TBM

COMMENTARY/POSITION PAPER

Addressing food insecurity in the United States: the role of policy, systems changes, and environmental supports

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Abstract

This commentary provides a brief overview of the historical, contemporary, and potential future approaches for using policy, systems changes, and environmental supports (PSE) to address food insecurity in the United States. We reflect on and integrate where possible the findings put forth in the other 16 papers included in the Translational Behavioral Medicine Special Issue entitled: Food Access Among Low-Income Populations: Understanding the Potential Intersect of Diet, Obesity, Food Insecurity, and Hunger.

Keywords

Food security, Federal food and nutrition assistance programs, Policy, systems changes, and environmental supports

Implications

Practice: Implementing policy, system changes, and environmental supports require multisectoral and multilevel intervening strategies including stronger connections with: (a) the research community to understand their impacts and how best to scale up and adopt where needed; and (b) policymakers to ensure effective translation of evidence-based approaches and the appropriate authorities and appropriations to implement and continually evaluate these strategies.

Policy: Legislative and executive actions can strengthen public health impacts of our federal food and nutrition assistance programs and additional investments in research and evaluation are needed to better understand the role of policy, system changes, and environmental supports in helping to address food insecurity, reduce chronic disease, and promote health equity.

Research: More rigorous research and evaluation is needed to better understand the role of policy, system changes, and environmental supports in addressing food insecurity, reducing chronic disease, and promoting health equity.

At the federal, tribal, state, and local levels, policymakers enact courses of action, regulatory measures, laws and policies, and set funding priorities designed to address food insecurity and its intersections and potential antecedents with chronic disease [1–3]. Increasingly, policy (e.g., ordinances, resolutions, mandates, guidelines, regulations, or rules) in addition to system changes (e.g., organizational procedures or resource allocation), and environmental supports (e.g., physical, observable changes in the built, economic, or social environments) are being used to address food insecurity, reduce chronic disease, and promote health equity [4]. This commentary provides a brief overview of the historical, contemporary, and potential future approaches for using policy, systems changes, and environmental supports (PSE) to address food insecurity in the United States. We reflect on and integrate where possible the findings put forth in the other 16 papers included in the *Translational Behavioral Medicine* Special Issue entitled: Food Access Among Low-Income Populations: Understanding the Potential Intersect of Diet, Obesity, Food Insecurity, and Hunger [5].

EVOLUTION AND EMERGING OPPORTUNITIES

Federal government

The United States has not adopted a "right to food" [6–8]. Notwithstanding, the federal government has the potential to take further actions to use PSE to address food insecurity [9]. First and foremost, the U.S. Department of Agriculture's (USDA) Food and Nutrition Service (FNS) administers a suite of fifteen programs to provide millions of income-eligible Americans access to healthy foods and beverages through food aid (provision of food commodities) and/or food assistance (provision of food vouchers), along with nutrition education (Table 1) [10]. Table 2 highlights selected examples of other federal agencies' contributions to advancing the role of PSE in addressing food insecurity [11–16]. Still, more is needed to maximize individual and collective federal efforts [17]. Some have argued for a National Institute of Nutrition, given no federal agency's primary focus is nutritional science even though managing diet-related chronic conditions is estimated at over $1 trillion per year and growing [18].

Table 1 | Selected highlights of the evolution of our national domestic food and nutrition safety net, which now consists of 15 federal food and nutrition assistance programs

Supplemental Nutrition Assistance Program (SNAP) About SNAP: Formerly known as Food Stamps, SNAP has evolved into an entitlement program and accounted for 68% of all federal food and nutrition assistance in fiscal year 2018. SNAP provides nearly forty million eligible individuals and families, persons with disabilities, and elders with monthly benefits through electronic benefit transfer accounts that allow participants to purchase eligible foods and beverages from more than 240,000 authorized retailers. Legislative Origins and Developments: The Agricultural Adjustment Act – 1935 (P.L. 74–320) provided initial funding to encourage domestic consumption of agricultural commodities. SNAP is now the largest component of the Farm Bill, accounting for about 80% of total spending. The most recent Farm Bill, The Agricultural Improvement Act – 2018 (P.L. 115–334), made only modest changes to SNAP and rejected a House Republican proposal for stricter work requirements, which the USDA subsequently proposed through a rule-making process (7 CFR 273). Website: https://www.fns.usda.gov/snap/supplemental-nutrition-assistance-program
Nutrition Assistance Program (NAP) About NAP: Based on but not directly a part of SNAP and provides income-eligible individuals and families with cash benefits for food and beverage purchases in a growing number of US territories. Legislative Origins and Developments: The Omnibus Budget Reconciliation Act of 1981 (P.L. 97-35) permitted NAP to operate via block grant in a growing number of US territories. The government of Puerto Rico is suing the USDA, among other federal agencies, regarding the policies that award lower federal benefits to US citizens who reside in Puerto Rico than to similarly situated US citizens residing in any of the 50 states of the US (Martinez v. Azar, No. 3:18-cv-01206, 2018 U.S. District WL 1795786, at *2 (D. P.R. Apr. 13, 2018)). A bill was recently introduced in the Senate to amend the Food and Nutrition Act of 2008 to provide for the participation of the US territories in SNAP (S.677). Website: https://www.fns.usda.gov/snap/examination-cash-nutrition-assistance-program-benefits-puerto-rico
Disaster Supplemental Nutrition Assistance Program (D-SNAP) About D-SNAP: Provides assistance to low-income households with food loss or damage caused by a natural disaster after the President has declared individual assistance for the disaster area and a state requests USDA's approval to operate the program. Legislative Origins and Developments: The Farm Bill and Congressional appropriations generally provide for disaster relief including the recent, contentious multi-billion disaster relief bill that included additional assistance to hurricane-damaged Puerto Rico (P.L. 116–20). Website: https://www.fns.usda.gov/disaster/disaster-assistance
The Emergency Food Assistance Program (TEFAP) About TEFAP: Provides emergency food assistance at no cost by providing commodities and administrative funds to states to operate the program. Legislative Origins and Developments: TEFAP was established by the Emergency Food Assistance Act of 1983 (P.L. 98-8) and this Act continues to govern program operations. The Hunger Prevention Act of 1988 (P.L. 100–435) authorized funds to be appropriated and formally named under the 1990 Farm Bill (P.L. 101–624). The Food and Nutrition Act of 2008 (P.L. 113–79) provides mandatory funding for the program's entitlement commodities. The 2018 Farm Bill 2018 (P.L. 115–334) reauthorized mandatory food purchases and reauthorizes discretionary storage and distribution grants. Website: https://www.fns.usda.gov/tefap/tefap-fact-sheet
Food Distribution Program on Indian Reservations (FDPIR) About FDPIR: Provides USDA Foods to income-eligible households living on Indian reservations and to American Indian households residing in approved areas near reservations or in Oklahoma. Legislative Origins and Developments: FDPIR is authorized under Food and Nutrition Act of 2008 (P.L. 113–79, §4(b)), Agriculture and Consumer Protection Act of 1973 (P.L. 93–86, §4(a)), and the 2018 Farm Bill 2018 (P.L. 115–334) reauthorizes the program and requires USDA to pay at least 80% of the administrative and distribution costs, waives the tribal organization's share for those financially unable to contribute, and authorizes funding for a demonstration project for one or more tribal organizations to enter into self-determination contracts to purchase agricultural commodities under FDPIR. Website: https://www.fns.usda.gov/fdpir/fdpir-fact-sheet
Commodity Supplemental Food Program (CSFP) About CSFP: Now works to improve the health of income-eligible individuals at least 60 years of age by distribution of commodities and providing administrative support to participating states and Indian tribal organizations (The Agricultural Act of 2014, P.L. 113–79). Legislative Origins and Developments: CSFP is authorized through the Agriculture and Consumer Protection Act of 1973 (§4(a)). The 2018 Farm Bill reauthorized the CFSP and sets minimum and maximum lengths for CSFP household certification periods. Website: https://www.fns.usda.gov/csfp/csfp-fact-sheet
USDA Foods in Schools About USDA Foods in Schools: Provides American commodities for schools and institutions participating in the National School Lunch Program (NSLP), the Child and Adult Care Food Program (CACFP), and the Summer Food Service Program (SFSP). Legislative Origins and Developments: The authorizing statute is Richard B. Russell National School Lunch Act (P.L. 79–396, §6), the Agricultural Adjustment Act of 1935 (P.L. 74–320, §32), The Agricultural Act of 1949 (P.L. 81–439, §416), and this program is a part of the forthcoming Child Nutrition Reauthorization. Website: https://www.fns.usda.gov/fdd/schoolscn-usda-foods-programs
National School Lunch Program (NSLP) About NSLP: Provides federal reimbursement for school meal programs operating in public and private schools and residential child care institutions.

