventions aimed at increasing opportunities for healthy eating and physical activity.
- ✓ SNACs most commonly utilize the *SNAP-Ed Evaluation Framework* to measure their capacity and partnerships.

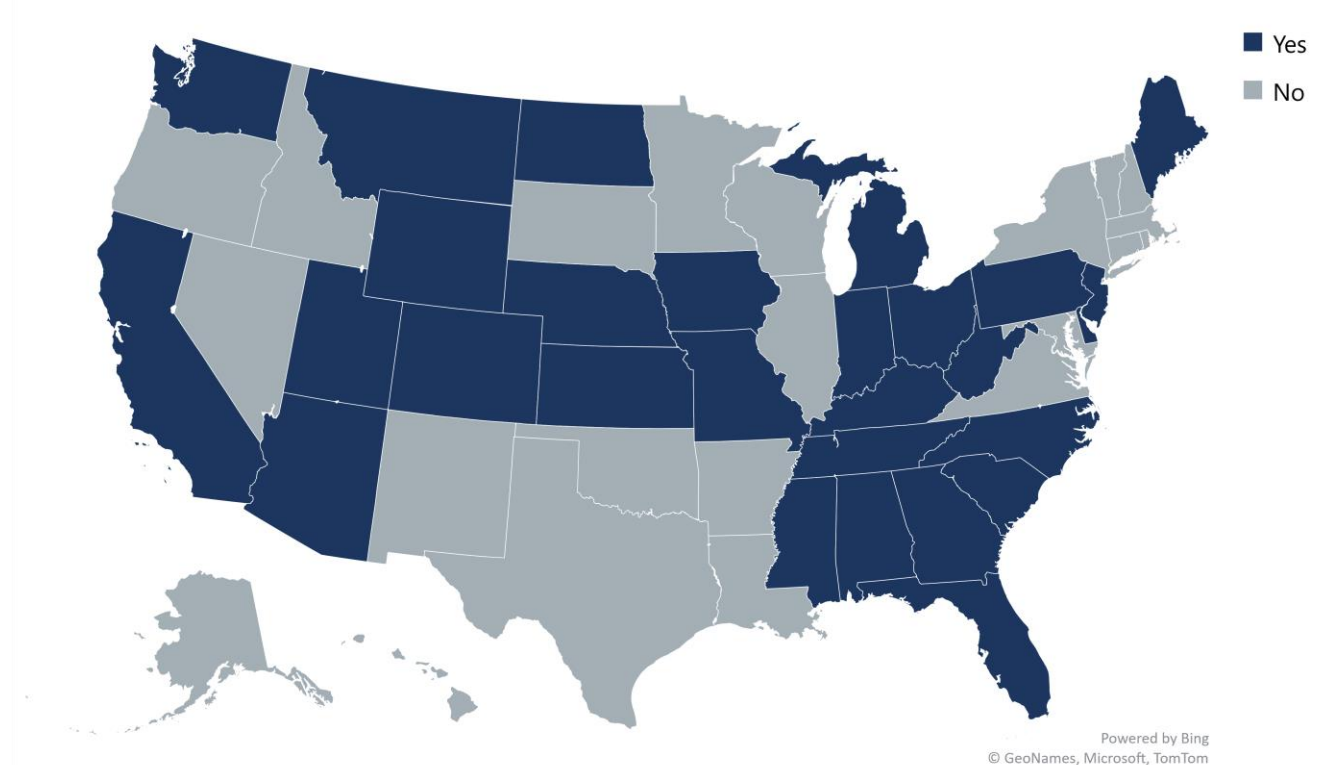
In the late 2000s, the USDA FNS began prioritizing the development of SNACs to address the high rates of obesity and other chronic diseases throughout the U.S. FNS encouraged states to engage in collaborative efforts, and SNACs were tasked with identifying solutions to the most pressing food-related issues throughout their states to transform communities to make healthy eating and active living accessible to everyone. More recently in 2017, the USDA required each state to establish a SNAC or a similar council to align nutrition education and obesity prevention activities across FNS programs.

