

Food as medicine through the lenses of Food Access, Justice, and Sovereignty

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Purpose of review

Food as Medicine (FAM) and supplemental nutrition programs like supplemental nutrition assistance program (SNAP), women, infants, and children (WIC), and school meals aim to combat rising diet-related chronic diseases and healthcare costs by addressing poor diet and food insecurity. However, their effectiveness is limited by a lack of community integration in planning, implementation, and evaluation. We introduce the Food Access, Justice, and Sovereignty (FAJS) framework, which expands FAM efforts to address acute food disparity through community-based strategies grounded in justice and sovereignty.

Recent findings

FAM interventions on adult populations have demonstrated a positive impact on food insecurity and its related chronic illness and shows promise for pediatric populations. However, community-driven solutions are essential for shifting power toward greater integration of the lived experiences of community, which can enhance positive behavioral changes needed for greater prevention and management of chronic illness.

Summary

Using community driven approaches through the lens of access, justice, and sovereignty address the effects of food insecurity and diet-related chronic diseases for adults and pediatric populations. Through the FAJS Framework, interventionalists can develop sustainable nutrition programs that engender community health, control, and lasting impact.

Keywords

community interventions, food ecosystems, food insecurity, sovereignty

INTRODUCTION

More than 25% of US adults face food insecurity, a rise since 2023 after national COVID-19 relief funds ended [1]. Black and Latinx families are disproportionately affected, experiencing food insecurity at rates 2.5 and 2 times higher than white families, respectively [2,3]. Among children, 29% of Black and 26% of Latinx children are food insecure, compared to 15% of white children [4]. Food insecurity in low-income families also increased from 46% to 52% [1]. Food as Medicine (FAM), which encompasses Medically Tailored Meals (MTM), Medically Tailored Groceries (MTG), and Produce Prescription Programs (PrX), supports federal nutrition efforts for low-income populations [5"]. FAM interventions are gaining momentum as a healthcare-based solution to address increasing prevalence of food insecurity and diet-related illnesses [6]. Since 2010, over 1081 PrX programs have launched nationally, funded by major organizations [7–10]. However, FAM initiatives often use a hierarchical

approach, relying on external experts while excluding those most proximate to the issues. Consequently, decision-making power remains far removed from the already disenfranchised communities that these programs are meant to serve. This paper builds upon prior discussions regarding the role of FAM programs in enhancing existing child nutrition initiatives, such as SNAP, WIC, and other meal programs, by introducing the Food Access, Justice, and Sovereignty (FAJS) Framework. The FAJS Framework offers a lens to

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Curr Opin Pediatr 2025, 37:13–18 DOI:10.1097/MOP.0000000000001417

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KEY POINTS

- The Food Access, Justice, and Sovereignty (FAJS) framework is a new tool to critically assess whether Food as Medicine (FAM) interventions promote food access, justice, or sovereignty, and can be applied across all stages of intervention, including planning, implementation, research, and policy.
- Current FAM programs focus on curative care and emphasize short-term food access solutions without addressing socio-economic root causes; to achieve sustainability, these initiatives must cultivate long-term social investment and enhance local capacity.
- Power and capital shifting to communities engenders ownership and control over their local food value chain, while changing economic conditions that sustain food insecurity and poverty.
- Viewing Food as Medicine through the FAJS
 Framework can foster intergenerational health and economic wellbeing by guiding food interventions towards a sovereign food system that ensures equitable access to nutritious, culturally relevant foods, promotes economic mobility, supports community-led improvements, and encourages sustainable investments in local food systems.

examine how and if FAM efforts address acute food disparities through community-based strategies grounded in justice and sovereignty, while simultaneously addressing systemic root causes of chronic illness and health-related inequities.