(Continued)

Table 1 | Continued

Legislative Origins and Developments: The authorizing statute is Richard B. Russell National School Lunch Act of 1946 (P.L. 79–396) and the process usually involves amending this Act and/or the Child Nutrition Act of 1966 (P.L. 89–642), and sometimes Section 32 of the Act of August 24, 1935. Congress has also used the farm bill, annual appropriations or other legislative approaches. The Healthy, Hunger-Free Kid Act of 2010 (P.L. 111–296) granted the USDA the authority to improve the nutritional standards for all foods regularly sold in schools during the school day, including vending machines, "a la carte" lunch lines, and school stores (which 7 CFR Parts 210, 215, 220 and 226 rolled back) and within the Child and Adult Care Food Program (CACFP); provided additional funding to schools to help them meet the updated nutritional standards; strengthened intersections between local farms and schools; expanded access to drinking water; set basic standards for school wellness policies; streamlined certification and eligibility processes to increase access and participation in the child nutrition programs; expanded supports for breastfeeding; expanded SNAP-Ed's mission by requiring comprehensive and public health approaches for obesity prevention; authorized testing innovative strategies to alleviate childhood hunger and food insecurity; among others. NSLP is a part of the forthcoming Child Nutrition Reauthorization.
Website: https://www.fns.usda.gov/nslp/national-school-lunch-program

School Breakfast Program (SBP)
About SBP: Provides federal reimbursement of breakfast meals served at programs operating in public and private schools and residential child care institutions.
Legislative Origins and Developments: The Child Nutrition Act of 1966 (P.L. 89–642) authorized the School Breakfast Program pilot and amendments to this Act made the program a permanent entitlement program in 1975 (P.L. 94–105). SBP is a part of the forthcoming Child Nutrition Reauthorization.
Website: https://www.fns.usda.gov/sbp/sbp-fact-sheet

Special Milk Program (SMP)
About SMP: Subsidizes milk provisions to children to eligible institutions, not participating in the National School Lunch Program or School Breakfast Program.
Legislative Origins and Developments: This program has been operating since 1954 (P.L. 86–478), became part of the Child Nutrition Act of 1966 (P.L. 89–642), and is a part of the forthcoming Child Nutrition Reauthorization.
Website: https://www.fns.usda.gov/smp/special-milk-program

Summer Food Service Program (SFSP)
About SFSP: Provides federal reimbursement for meals and snacks provided during the summer months to participating sites, including schools, community centers, parks, and faith-based organizations.
Legislative Origins and Developments: The Richard B. Russell National School Lunch Act of 1968 (P.L. 90–302) authorized a summer feeding program. SFSP is part of the forthcoming Child Nutrition Reauthorization.
Website: https://www.fns.usda.gov/sfsp/summer-food-service-program

Fresh Fruit and Vegetable Program (FFVP)
About FFVP: Provides free fruit and vegetable snacks to elementary school students.
Legislative Origins and Developments: The Farm Security and Rural Investment Act of 2002 (P.L. 107–171) and the Agricultural Act of 2014 (P.L. 113–76) authorized FFVP. This program is part of the forthcoming Child Nutrition Reauthorization.
Website: https://www.fns.usda.gov/ffvp/fresh-fruit-and-vegetable-program

Child and Adult Care Food Program (CACFP)
About CACFP: Provides federal reimbursement for meals and snacks served to children, adolescents, and elders participating in eligible programs based in a variety of settings such as the Boys and Girls Club, early childcare centers and day care homes, and recreational sites providing programming tailored to seniors, among others.
Legislative Origins and Developments: The Richard B. Russell National School Lunch Act of 1968 (P.L.90–302) authorized the program for child care centers, day care homes, adult day care centers and then with additional amendments in 1994 the program expanded to offer at-risk after-school snacks and meals. CACFP is part of the forthcoming Child Nutrition Reauthorization.
Website: https://www.fns.usda.gov/cacfp/child-and-adult-care-food-program