As state-level collaboratives, SNACs unite around two overarching goals:

- ▲ Improving the health of low-income communities by increasing access to food and opportunities for physical activity.
- ▲ Improving the coordination of activities among similarly focused organizations.

Although required by the USDA, only slightly more than 50% of states have evidence of a SNAC. In total, 28 states have created and implemented a SNAC (**Exhibit II**), and of those, only 13 (46%) had details on a dedicated website or webpage further describing their SNAC, including collaborative partners and current or past projects or strategies. It is possible that some states have formed SNACs and they were not identified in this scan because information was not publicly accessible or the group used a title other than “SNAC”. For example, references to state-level nutrition, healthy eating and/or food access coalitions and collaborations were found; however, there was no specific mention or title of “SNAC”.

Exhibit II. Presence of SNAC



Key Stakeholders

LEAD ORGANIZATIONS

As organizations responsible for implementing USDA FNS programs, state SNAP-Education programs and SNAP-Education implementing agencies are predominantly responsible for organizing SNACs. The state SNAP-Education programs currently implementing SNACs are housed within state government agencies, including Departments of Health, Human Services, Economic Security, Education, Family and Children Services and Social Services. Most commonly, these departments lead state-level SNAC initiatives; however, a small number of SNAP-Education implementing agencies lead efforts. These implementing agencies and cooperative extensions at affiliated universities include Mississippi State University Extension Service, University of Missouri Extension, University of New England, Ohio State University Extension, Utah State University Extension and the University of Wyoming.

SUPPORTING ORGANIZATIONS

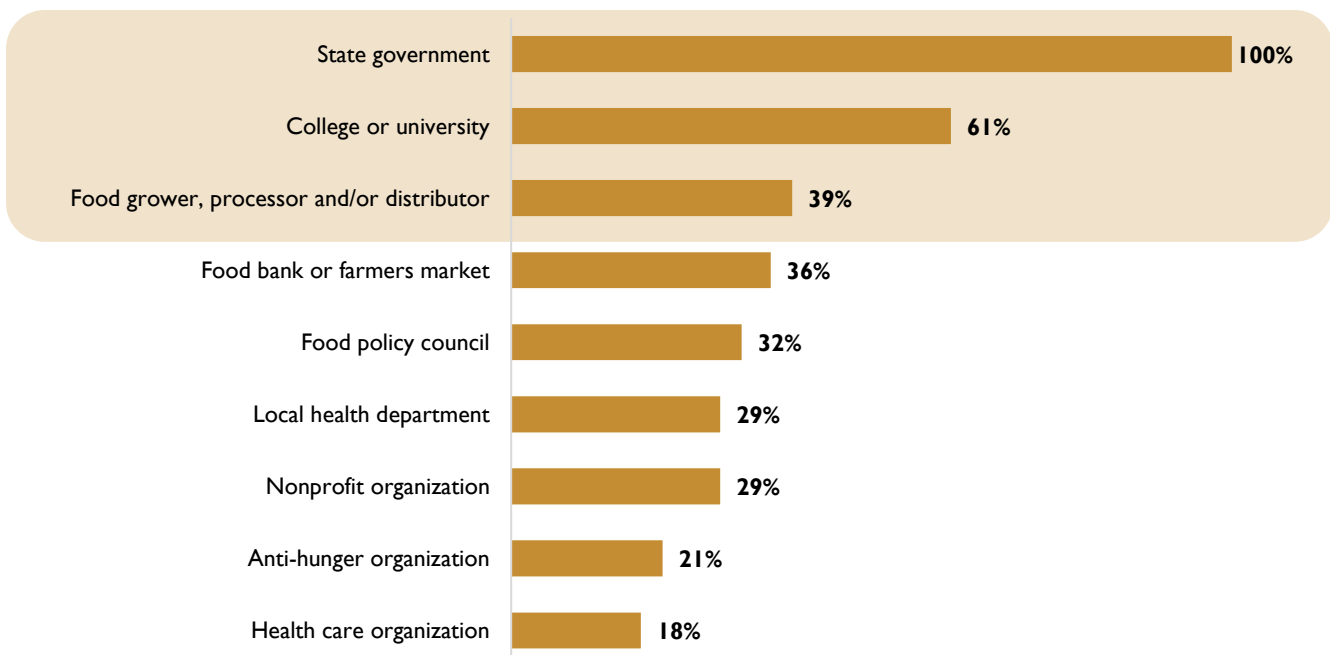
A variety of organizations partner with the lead organizations to support SNAC activities and initiatives. Every current SNAC engages with at least one state government department or agency. Most commonly, those include the Department of Education, Public Health, Aging, Agriculture and Social Services. Further, other FNS programs such as WIC, The Emergency Food Assistance Program (TEFAP), SFSP, CACFP, National School Lunch Program and School Breakfast Program which are housed within and implemented by those departments are often identified as main SNAC supporting partners.