A BACKGROUND ON FOOD AS MEDICINE

In 2022, the White House Conference on Hunger, Nutrition, and Health proclaimed its goal of ending hunger and reducing chronic diseases by 2030 and referred to FAM as the national standard to meet the goal [11]. FAM has become a shorthand "of programs and interventions in healthcare and population health [that] integrate food-based nutrition interventions at multiple levels," serving those most ill to least of chronic nutrition-based illnesses [12**]. Evaluations and studies have demonstrated FAM's effectiveness in mitigating the impacts of food insecurity on chronic health conditions like diabetes, hypertension, and obesity rates in adult populations [13–16]. FAM evaluations have also demonstrated promise in adolescent populations, showing positive impacts on children's diets, chronic disease rates, and food insecurity rates [17-20]. Although integrating FAM into pediatric nutrition is a promising mode of prevention for adult-onset chronic illnesses, the current landscape of FAM initiatives is still limited by systemic, economic, racial, and political constraints, possibly skewing FAM program success. Current FAM models focus on improving individual food access and managing chronic diseases but fall short in establishing community leadership within localized food-based interventions. They also fail to address the root causes of food insecurity, as well as the long-term outcomes and impacts on community health.

LIMITATIONS OF FOOD AS MEDICINE

Access to food, while crucial, is insufficient to address root causes of food insecurity. Food insecurity is a pressing and complex issue that arises from systemic challenges such as unemployment, lack of affordable housing, and inadequate social safety nets [21]. Without tackling income inequality and job instability, families may struggle to consistently afford nutritious food, perpetuating the cycle of food insecurity [22].

Prioritization of treatment over prevention

Addressing childhood food insecurity is necessary to improve the health of pediatric patients and prevent diet-related chronic diseases. Prevention of chronic illness has a history of evidence proving its success in diminishing healthcare cost and improving late-age wellbeing [23]. Children earlier in developmental stages are more susceptible to learning about nutrition and changing their beliefs around food and eating [24]. Therefore, children are the ideal population to administer behavioral, social-cultural, educationbased, nutrition, and fitness interventions that mitigate the risk of developing disease in adulthood [25]. Current interventions focus narrowly on increasing food access for the most chronically ill patients and disease treatment from a health institution approach and are not accessible to those without clear diagnoses. FAM would need to pivot fundamental strategies from treating illnesses through increasing food access to preventing illness through skill building, knowledge acquisition, and economic development that addresses root causes of food insecurity.

Narrow focus on access

Current FAM framework focuses solely on mitigating food insecurity through short-term access, with limited strategies to address underlying root causes. With food insecurity impacting over 15% of the US population, addressing its root causes requires tackling complex social and economic factors [26]. Most FAM interventions address the distribution of produce, neglecting the broader socio-political issues that perpetuate chronic food insecurity.

This reliance on temporary and external solutions tied to grant cycles creates dependency. To be sustainable, FAM initiatives must foster long-term social investment and build localized capacity.

"Partnering with" vs. "Led by"

Rather than equitable distribution of power, or partnerships with communities, many FAM initiatives are led by healthcare institutions and powerful industry players. The US Department of Health and Human Services' 2024 Food as Medicine Summit involved national, well funded companies and organizations like Instacart and Feeding America, but excluded small, local CBOs as experts in FAM programs [27]. Community involvement can significantly increase the impact of interventions yet community voices are often underrepresented and decision-making power and control largely lies with the powerful institutions leading FAM interventions [28,29]. To foster greater equity, more inclusive criteria are needed, allowing under-resourced, community-driven organizations to actively engage in and inform FAM initiatives.

Disparity in funding among food actors

Agricultural producers are vital to food systems, and when FAM first launched, it aimed to support small local growers [12**]. The PrX programs reported a \$107.4M economic impact in GusNIP Year 4, with \$43M directed to farms [30]. However, as FAM expanded into the broader national food and wellness industry, growing collaboration between federal and private food actors showed little commitment to local producers. As funding flows to larger companies like Instacart, which has revenue surpassing \$823 million, and GrowNYC, with \$23 million, smaller producers struggle to compete [31,32]. This creates a widening gap in infrastructure and capacity, leaving smaller growers at a disadvantage. Prioritizing big-budget entities in food systems undermines the original intent of FAM, which was to invest in and scale up small to medium sized local producers and support their economic mobility.

To address these limitations, it is essential to prioritize prevention, broaden the scope of FAM interventions beyond food access, and ensure equitable funding. Most importantly, we must shift structural power to the community, establishing a sovereign food ecosystem that integrates community-driven food interventions. Uplifting community voice is not a new topic, but one requiring more intentional capacity and infrastructure. In 2022, Feeding America published a report collecting narratives from over ten thousand people across the

United States, and gathering community-driven solutions to end hunger [33]. There are also widely recognized published strategies available for implementers to incorporate greater community voice and strengthen local community governance. One notable example is The Spectrum of Community Engagement to Ownership, which aims to establish stronger local democracies [34].