Special Supplemental Nutrition Program for Women, Infants and Children (WIC)
About WIC: Provides benefits redeemable for supplemental foods and beverages, along with nutrition counseling and breastfeeding support to eligible women who are pregnant and/or lactating and infants from age 0 to 5.
Legislative Origins and Developments: The Child Nutrition Act of 1966 was amended in 1972 (P.L. 92–433) to authorize WIC as a two-year pilot program, in 1975 WIC was made permanent (P.L. 94–105), and is part of the forthcoming Child Nutrition Reauthorization.
Website: https://www.fns.usda.gov/wic/women-infants-and-children

Farmers' Market Nutrition Program (FMNP) /
Senior Farmers' Market Nutrition Program (SFNMP)
About FMNP/SFNMP: Provides vouchers to WIC participants and eligible seniors to redeem at farmers' markets.
Legislative Origins and Developments: The Child Nutrition Act of 1966 was amended in 1992 (P.L. 102–314) to authorize WIC FMNP and SFNMP. The Farm Security and Rural Investment Act of 2002 (P.L. 107–171, §4307) authorized $15 million until expended. The Healthy, Hunger-Free Kids Act of 2010 (P.L 111–296, §424) authorized $20 million per year but annual appropriations have been between $15 to $18.5 million through fiscal year 2019. FMNP/SFNMP are part of the forthcoming Child Nutrition Reauthorization.
Website: https://www.fns.usda.gov/fmnp/wic-farmers-market-nutrition-program
https://www.fns.usda.gov/sfmnp/senior-farmers-market-nutrition-program

Table 2 | Selected examples of federal agencies' contributions to advancing the role of policy, systems changes, and environmental supports (PSE) in addressing food insecurity in the United States

Department or agency	Selected contributions
U.S. Department of Agriculture	*Agricultural Marketing Service* – Commodity Services; Farmers Market and Local Food Promotion Program; Child Nutrition Labeling Program *Agriculture Research Service* – Human Nutrition National Program, which includes Dietary Surveillance and Food Composition and other research conducted at six Human Nutrition Research Centers *Economic Research Service* – Food and Nutrition Assistance Studies and Evaluations including FoodAPS *Food and Nutrition Service* – Suite of 15 Food and Nutrition Assistance Programs including SNAP-Ed (*See* Table 1); Center for Nutrition Policy and Promotion Collaborative Efforts in Developing and Promoting National Dietary Guidance *Food Safety and Inspection Service* – Food Safety Education *Foreign Agricultural Service* – McGovern-Dole Food for Education and Child Nutrition Program (exchange of lessons learned across domestic and international programs) *National Agricultural Library* – nutrition.gov *National Institute of Food and Agriculture* – Competitive Funding Programs; Cooperative Extension System
U.S. Department of Defense	Defense Commissary Agency; Support of the USDA Fresh Fruits and Vegetables Program
U.S. Department of Health and Human Services	*Administration for Children and Families* – Competitive Funding Programs; Research and Evaluation *Administration for Community Living* – Competitive Funding Programs; Research and Evaluation *Centers for Disease Control and Prevention* – National Monitoring and Surveillance; Nutrition and Obesity Policy Research Network Food Security Working Group, which is part of the Prevention Research Centers Program *Centers for Medicare and Medicare Services* – Funded a report by the National Quality Forum entitled "A Framework for State Medicaid Programs to Address Food Security and Housing Instability" *Food and Drug Administration* – Food Safety; Nutrition Labeling; Encourage New or Reformulated Food and Beverages *Health Resources and Services Administration* – Competitive Funding Programs; Training Programs; Research Networks *National Institutes of Health* – Competitive Funding Programs; *See* Brown et al. *Transl Behav Med.* 2019;9(5):980-987. *Office of Disease Prevention and Health Promotion* – Collaborative Efforts in Developing and Promoting National Dietary Guidance
U.S. Department of Housing and Urban Development	Competitive Funding Programs (e.g., support building of community kitchens and facilities where federally supported meal services can be offered); Support of the USDA Summer Food Service Program
U.S. Department of State	*United States Agency for International Development* (exchange of lessons learned across domestic and international programs)
U.S. Department of Transportation	Competitive Funding Programs (e.g., supports for new or enhanced transportation options to food outlets in underserved areas)
U.S. Executive Office of the President	-The Hoover and Roosevelt administrations were instrumental in the development of the Food Stamp Program (now known as SNAP) -The Truman administration was critical to establishing the National School Lunch Program -The Nixon administration hosted the White House Conference on Food, Nutrition, and Health in 1969, with the aim of more effectively addressing food insecurity, utilizing federal food and nutrition assistance programs, partnering with the private sector, and coordinating interagency efforts
U.S. Government Accountability Office	Conducts studies relevant to food insecurity; for example, examining the extent to which active-duty service members and their families have access to food assistance programs (GAO-16–561) and how prevalent food insecurity may be among college students (GAO-19–95)

(Continued)

Table 2 | Continued

Department or agency	Selected contributions
Inter-Departmental and Other Collaborative Endeavors	*Dietary Guidelines for Americans* – Serves as the science-base for all federal policy including nutrition assistance programs *Dietary References Intakes* – Serves as the most current scientific knowledge on nutrient needs of healthy populations *Global Food Security Strategy* – Charts a course for the US Government to contribute to the achievement of global food security and the range of Sustainable Development Goals (exchange of lessons learned across domestic and international programs) *Global Nutrition Coordination Plan* – Identities opportunities for greater interagency communication and collaboration on human nutrition research and programming, facilitating a stronger whole-of-government approach to global nutrition (exchange of lessons learned across domestic and international programs) *Healthy People* – Provides science-based, 10-year national objectives for improving the health of all Americans including addressing food insecurity (e.g., NWS-12 and NWS-13) *Interagency Committee on Human Nutrition Research* – Charged with improving the planning, coordination, and communication among federal agencies engaged in nutrition research including intersects with food insecurity *National Collaborative on Childhood Obesity Research* – Brings together four of the nation's leading research funders in childhood obesity research (CDC, NIH, USDA and the Robert Wood Johnson Foundation); projects include developing a series of resources to support the transformation of SNAP-Ed into a nutrition education and obesity prevention grant program *National Food and Nutrient Analysis Program* – Monitors key foods and their nutrient content for the US populations with special efforts to include foods consumed by ethnic minorities that are of research interest *National Health and Nutrition Examination Survey* – Assesses the health and nutritional status of adults and children in the US including gathering demographic and socioeconomic questions

Congress has used its authority to enact legislation, appropriate funding, conduct investigations, among other activities, to advance the role of PSE in addressing food insecurity [9]. Establishing a comprehensive, coordinated program through the National Nutrition Monitoring and Related Research Act of 1990 (P.L. 101–445) was fundamental to helping address food insecurity using data informed activities and allocating scare resources at the federal, state, and local levels [19]. Known as NNMRR, Congress established a 10-year program (during the period of 1992 to 2002) and required the Secretaries of USDA and the U.S. Department of Health and Human Services (DHHS) to act jointly in establishing an interagency board to assist in implementation. NNMRR also directed the President to establish the National Nutrition Monitoring Advisory Council made up of external stakeholders and subject matter experts that would be terminated after the final comprehensive plan is prepared. In addition, the Secretaries of USDA and DHHS were directed to publish a report entitled "Dietary Guidelines for Americans" containing guidelines for the general public based on the preponderance of scientific and medical knowledge (the 1980 and 1985 versions were published without a legislative mandate).