More than half of all SNACs (61%) engage at least one college or university. Other commonly engaged stakeholders include food growers, processors and/or distributors (39%), food banks or farmers markets (36%) and food policy councils (32%) (**Exhibit 12**). Boys and Girls Clubs, YMCAs and Girls on the Run are examples of nonprofit organizations working collaboratively on SNAC initiatives.

89%

SNACs have partnered with state offices implementing USDA FNS programs.

Exhibit 12. Key stakeholders leading and supporting SNAC initiatives (n=28)



Planning Efforts

Most SNACs convene coalition meetings on a regular basis for participating organizations and partners. These meetings provide an ongoing opportunity for organizations to connect, network and collaborate around shared priorities and goals. Further, these meetings provide a platform for direct sharing allowing for promotion of one another's work and to reduce the duplication of efforts. A small number of SNACs report maintaining regular communication between SNAC members through an email listserv.

Thirteen SNACs (46%) have a dedicated website with information and supporting materials from their coalition. For those SNACs with a dedicated website or online presence, healthy eating and physical activity resources are readily available for users to access and review. Healthy eating and nutrition resources frequently include recipes, shared tips for gardening, cooking, shopping, food access and resource maps and in some cases, youth-specific resources such as recipes and activities. Wyoming and South Carolina SNACs also provide access to online physical activity opportunities at low or no cost.^{62, 63}

PSE Interventions and Associated Projects

USDA FNS NUTRITION ASSISTANCE PROGRAMS

SNACs are most commonly engaged in the implementation of USDA FNS nutrition assistance programs. This is likely due to the 2017 USDA guidance to align activities across organizations implementing these programs. Lead and supporting organizations across a variety of SNACs are responsible for administering CACFP, SFSP, WIC, TEFAP, School Breakfast Program, and National School Lunch Programs.



NUTRITION INCENTIVE PROGRAMS

Nebraska and Utah SNACs have implemented the DUFBI program. In Utah, the DUFBI program was led by the SNAC from 2015-2017. SNAC partners were responsible for marketing the DUFBI at farmers markets,

providing direct education to raise awareness of DUFB and implementing farmers markets, leading nutrition education activities for consumers and supporting evaluation activities of the DUFB program. SNAP and DUFB redemptions increased each year from 2015-2017, with SNAP redemptions increasing from \$47,085 to \$72,508 and DUFB redemptions nearly doubling from \$29,521 to \$47,047.⁶⁴

COMMUNITY-BASED INTERVENTIONS

Although uncommon, some SNACs implement community-based programs to increase opportunities for healthy eating and physical activity.

In North Dakota, SNAC partners developed the Hunger Free North Dakota Garden Project in 2010. The SNAC encourages state food growers to plant additional produce to be donated to food pantries and other community-based food hubs and distributors. A produce donation map was created and published online to make the process easier for farmers. Since it began, the Hunger Free North Dakota Garden Project has recorded volunteer donations of more than 3.4 million pounds of fresh produce.⁶⁵

In Utah, SNAC partnerships reach families through the Intergenerational Poverty Project. Families participate in free, hands-on cooking classes which encourage increased family mealtimes. Newsletters and flyers provide information and food budgeting education tips on how to eat and live well on a budget.⁶⁴