THE FOOD ACCESS, JUSTICE, AND SOVEREIGNTY FRAMEWORK

The Food Access, Justice, and Sovereignty (FAJS) framework is a lens to critically examine FAM interventions and to identify whether they promote food "access," "justice" or "sovereignty." Each "category" offers guidelines for how access, justice or sovereignty can be operationalized in the FAM intervention. However, the guidelines can be applied broadly across not just the intervention itself, but in planning, implementation, research methodology, evaluation, policy making, funding, and partnership building, making it a versatile tool for FAM interventionalists (Fig. 1). The aim of the framework is to provide clear delineations and to name the intended goal of the intervention:

- (1) Access: Increase availability of healthy food for as many people as possible
- (2) Justice: Advocate for the equitable distribution of healthy and culturally appropriate food, addressing systemic injustices within the food system
- (3) Sovereignty: To shift power and capital to communities so they have ownership and control over their localized food value chain and to change economic realities that perpetuate the cycle of food insecurity/poverty

The Food Access, Justice, and Sovereignty framework in action

The FAJS framework is being used in the national Fidelity, Equity, and Dignity Collective Hub (FED), which centers on community-led design and focuses on the participation and lived experiences of program practitioners and community members [35]. A collective of six organizations have been working together, laying groundwork for multiple avenues to practice and disseminate FED initiatives and shifting power to communities participating in interventions. The FED Collective uses the FAJS Framework when looking for new development and partnership opportunities, ensuring funders, community partners, and collective members share values and reflect the FED and FAJS mission.

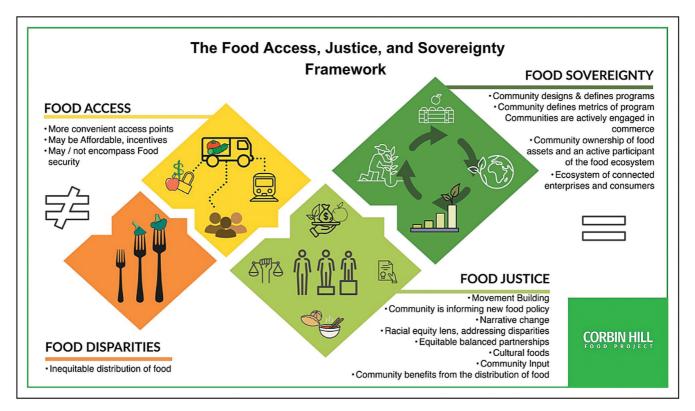


FIGURE 1. The Food Access, Justice, and Sovereignty framework.

The FAJS Framework was also used in a partnership between a large safety-net health system in Boston and a Black owned grocer and cafe aimed at addressing health and economic disparities in the Roxbury African diasporas. An intentional partnership developed after analyzing the actionable history of shared values, mutual need to address upstream social determinants of health, and investment in sovereign community-led systems, which demonstrates an internalized FAJS perspective when approaching new development opportunities between small local grocers and high-capacity health institutions. The new partnership led to a two-million-dollar investment in the market to help address acute food access needs among pediatric patients and their families, while supporting the local economy [36]. The FAJS Framework addresses a crucial gap in FAM initiatives by demonstrating that communityled partnerships are often more effective than those developed solely by academic or health institutions.

Utilizing the Food Access, Justice, and Sovereignty framework in Food as Medicine interventions

The applications of the FAJS Framework inform how it can reshape FAM interventions. First, to expand access for MTM and MTGs, implementers can open the criteria for target populations to include patients

who are not yet categorized as chronically ill, implementing a more preventive approach to program reach. This may require a larger production of MTMs or a greater amount of MTGs distributed, both of which can be increased by investing in local food production vendors and food retailers. Typically, MTMs/MTGs favor large corporations over local businesses due to their ability to streamline operations, offer lower prices, and provide a wider variety of products. By recruiting local food actors, patients have more options to spend their limited resources on sustainable food sources. By investing in local growers and vendors, patients gain greater access to relevant produce while also supporting economic opportunities for local businesses.