Since 2002, there has been a lack of Congressional mandate to ensure national nutrition monitoring activities across the lifespan and for input from important subgroups to meet our current and emerging data, reporting, program, and policy needs. Data collection and analysis pertaining to American Indians and Alaska Natives continues to be an unmet need [20]. Another major deficiency is our lack of data on women who are pregnant and/or lactating and infants from birth to 24 months. This deficiency will be problematic to meet the Congressional mandate (P.L. 113–79) of evidence-based dietary guidelines for these special groups in the impending 2020–2025 *Dietary Guidelines for Americans* [21]. For these critical life stages and across the entire lifespan, there are limited standardized measures for food insecurity [22]. Most available food insecurity measures are economically-driven and do not assess other important aspects, including physiological hunger, coping mechanisms, and transportation options. Furthermore, key aspects of our food systems are not adequately monitored, among other research gaps outlined in the *National Nutrition Research Roadmap*; specifically, limited information exists on the nutritional environments and policies in key settings such as childcare and food pantries and the other settings where federal food and nutrition assistance programs operate [23]. As discussed by McCormack et al. [24], valid and reliable measures are needed to help document and facilitate meaningful change in the nutritional environment of food pantries. Future work could explore

how best to use legislation to ensure appropriate authorities and appropriations for a modernized federal nutrition monitoring plan. This plan could be required to establish the data and reporting components needed to effectively track and inform policy and programmatic actions regarding food insecurity and its coexistence with chronic diseases across the lifespan, particularly among vulnerable populations and within key settings.

The 2020–2025 *Dietary Guidelines for Americans* should be released closer to the start of 2020 and will serve as the foundation for new federal nutrition messaging and materials [25]. As discussed by Gustafson et al. [26], the USDA MyPlate messaging and materials were utilized by state extension agents in collaboration with academic and retail partners to develop a state-specific and seasonally appropriate marketing campaign in rural communities known as "Plate It Up Kentucky." These efforts complemented other choice architecture intervention strategies such as placing the featured healthy food and beverage products at the end caps in retail outlets near the check-out with a "Plate It Up" logo and offering recipe cards, in-store sampling, and price reductions. Participating customers spent on average 8% more on fruits and vegetables within intervention stores from baseline to postintervention (p = .001). Future research can examine how the impending 2020–2025 *Dietary Guidelines for Americans*, along with current and forthcoming nutrition education materials resonates with the unique contextual, cultural, and economic needs of Americans struggling with food insecurity [27].

Another critical legislative tool is the Farm Bill. This recurring omnibus bill is reapproved about every 5 years by Congress and includes 12 titles, ranging from rural development to nutrition [28]. More than six decades ago, a pilot Food Stamp program was added to the Farm Bill to garner urban Congressional members support for farming issues [28]. Now known as the USDA Supplemental Nutrition Assistance Program (SNAP) and the largest component of the Farm Bill, SNAP accounted for about 80% of total spending in the 2018 Farm Bill [29]. Over the last decade, Farm Bill deliberations have resulted in legislative authorities and appropriations with food security implications such as considering increasing work requirements for able-bodied adults without dependents and exploring approaches to modernizing SNAP redemption through farmers' markets, community-supported agriculture, restaurants (for individuals who are homeless, elder, or disabled), online delivery options, and during the summer months when students are not participating in school-based nutrition assistance programs [9]. Moreover, Congress has worked to strengthen SNAP's public health impacts during the Farm Bill reauthorization process. As one example, Congress has supported incentives for healthful foods through multiple iterations of USDA funding mechanisms—starting with the Healthy Incentives Pilot to now permanent funding through the Gus Schumacher Nutrition Incentive Program (GusNIP). In addition, Congress has authorized a Produce Prescription Program as part of GusNIP; enhanced minimum stocking standards for SNAP-authorized retailers; expanded access to foods through a National Healthy Food Financing Initiative; and supported nutrition education through SNAP-Ed. The Farm Bill also authorizes and appropriates funding for other federal food and nutrition assistance programs (Table 1).

This Special Issue included several manuscripts with implications for future Farm Bill deliberations. For instance, regarding access to retail food outlets, Hollis-Hansen et al. [30] conducted a systematic review to examine if and how the introduction of a healthy food retailer affects fruit and vegetable consumption in lower-income communities and identified 15 studies meeting the study inclusion criteria and 6 of these studies reported the introduction of a new food retailer significantly increased consumers' fruit and vegetable consumption. The authors noted more studies are needed in order to assess differences between various types of retailers (e.g., mobile markets vs. brick and mortar stores) and to gain a better understanding of how to strengthen the impact of a new retailer on consumers' fruit and vegetable intake. Moreover, Pare et al. [31] conducted a qualitative study to better understand alternative retail food outlets (i.e., produce markets that utilize volunteers and customers to act as "food gateways" by providing transportation and advocacy support) within one urban community and found this nonprofit model has promise in helping customers with low resources to navigate the food system.

Several studies examined the dietary quality available within SNAP-authorized retailers and how PSE changes might positively impact the retailer's offerings and consumer's purchases. As one example, Powell et al. [32] conducted a multisite project to evaluate the extent that small food stores located in low-income areas met the USDA 2016 final rule on SNAP-authorized retailer stocking requirements and reported less than a third (30.6%) met all the 2016 final rule requirements and 86% met the requirements for fruits and vegetables. These data illustrated the potential positive impact of enhanced stocking requirements on the retail food environment in low-income areas while also demonstrating the need for technical assistance and capacity building to ensure regulatory compliance. Other studies explored the feasibility or impacts of using the marketing-mix, choice architecture and/or produce prescription strategies to encourage healthy consumer purchases and acknowledged the economic constraints and facilitators for both retailers and consumers [26,33,34]. For example, Aiyer et al. conducted a pilot food prescription program in two

school-based clinics and one federally qualified health center and 99% of the participants reported eating all/most of the distributed produce and 94.1% indicated a decrease in the prevalence of food insecurity [35]. Altogether, these findings demonstrate how the food environment is complex. And while the use of PSE changes show promise, more work is needed to better elucidate which strategies are most effective and feasible. Research is also needed to examine the policy opportunities within future iterations of the Farm Bill to strengthen its public health impacts [36].