State Highlight: Nebraska

Background: The Nebraska SNAC, Community Nutrition Partnership Council, is comprised of 21 member organizations, including state staff responsible for implementing USDA FNS programs such as SNAP, WIC, and Team Nutrition. The council meets twice per year and strives to promote consistent nutrition and physical activity messaging without duplicating messaging.⁶⁶

PSE Interventions: DUFB and Go NAP SACC (Nutrition and Physical Activity Self-Assessment for Child Care)

Results:

- ✓ Nebraska first piloted DUFB at four sites in 2017 having since grown to more than 10 sites throughout the state. Program sites have yielded more than 250 new SNAP customers and an increase in SNAP sales between 24-53%.

- ✓ Select Nebraska SNAC partners collaborate around the implementation of Go NAP SACC, an evidence-based program to improve the health of young children in early care and education (ECE) programs. The project aims to improve nutrition and physical activity within ECE programs through training and healthy improvements. In 2017, a total of 253 childcare providers from 47 ECE centers participated in Go NAP SACC with a total of 3,619 children being reached by the program. Prior to participating in the program, providers met 39% of the Go NAP SACC best practices which increased to 60% of best practices met after participating

Other Collaborative Strategies:

- ✓ Food policy council – Nebraska Food Council

Promotional Outreach and Marketing Campaigns

Promotional and marketing activities are regularly conducted through dissemination of flyers, food access maps, social media posts and formal social marketing campaigns. These activities are often monitored by SNACs analyzing the total number of views or individuals reached.

Due to SNACs being predominantly comprised of FNS programs, the promotion of USDA FNS nutrition assistance programs is a major activity. Flyers and food access maps are the most common platforms used by SNACs to promote FNS programs throughout the state. SNACs in Florida, Mississippi and North Carolina have each developed state-specific reference guides and flyers to increase awareness and knowledge of FNS program and eligibility details. These resources are often translated into multiple languages and disseminated by state-level program staff responsible for implementing the FNS programs and/or posted online for state residents to easily access. Specifically in North Carolina, a spike in online viewership was observed from May-June 2021. In less than two full months, the Nutrition Resource Programs reference guide resulted in more than 16,000 pageviews with over 12,500 of those from unique views. In Alabama, the End Child Hunger in Alabama County Food Guide Project aims to ensure Alabama residents can find nutritious food. The project includes an interactive map of feeding sites and other food resources.⁶⁷ Similarly, Arizona Health Zone's online meals map presents all farmers markets and food site locations throughout the state.⁶⁸

State Highlight: California

Background: The California SNAC is comprised of USDA-funded organizations working to improve the health of Californians, especially low-income populations.⁶⁹

PSE Intervention: Farmers Market Initiative

Description: The Farmers Market Initiative sought to increase low-resourced shoppers' utilization of food and nutrition program benefits at local farmers markets.

Results:

- ✓ In 2018, the project was launched in four counties at 11 farmers markets.
- ✓ More than 15,700 promotional materials, including brochures, posters, flyers and postcards were disseminated.

- ✓ A total of 10 California SNAC partners worked to implement the initiative and promoted Market Match, a program to allow CalFresh participants to extend their food dollars, as well as promoted other nutrition programs that enabled them to increase their buying power, including the Senior Farmers Market Nutrition Program vouchers, WIC vouchers and monthly coupons.
- ✓ In 2019, the Farmers Market Initiative expanded into two additional counties at 19 farmers markets.

Other Collaborative Strategies:

- ✓ Food policy council – California Food Policy Council
- ✓ Food charter – The New Mainstream

More recently, SNACs have organized similar campaigns to promote access to free meals and other food resources to address the food insecurity as a result of the COVID-19 pandemic. SNACs in California, Maine and Ohio all published and promoted access to meals from state FNS programs through flyers and via social media

posts. In Maine, the social media message, “getting started with school meals” reached over 4,000 people and had 100 viewer engagements (likes, comments and shares) during the eight-week campaign.⁷⁰