With more reach, it is important to consider the generalizability of MTM/MTGs across a wider range of nutritional needs and wants. MTMs/MTGs are often designed by Registered Dietitian Nutritionist (RDNs), experts trained in medical nutrition therapy. However, over 80% of RDNs identify as white, resulting in minimal representation of cultural food preferences [37]. Due to these limitations and without a feedback loop that informs nutrition experts of the value of cultural integration, MTMs and MTGs may have limited sustainability. Having communities co-create MTMs/MTGs enhances autonomy, promotes cultural relevance, improves adherence to treatment, and helps acknowledge that food

and nutrition expertise can extend beyond those who have formalized training [38,39].

Produce Prescription programs

PrX programs are intended to be tailored to the participating community, and as such, range in their delivery model, procurement strategies, and costs. On average, programs are short, usually ranging from 4-12 months and target specific chronic conditions and/or have income related inclusion criteria [30,41,42]. However, depending on the funding institution that supports the program, restrictions based on research fidelity and funding guidelines can hinder both sustainability and accessibility. For example, in a Southwest PrX program where funding was restricted to produce, items like beans were not allowed in their program, which community members viewed as a significant lack of cultural awareness [43]. After more than a year of advocacy, beans and other legumes were permitted, but only under specific circumstances reported to the funder [44]. This demonstrates how PrX programs could be seen as inaccessible if community advocacy is ignored.

When viewed through a justice lens, PrX programs are often designed by healthcare institutions or insurance companies, perpetuating a medical hierarchy in public health. The selection process for PrX grants can disadvantage smaller nonhealthcare community organizations that lack the staffing, funding, and networks of larger entities. These grassroots organizations typically have greater community trust and a better understanding of local issues than multimillion dollar health institutions. To address the exclusivity of PrX, smaller organizations can be given more opportunities to lead multiyear initiatives that evolve with community needs, demonstrating a commitment to long-term impact and program sustainability.

Sovereignty across Food as Medicine

The FAJS framework envisions a sovereign food system that necessitates restructuring various aspects of agricultural production and consumption. Sovereign food systems exemplify a nonextractive food system, empowering communities with the tools, knowledge, and skills needed to develop local environments and food-based businesses, thus creating a new economy within existing oppressive food systems. Achieving food sovereignty requires integrating communities into policy development, enhancing their ability to address detrimental policies that result in conditions of perpetual food insecurity. Empowering communities to

understand policy-making processes enables them to act. This may require educational initiatives focused on social entrepreneurship and business development, led by emerging community leaders who reclaim their power instead of by educators who pathologize community culture. Such efforts foster a transformative model for sustainability, where communities actively inform social determinants of health while establishing a healthier, more integrated food ecosystem.

Small growers, producers, and vendors, who face greater risks in community-driven food programs, also play a crucial role in this ecosystem. They are disproportionately affected by unsold products compared to larger food actors. Strengthening networks of sustainable aggregation hubs – pooling resources for product distribution, transportation, and delivery – can mitigate risks associated with fluctuating market demands in Food as Medicine, thereby enhancing local supply chain resilience.

When viewed through the FAJS lens, Food as Medicine can create lasting impacts that benefit future generations both in physical and economic wellbeing, creating intergenerational wealth and health [45]. A sovereign food system enables equitable access to community-relevant and health-promoting foods, equitable nutrition education, and opportunities for economic mobility along the value chain. Additionally, it supports community-informed continuous process improvement and sustainable investments in community-driven solutions, ultimately fostering a healthier, more resilient food landscape [40].

CONCLUSION

Community-driven solutions, guided by the FAJS framework, offer transformative potential for expanding the impact of FAM interventions beyond food access. By centering community voices in the design, implementation, and analysis of FAM programs, these initiatives can be more responsive to local needs, improving their effectiveness, and shifting overall community health and wealth. Incorporating community insights fosters trust and aligns interventions with local practices and preferences, leading to more effective outcomes. Moreover, prioritizing economic mobility and local infrastructure over further investments in billion-dollar food companies can address systemic issues such as food insecurity, inequality, and social determinants. Supporting local food systems and small-scale producers can build a more resilient and sustainable food economy, ultimately benefiting communities more than large corporations whose interests may not align with local needs.

Acknowledgements

None.

Financial support and sponsorship

None.

Conflicts of interest

There are no conflicts of interest.

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