A third major legislative lever for Congress is Child Nutrition Reauthorization (CNR). Congress undertakes this process about every five years to make changes, additions and/or deletions to the permanent statutes and related policies authorizing the USDA child nutrition programs (Table 1) [37]. As detailed in Table 1, the last Child Nutrition Reauthorization, known as The Healthy, Hunger-Free Kids Act of 2010 (HHFKA) (P.L. 111–296), made significant changes that have resulted in positive impacts on the nutritional quality of school meal offerings nationwide, as well as the dietary intakes of participating children [38].

This Special Issue included several manuscripts with implications for current Child Nutrition Reauthorization deliberations. As one example, Escaron et al. [39] worked with five school districts and found school wellness policies were an important local lever to address food insecurity, chronic diseases and health equity. Nevertheless, each school district had a tendency to avoid incorporating strong language, which will likely lessen their potential impact on improving school wellness. This study also found afterschool snack servings of fruits, vegetables, whole grains, and sugar-sweetened beverages did not comply with the USDA Smart Snacks program regulations. Another study led by Turner et al. [40]. examined community eligibility and other provisions for universal free meals at schools in California and found more than half of the eligible schools were using a provision for universal free meals. Provision adoption was more common at schools that were larger, had predominantly Latino students, and were in rural areas.

Leveraging the local food system to improve nutrition in schools, Rains et al. [41] found the Farm to School Education Grant Program helped the State of Oregon reach more than 20,000 students in 30 school districts, including 25 low-income districts in Oregon. These investments contributed to behavior changes among participating students for increased acceptance of school meals, better health outcomes, and improved food security. Regarding SNAP-Ed, Naja-Riese et al. [42] found a newly developed SNAP-Ed Evaluation Framework is facilitating the translation of evidence-based approaches for addressing food insecurity and the coexistence of chronic diseases into practitioner-driven tools for measuring effectiveness across program models, settings, partnerships, and policy efforts. To build on these initial successes, the authors called for more involvement of policymakers in the advancement of PSE changes within SNAP-Ed at the state and national levels.

Considered collectively, more work remains to ensure the effective translation of what we know and what is continually emerging regarding the various changes made in the HHFKA to inform the current Child Nutrition Reauthorization. Additional multidisciplinary, multisectoral, and multilevel work is needed to envision new or enhanced innovative legislative approaches in this reauthorization process, as well as future iterations. This work could potentially strengthen public health impacts of the USDA child nutrition programs and WIC, especially comparatively understudied programs such as the Summer Food Service Program (SFSP) and the Child and Adult Care Food Program (CACFP).

Other traditional and emerging federal levers are expanding existing activities or creating new ones to better address food insecurity. For example, the Patient Protection and Affordable Care Act (P.L. 111–148) and subsequent programmatic and regulatory approaches from the DHHS are increasingly considering the role of improved nutrition in health promotion and disease prevention. For instance, Section 3025 required the Secretary of the DHHS to establish a Hospital Readmission Reduction Program which is in response to evidence indicating providing adequate nutritional supports to patients who are low-income and/or socially isolated as a key ingredient to lowering hospital readmission rates [43]. While the evidence remains mixed and state implementation varies widely, Medicaid expansion aimed to improve overall individual and household financial stability, which could potentially have spillover benefits for reducing food insecurity or at least lessen conflicts between “eat or treat” (i.e., the trade-offs that food insecure households often make between buying food or health care costs such as medication) [44].

Another example is the Older Americans Act (P.L. 89-73), which has progressively addressed food insecurity since 1972 and continues to explore more innovative ways to develop, implement, and scale up evidence-based practices for enhancing senior nutrition through more than 145 million home-delivered meals and more than 79 million congregate meals each year [45,46]. The Nutrition Labeling and Education Act (P.L. 101–535) and more contemporary efforts at the Food and Drug Administration (FDA) consider nutrients of concern and literacy levels among vulnerable populations. As an example, FDA’s expansion of folic acid fortification to corn masa flour (a staple food for many Latin Americans who reside in the United States) will likely help reduce the incidence of neural tube

defects among these populations [47,48]. Recently, the USDA established the National Bioengineered Food Disclosure Standard, as authorized by Congress in 2016 [49]. Bioengineered food has been shown to reduce food insecurity and is considered an important component of our domestic and global food security strategy, though work remains to better understand their impacts on consumers and the environment [50–52]. A final but emerging legislative effort is paid parental leave, which could address maternal employment trade-offs that might help increase breastfeeding initiation and duration while protecting household food security [53].

Tribal, state, and local governments

Self-determined tribal governance in which Native American tribes in the United States exercise self-governance and decision making on issues that affect their own people including food sovereignty (P.L. 73–383) is fundamental to ensuring sustained, positive impacts for food insecurity, health promotion, and disease prevention. Emerging efforts demonstrate the promise of using multilevel, multisectoral, and multigenerational approaches to promote healthy eating with robust, long-term civic and community engagement [54,55]. As discussed by Bersamin et al. [56], traditional food systems have an important function in addressing the disproportionate burdens of food insecurity and chronic diseases among American Indian and Alaska Native communities. More work is needed to build on the historic success of the Native Farm Bill Coalition in the 2018 Farm Bill to further support tribally led PSE changes across Indian Country [57].

States also have a critical but too often understudied and utilized role [36]. As examined in Abildso et al. [58], a Centers for Disease Control and Prevention (CDC) grant supported statewide effort known as "Change the Future West Virginia" made PSE changes to enhance access to fresh fruits and vegetables. As a result of this statewide effort, schools from 48 of the state's 55 counties implemented PSE changes and 35 counties served locally produced foods; 29 of the farmers' markets within the state added electronic benefit transfer machines; and 22.1% of grocery stores and 14.1% of convenience stores signed agreements to support the statewide effort. The study authors recognized the importance of federal support, state leaders championing the effort, private and public sectors partnering on a coordinated campaign, and the role of face-to-face contact in ensuring program adoption, fidelity, and sustainability. Another asset: States provide critical testing grounds for possible national strategies; for instance, the Pennsylvania Fresh Food Financing Initiative that helped inform an ultimate national Healthy Food Financing Initiative [59].