SNACs in Ohio and Iowa have implemented social marketing campaigns to support existing SNAP-Ed direct education and PSE interventions throughout their respective states to further encourage fruit and vegetable consumption. In Ohio, the Celebrate your Plate campaign launched in 2016.⁷¹ The Pick a better snack™ social marketing campaign is primarily used for the Iowa HHS youth SNAP-Ed program in low-income Iowa schools to encourage children and families to eat more fruits and vegetables. Iowa SNAC partners, WIC and Team Nutrition, use the campaign materials to expand reach and impact throughout the state.⁷² The Georgia SNAC initiated a similar project in 2021; a collective social media project called Harvest of the Month unifies messaging around fruit and vegetable consumption. The project included the development of recipes, messages and activities, as well as health benefits detailed by a nutritionist with posts published at least once a week with the hashtag #EatLocalGA. At the conclusion of the seven-month project, more than 1,700 impressions on Facebook posts, 10,000 impressions on Twitter, and 60 likes on Instagram were recorded.⁶⁷

Evaluating SNACs

SNACs are encouraged to use the *SNAP-Ed Evaluation Framework* as a tool to plan for and evaluate their SNAC and associated partnerships.⁷³ The evaluation resource was created for SNAP-Ed programs and includes background and details on 51 indicators to measure the success of the programs. For the SNACs that documented their results, the outcome indicators and associated metrics are listed below in **Exhibit 13**.

Exhibit 13. Common evaluation metrics used by SNACs to evaluate progress and success

Category	Metric to Measure	Evaluation Level and Type of Outcome
Organizational partnerships	<ul style="list-style-type: none"> ▲ Number of active partnerships in SNAP-Ed qualified sites ▲ Description of depth of relationship 	Environmental setting – Short term
Multi-sector partnerships and planning	<ul style="list-style-type: none"> ▲ Type and number of organizations or individuals per sector represented 	Sectors of influence – Short term
Nutrition supports	<ul style="list-style-type: none"> ▲ Total number of promotional efforts for a PSE change ▲ Site-level or organizational level reach 	Environmental setting – Medium term
Agriculture	<ul style="list-style-type: none"> ▲ Number of farmers markets that offer SNAP-bonus incentive programs ▲ Estimated number of people in target population who have increased access to or benefit from the agricultural policy or intervention ▲ Total number of on-farm markets that accept SNAP benefits per 10,000 SNAP recipients 	Sectors of influence – Medium term
Social marketing	<ul style="list-style-type: none"> ▲ Number of statewide social marketing campaigns ▲ Projected reach of statewide social marketing campaigns 	Sectors of influence – Medium term

Discussion and Best Practice Recommendations

The purpose of this report is to identify best practices in addressing food and nutrition security through PSE change strategies and the work that states have undertaken in this area. The following is a summary of key findings from the peer-reviewed and grey literature, as well a review of the collaborative strategies states have implemented to address food and nutrition security through food policy councils, food charters and SNACs.

Addressing food and nutrition security will take a coordinated approach involving federal assistance programs, innovative policies and evidence-based interventions.

The peer-reviewed literature highlights the myriad of poor outcomes associated with food and nutrition insecurity, including diet-related diseases such as obesity, heart disease and other chronic conditions. In response to this, a variety of entities across the U.S. are working to address food and nutrition insecurity and associated health outcomes through local grassroots efforts to large-scale national-level initiatives and governmental programs. Food and nutrition insecurity is a complex issue that will take a coordinated approach to solve. Despite the noted challenges evaluating PSE strategies, the literature offers many promising practices and suggestions for future efforts, including the following.

- ▲ Apply a systems approach to address food and nutrition security by designing coordinated approaches with aligned policies.
- ▲ Engage food policy councils in these efforts, including stakeholders from various food systems sectors (at the state, local and regional level) to address quality food access, food security, economic development, land-use planning and procurement.
- ▲ Changes made to federal nutrition assistance programs introduced during the pandemic, including increased eligibility, streamlined application and expanded benefits, offer innovative solutions for the future.
- ▲ Interventions should work to maximize enrollment of eligible populations into nutrition assistance programs including the National School Lunch Program, SFSP, SNAP, WIC and senior meal programs.
- ▲ Encourage strong community partnerships that leverage resources and coordinate efforts for achieving community-wide change. Build local capacity through community workshops, technical assistance and training.
- ▲ Offer households with lower incomes extra food dollars to purchase fruits and vegetables through nutrition incentive programs, such as DUFEB and Produce Prescription (Rx) programs.
- ▲ Engage health care entity-based programs and provide training and resources to screen patients for food insecurity and connect them with food resources.
- ▲ Gather data to better understand food insecurity among diverse populations and rural communities to design effective interventions and approaches to address known health disparities.