At the local level, minimum wage ordinances have become one of the most intriguing policy approaches relevant to food security. As examined by Beck et al. [60], Seattle enacted a Minimum Wage Ordinance that went into effect in 2015 with a schedule to increase the minimum wage to $15 an hour. Using a qualitative study design among the 55 workers in low-wage jobs, the study investigators found the additional income from increased minimum wage might be used to purchase higher quality foods or increased food-related leisure activities but trade-offs might limit income-based adjustments to food spending patterns. Cities, counties, and municipalities are also focusing more on promoting health equity and some are enacting ordinances or resolutions aimed at using local levers to improve the community conditions for vulnerable populations including accessing healthful, affordable foods [61,62].

Nongovernmental sectors

Civil society organizations such as the charitable food assistance system (e.g., food banks and pantries) and nonprofit hospitals and health care systems, as well as private entities (e.g., for profit hospitals and healthcare systems, food and beverage manufacturers, retail food outlets) are instrumental to accelerating the impacts of PSE changes to address food insecurity [63,64]. Several of the papers featured in this Special Issue would not have been possible without the financial backing, in-kind contributions, or other forms of support. More work is needed to strengthen public–private partnerships and other forms of collaborative action across government, civil society organizations, and private entities [23]. This includes enhancing and expanding the evaluation of PSE changes driven by and within civil society organizations or private entities. As one example, more research is needed on the professional training program known as Food As Medicine that is designed to provide health professionals with the tools they need to integrate nutrition into clinical practice [65]. Other areas that merit attention include how to systematically improve nutrition standards for donated foods and beverages nationwide and collaboratively tackle more upstream work on understanding the social determinants of health such as Kaiser Permanente's initiative to reduce homelessness [66,67].

CATALYZING EVIDENCE-INFORMED PSE CHANGES TO ADDRESS FOOD INSECURITY

This Special Issue demonstrates the complexity of understanding the intersects of diet, obesity, food insecurity, and hunger but also provides invaluable insights on how best to use PSE changes to institute sustainable and scalable changes—across various life stages, sectors, jurisdictions, as well as cultural, geographic, and political contexts [5]. Work remains to strengthen the uptake and expansion of PSE changes into clinical, organizational and policy contexts, particularly those with the highest likelihood

of impacting the dietary patterns and feeding practices of women who are pregnant and/or lactating and infants from birth to 24 months, along with other underserved populations. As demonstrated individually and collectively across this Special Issue, the growth of PSE changes has helped illustrate the importance of these changes to multipronged approaches to addressing food insecurity—from farm to fork. Without question, a local school or childcare center's ability to serve healthy meals is intricately connected to our nation's agricultural and nutrition policies, including technical assistance and capacity building supports. Our ability to institute these changes is increasingly, interconnected with broadening our focus to include children and their families' physical, social, and emotional health. We must recognize that raising a healthier generation depends on our ability to better elucidate the "cobenefits" or additional benefits of addressing food security and promoting healthy eating, such as child development, school attendance, academic achievement, food waste, mental wellness, poverty alleviation, and community and economic development.

Multidisciplinary efforts will be essential to ensure PSE changes are complemented by the necessary education and promotion to facilitate long-term behavior change. As one example, innovative, multidisciplinary, culturally competent efforts are needed to increase awareness, knowledge, and use of calorie information among certain demographic subgroups to bolster the effectiveness of recent nutrition product and menu labeling regulatory changes to address food insecurity, promote health, and reduce chronic diseases [68]. Put simply, behavior change demands active involvement of both children and adults, particularly among those representing vulnerable populations. Finally, we need a better understanding of how to effectively recruit, cultivate and develop implementation and translation science skill sets across all stages of professional development to foster the rapid integration of research into the development, implementation, evaluation, and dissemination of PSE changes to address food insecurity [69,70]. This includes improving our use of actionable science strategies to accelerate the effective translation of behavioral science findings to patient and population outcomes.

Compliance with Ethical Standards

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References

1. Gostin LO, Wiley LF. *Public Health Law: Power, Duty, Restraint*, 3rd ed. Oakland, CA: University of California Press. (ISBN-13: 978-0520282650).
2. The United States Agency for International Development (USAID). Integrating Rule of Law and Global Development: Food Security, Climate Change, and Public Health (2013). Available at https://www.usaid.gov/sites/default/files/documents/1866/IntegratingRuleofLawandGlobalDevelopment.pdf (Accessibility verified May 1, 2019).
3. Crawford P, Dunning L, Kappagoda M, et al as part of The United States Office of Disease Prevention and Health Promotion, Healthy People 2020 Law and Health Policy Project. *The Role of Law and Policy in Achieving the Healthy People 2020 Nutrition and Weight Status Goals of Increased Fruit and Vegetable Intake in the United States* (2018). Available at https://www.healthypeople.gov/sites/default/files/LawHealthPolicy_Report_2018.10.pdf (Accessibility verified May 1, 2019).
4. ChangeLabSolutions. Blueprint for Changemakers: Achieving Health Equity through Law and Policy. Available at https://www.changelabsolutions.org/product/blueprint-changemakers (Accessibility verified May 16, 2019).
5. Calloway EE, Parks CA, Bowen DJ, Yaroch AL. Environmental, social, and economic factors related to the intersection of food security, dietary quality, and obesity: an introduction to a special issue on the Translational Behavioral Medicine (TBM) journal. *Transl Behav Med.* 2019;9(5):823–826.
6. The United States Department of Agriculture Food and Nutrition Service. FNS Nutriton Programs. Available at https://www.fns.usda.gov/programs (Accessibility verified May 1, 2019).
7. Poppendieck J. *Breadlines Knee-Deep in Wheat: Food Assistance in the Great Depression*. Oakland, CA: University of California Press; 2014.
8. Food and Agriculture Organization of the United Nations. The Right to Food. Available at http://www.fao.org/right-to-food/en/ (Accessibility verified May 1, 2019).
9. Fleischhacker S, Moran A, Bleich SN. Legislative and executive branch developments affecting the United States Department of Agriculture Supplemental Nutrition Assistance Program. *J Food Law & Policy.* 2019;15(1):5.
10. The United States Department of Agriculture Food and Nutrition Service. Annual Summary of Food and Nutrition Service Programs. Available at https://www.fns.usda.gov/pd/overview (Accessibility verified May 6, 2019).
11. Fleischhacker S, on behalf of the Workshop Series Planning Committees. *USDA Intra-Departmental Nutrition Workshop Series*. Washington, DC: USDA Office of the Chief Scientist; 2018. Available at https://www.usda.gov/sites/default/files/documents/usda-nutrition-workshop-summary.pdf (Accessibility verified May 6, 2019).
12. Brown AGM, Esposito LE, Fisher R, et al. Food insecurity and obesity: research gaps, opportunities and challenges. *Transl Behav Med.* 2019;9(5):908–987.
13. The United States Department of Agriculture. Public and Indian Housing. Available at https://fns-prod.azureedge.net/sites/default/files/sfsp/smt-public-housing.pdf (Accessibility verified May 6, 2019).
14. The United States Department of Transportation. Connectivity. Available at https://www.transportation.gov/mission/health/connectivity (Accessibility verified May 6, 2019).
15. The United States Government Accountability Office. Report to Congressional Committees: Military Personnel: DoD Needs More Complete Data on Active-Duty Service Members' Use of Food Assistance Programs, GAO-16–561 (July 2016). Available at https://www.gao.gov/assets/680/678474.pdf (Accessibility verified May 6, 2019).
16. The White House Conference on Food, Nutrition, and Health: Final Report (1969). Available at https://catalog.hathitrust.org/Record/007426536 (Accessibility verified May 6, 2019).
17. Berkowitz SA, Basu S, Meigs JB, et al. Food insecurity and health care expenditures in the United States, 2011-2013. *Health Serv Res.* 2018;53(3):1600–1620.
18. Yun J. The case for a National Institute of Nutrition. *The Hill.* 2018. News article. Available at: https://thehill.com/opinion/healthcare/410620-the-case-for-a-national-institute-of-nutrition (Accessibility verified May 6, 2019).
19. Ahluwalia N, Dwyer J, Terry A, et al. Update on NHANES Dietary Data: focus on collection, release, analytical considerations, and uses to inform public policy. *Adv Nutr.* 2016;7(1):121–134.
20. Katz RJ. Addressing the health care needs of American Indians and Alaska Natives. *Am J Public Health.* 2004;94(1):13–14.
21. Stoody EE, Spahn JM, Casavale KO. The Pregnancy and Birth to 24 Months Project: a series of systematic reviews on diet and health. *Am J Clin Nutr.* 2019;109(Supplement_7):685S–697S.
22. Jones AD, Ngure FM, Pelto G, et al. What are we assessing when we measure food security? A compendium and review of current metrics. *Adv Nutr.* 2013;4(5):481–505.