States are addressing food and nutrition security through collaborative strategies engaging diverse stakeholders.

States and other stakeholder groups address food and nutrition insecurity through collaborative strategies such as food policy councils, food charters and plans and SNACs. Comprehensive networks of key stakeholders from across the food system are engaged in these strategies, including colleges and universities, local food growers, processors, distributors and retailers, nonprofit and anti-hunger organizations and most importantly, representatives from multiple departments of the state government.

Comprehensive networks comprised of key stakeholders align to address food insecurity through PSE interventions, such as the passage of local and state-level policy changes within community and school settings; the creation of organizational guidance documents such as strategic plans and policy agendas; and the implementation of USDA FNS nutrition assistance programs such as SNAP and WIC, nutrition incentive programs and various community-based approaches aimed at increasing the availability of healthy foods.



State government departments play a key role in supporting food and nutrition security efforts.

Individuals from state government departments play a key role in supporting local and regional PSE interventions and connecting similarly focused partners and members. Numerous states are in the process of building their internal capacity to implement PSE interventions through food policy councils, food charters and SNACs, developing their collaborative networks and organizing during monthly or quarterly meetings. Additionally, these individuals are already positioned in state departments responsible for implementing USDA FNS programs.

Further, state government departments serve as leaders, convening local-, county- and regional-level food policy councils. These entities are responsible for implementing the PSE change strategies, while state departments and similar agencies support their efforts by connecting similarly focused organizations and sharing best practices and resources.

States have documented an array of outcomes as a result of their work on food policy councils, food charters and plans, and SNACs.

States commonly track and report on short-term outcomes related to the work of food policy councils, food charters and plans and SNACs. These collaborative strategies have highlighted internal organizational progress such as improved capacity to deliver PSE interventions through organizational partnerships. SNACs most frequently measure their capacity and partnerships through process metrics such as number and type of active partnerships. Select state-specific food policy councils, food charters and plans and SNACs detail the outcomes of PSE interventions and associated strategies which include increased access to healthy foods, increased food security, improved overall health, improved food systems and agriculture and improved workforce capacity of residents within their states. Reach and enrollment data is used as a crucial metric for measuring progress. Examples of outcome measures include:

- ▲ Food policy councils and food charters monitor poverty, food insecurity and employment rates; measure participation in nutrition assistance programs; utilize self-reported health and health behavior data; and track agriculture statistics, such as number of farms and acres of land.
- ▲ SNACs utilizing the SNAP-Ed Evaluation Framework have also evaluated their social marketing campaigns and nutritional supports through medium-term process metrics by measuring reach.

States use collaborative strategies such as food policy councils, food charters and plans and SNACs to address the most pressing needs of their food systems and food-related issues, including food insecurity, at various geographic levels.



A comprehensive network of partners across the food system is utilized, including **colleges and universities, nonprofit organizations, local food growers and distributors and representatives from government offices.**



States document PSE interventions and associated projects such as: local and state-level **policy change**; the creation of **organizational guidance documents**; and the implementation of **USDA FNS programs, nutrition incentive programs and community-based approaches** aimed at increasing the availability of healthy foods.



Within their own organizations, food policy councils, food charters and SNACs have **improved capacity and increased collaboration.** PSE interventions and associated strategies have **increased access to healthy foods, increased food security, improved overall health, improved food systems and agriculture and improved workforce capacity** of residents throughout their states.

Limitations

This report details high-level findings from peer-reviewed literature relative to promising practices to address food and nutrition security with PSE change strategies. A much more extensive literature review could have been conducted for each type of PSE strategy highlighted in this report. If more in-depth information is desired on any one strategy or intervention, a more thorough literature review may be needed using different search terms. It is also likely that there are PSE strategies designed to address food and nutrition security that were not identified through this literature review process. Findings from state-level and select large city food policy councils, state food charters and SNACs presented throughout this report are limited to the information that was publicly accessible. It is possible that information for each of the collaborative strategies is missing. For example, although prioritized by USDA FNS, only 28 states were found to have a SNAC as part of this scan. It is possible that some states have formed SNACs and they were not identified because information is not publicly accessible, or the group uses a name or reference other than “SNAC”.

Definitions of Key Terms

Food charters and plans also referred to as visions and roadmaps, serve as a food system framework according to the Center for Regional Food System at Michigan State University. These documents identify goals and priorities developed by a diverse group of organizations and agencies to advance sustainability, health and equity, within state food systems.

Food policy councils and similar groups, which have grown rapidly in number over the past decade in the U.S. and in Tribal nations, are defined by the Johns Hopkins Center for a Livable Future as networks that represent multiple stakeholders and that are either sanctioned by a government body or exist independently of government, and address food-related issues and needs within a city, county, state, Tribal, multi-county or other designated region.

Food security is defined by the USDA as having access to enough food for an active, healthy life at all times. At a minimum, food security includes 1) readily available nutritionally adequate and safe foods, and 2) the ability to acquire those foods in a socially acceptable way.

Food systems are described by the United Nations Food and Agricultural Organization (FAO) as encompassing the entire range of actors and their interlinked value-adding activities involved in the production, aggregation, processing, distribution, consumption and disposal of food products that originate from agriculture, forestry or fisheries and parts of the broader economic, societal and natural environments in which they are embedded. The food system is composed of sub-systems (e.g., farming system, waste management system, input supply system) and interacts with other key systems (e.g., energy system, trade system, health system).

Health disparity is defined by Healthy People 2020 as a particular type of health difference that is closely linked with social, economic and/or environmental disadvantage. Health disparities adversely affect groups of people who have systematically experienced greater obstacles to health based on their racial or ethnic group; religion; socioeconomic status; gender; age; mental health; cognitive, sensory or physical disability; sexual orientation or gender identity; geographic location; or other characteristics historically linked to discrimination or exclusion.

Nutrition security is defined by the USDA as all Americans having consistent access to the safe, healthy and affordable foods essential to optimal health and well-being. Nutrition security builds on food security by focusing on how the quality of our diets can help reduce diet-related diseases. It also emphasizes equity in tackling long-standing health disparities.

PSE change strategies are designed to promote healthy behaviors within a community by making healthy choices easy and accessible where people live, learn, work, shop and play.

Supplemental Nutrition Assistance Program (SNAP) is the nation's largest hunger safety net program. SNAP helps people with lower incomes purchase food they need for healthy lives.

Supplemental Nutrition Assistance Program-Education (SNAP-Ed) is the educational component of the SNAP program. SNAP-Ed is an evidence-based program that helps people live healthier lives. The program teaches families with lower incomes how to stretch their food dollars, how to shop for and cook healthy meals and how to stay physically active. SNAP-Ed programming includes nutrition education classes, social marketing campaigns and strategies to improve policies, systems and the environment of communities.

State Nutrition Action Councils (SNACs) are state-level collaborations required by the USDA to align nutrition and obesity prevention activities across FNS programs. SNACs serve to maximize nutrition education efforts and improve coordination among state SNAP-Education agencies, FNS nutrition assistance programs and the Expanded Food and Nutrition Education Program.

Get Connected

To find out more information on the work Iowa HHS is doing to improve healthy eating, active living and food security in Iowa, please visit the Bureau of Nutrition and Physical Activity's (BNPA) websites.

BNPA: <https://idph.iowa.gov/nutrition-physical-activity>

WIC: <https://idph.iowa.gov/WIC>

SNAP-Ed: <https://idph.iowa.gov/INN>

5-2-1-0 Healthy Choices Count!: <https://idph.iowa.gov/5210>




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