23. Interagency Committee on Human Nutrition Research. *National Nutrition Research Roadmap 2016–2021: Advancing Nutrition Research to Improve and Sustain Health*. Washington, DC: Interagency Committee on Human Nutrition Research; 2016.
24. McCormack LA, Eicher-Miller HA, Remley DT, et al. The development and use of an assessment tool to capture changes in the food pantry nutrition environment and system of food distribution *Transl Behav Med*. 2019;9(5):962–969.
25. 2020 Dietary Guidelines Advisory Committee. *Meeting 1: March 28–29, 2019* (Washington, DC). Available at https://www.dietaryguidelines.gov/work-under-way/review-science/public-meetings/meeting-1 (Accessibility verified May 6, 2019).
26. Gustafson A, Ng SW, Jilcott Pitts, SB. The association between the "Plate It Up Kentucky" supermarket intervention and changes in grocery shopping practices among rural residents. *Transl Behav Med*. 2019;9(5):865–874.
27. The United States Department of Agriculture. *Start Simple with MyPlate*. Published March 13, 2019. Available at https://www.youtube.com/watch?v=W7_i5tY-5BY&feature=youtu.be (Accessibility verified May 6, 2019).
28. Jonathan Coppess. *The Fault Lines of Farm Policy*. Lincoln: University of Nebraska Press; 2018.
29. The United States Department of Agriculture Economic Research Service. Agriculture Improvement Act of 2018: Highlights and Implications (2019). Available at https://www.ers.usda.gov/agriculture-improvement-act-of-2018-highlights-and-implications/ (Accessibility verified May 6, 2019).
30. Hollis-Hansen K, Vermont L, Zafron ML, et al. The introduction of new food retail opportunities in lower-income communities and the impact of fruit and vegetable intake: a systematic review. *Transl Behav Med*. 2019;9(5):837–846.
31. Pare ER, Body K, Gilstorf S, et al. The role of food gateways at increasing access to alternative retail food outlets *Transl Behav Med*. 2019;9(5):884–887.
32. Powell LM, Singleton CR, Li Y, et al. Changes to SNAP-Authorized retailer stocking requirements and the supply of foods and beverages in low-income communities in seven U.S. states. *Transl Behav Med*. 2019;9(5):857–864.
33. Schlosser AV, Joshi K, Smith S, et al. "The coupons and stuff just made it possible": economic constraits and patient experiences of a produce prescription program *Transl Behav Med*. 2019;9(5):875–883.
34. Houghtaling B, Serrano E, Dobson L, et al. Rural independent and corporate Supplemental Nutrition Assistance Program (SNAP)–authorized store owners' and managers' perceived feasibility to implement marketing-mix and choice-architecture strategies to encourage healthy consumers purchases. *Transl Behav Med*. 2019;9(5):888–898.
35. Aiyer J, Raber M, Bellow R, et al. A pilot food prescription program promotes produce intake and decreases food insecurity *Transl Behav Med*. 2019;9(5):899–909.
36. Bleich S, Moran A, Vercammen K, et al. Strengthening the public health impacts of the Supplemental Nutrition Assistance Program through policy. *Ann Rev Pub Health*. Forthcoming.
37. Congressional Research Service. Focus: An Introduction to Child Nutrition Reauthorization. Updated March 8, 2019. Available at https://fas.org/sgp/crs/misc/IF10266.pdf (Accessibility verified April 3, 2019).
38. Mathematica Policy Research in partnership with Abt Associates, Inc. School Nutrition and Meal Cost Study: Summary of Findings (April 2019). Available at https://fns-prod.azureedge.net/sites/default/files/resource-files/SNMCS_Summary-Findings.pdf (Accessibility verified July 14, 2019).
39. Escaron AL, Martinez C, Vega-Herrera C, et al. RE-AIM analysis of a community-partnered policy, systems, and environment approach to increasing consumption of healthy foods in schools serving low-income populations. *Transl Behav Med*. 2019;9(5):899–909.
40. Turner L, Guthrie JF, Ralston K. Community eligibility and other provisions for universal free meals at schools: impact on student breakfast and lunch participation in California public schools. *Transl Behav Med*. 2019;9(5):931–941.
41. Rains CB, Giombi C, Joshi A. Farm to School Education Grants reach low-income children and encourage them to learn about fruits and vegetables. *Transl Behav Med*. 2019;9(5):910–921.
42. Naja-Riese A, Keller K, Bruno P, et al. The SNAP-Ed Evaluation Framework: demonstrating the impact of a national framework for obesity prevention in low-income populations. *Transl Behav Med*. 2019;9(5):970–979.
43. NEJM Catalyst. Hospital Readmission Reduction Program (HRRP). Posted April 26, 2018. Available at https://catalyst.nejm.org/hospital-readmissions-reduction-program-hrrp/ (Accessibility verified May 6, 2019).
44. Kino S, Sato K, Kawachi I. Spillover benefit of improved access to healthcare on reducing worry about housing and meal affordability. *Int J Equity Health*. 2018;17(1):174.
45. The United States Department of Health and Human Services, Administration for Community Living. Nutrition Services. Available at https://acl.gov/programs/health-wellness/nutrition-services (Accessibility verified May 6, 2019).
46. Lepore M, Rochford H. Addressing food insecurity and malnourishment among older adults: the critical role of Older Americans Act Nutrition Programs. *Public Policy & Aging Report*. 2019;29(2):56–61.
47. The United States Food and Drug Administration. FDA News Release: FDA approves folic acid fortification of corn masa flour. Released April 14, 2016. Available at https://www.fda.gov/news-events/press-announcements/fda-approves-folic-acid-fortification-corn-masa-flour (Accessibility verified May 6, 2019).
48. Jacobs J. Twenty years after folic acid fortification, FDA ponders expansion to corn masa flour. *JAMA*. 2016;315(17):1821–1822.
49. The United States Department of Agriculture. Press Release: Establishing the National Bioengineered Food Disclosure Standard. Posted on December 20, 2018. Available at https://www.usda.gov/media/press-releases/2018/12/20/establishing-national-bioengineered-food-disclosure-standard (Accessibility verified May 6, 2019).
50. Qaim M, Kouser S. Genetically modified crops and food security. *PLoS One*. 2013;8(6):e64879.
51. Yang YT, Chen B. Governing GMOs in the USA: science, law and public health. *J Sci Food Agric*. 2016;96(6):1851–1855.
52. McFadden BR. The unknowns and possible implications of mandatory labeling. *Trends Biotechnol*. 2017;35(1):1–3.
53. Salam M. Could the US get paid family leave? It's looking better than ever. *NY Times*. Posted February 15, 2019. Available at https://www.nytimes.com/2019/02/15/us/paid-family-leave.html (Accessibility verified May 17, 2019).
54. Fleischhacker S, Byrd R, Hertel AL. Advancing native health in North Carolina through tribally led community changes. *N C Med J*. 2014;75(6):409–411.
55. Gittelsohn J, Jock B, Redmond L, et al. OPREVENT2: Design of a multi-institutional intervention for obesity control and prevention for American Indian adults. *BMC Public Health*. 2017;17(1):105.
56. Bersamin A, Izumi B, Nu J, et al. Strengthening adolescents' connection to their traditional food system improves diet quality in remote Alaska Native communities: results from the Neqa Elicarvigmun Pilot Study. *Transl Behav Med*. 2019;9(5):952–961.
57. Seeds of Native Health: A Campaign for Indigenous Nutrition. Native Farm Bill Coalition. Available at https://seedsofnativehealth.org/native-farm-bill-coalition/ (Accessibility verified July 14, 2019).
58. Abildso CG, Bias TK, Coffman J. Adoption and reach of a statewide policy, systems, and environment intervention to increase fresh fruits and vegetable access in West Virginia. *Transl Behav Med*. 2019;9(5):847–856.
59. Fleischhacker SE, Flournoy R, Moore LV. Meaningful, measurable, and manageable approaches to evaluating healthy food financing initiatives: an overview of resources and approaches. *J Public Health Manag Pract*. 2013;19(6):541–549.
60. Beck L, Quinn E, Hill H, et al. Low-income workers' perceptions of wages, food acquisition, and wellbeing. *Transl Behav Med*. 2019;9(5):942–951.
61. Arlington County, Virginia. Welcome to Destination 2027! Available at https://health.arlingtonva.us/pha/d2027/ (Accessibility verified May 6, 2019).
62. King County. Ordinance 16948: Establishing Definitions and Directing the Implementation Steps Related to the Fair and Just Principle of the Adopted 2010–2014 Countywide Strategic Plan. Available at https://aqua.kingcounty.gov/council/clerk/OldOrdsMotions/Ordinance%2016948.pdf (Accessibility verified August 16, 2019).
63. Hyslop G. The food companies committed to fighting world hunger. *Bakeryandsnackscom*. 2019.
64. Mitchell F. Healthy eating, active living: reflections, insights, and considerations for the road ahead. *Stanford Social Innovation Review*. 2019.
65. The Center for Mind-Body Medicine. Food as Medicine Professional Training Program: A Feast of Science and Wisdom. Available at https://cmbm.org/trainings/food-as-medicine/ (Accessibility verified July 18, 2019).
66. Levey, NN. Kaiser Permanente to Commit $200 Million to Help Communities Reduce Homelessness. Posted on May 18, 2018. Available at https://www.latimes.com/politics/la-na-pol-kaiser-homelessness-20180518-story.html (Accessibility verified May 6, 2019).
67. Martin KS, Wolff M, Callahan K, et al. Supporting wellness at pantries: development of a nutrition stoplight system for food banks and food pantries. *J Acad Nutr Diet*. 2019;119(4):553–559.
68. McKinnon RA, Oladipo T, Ferguson MS, et al. Reported knowledge of typical daily calorie requirements: relationship to demographic characteristics in US adults *J Acad Nutr Diet*. 2019. In press. doi:10.1016/j.jand.2019.04.024
69. Pérez-Escamilla R, Odle J. Implementation science in the field of nutrition: why is it so relevant? *Curr Dev Nutr*. 2019;3(3):nzy086.
70. Estabrooks PA, Brownson RC, et al. Dissemination and implementation science for public health professionals: an overview and call to action. *Prev Chronic Dis*. 2018;15:E162.