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# Market Solutions for Scaling Food Is Medicine Prescriptions



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## ACKNOWLEDGMENTS

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## INTRODUCTION

Food Is Medicine (FIM) has emerged as a promising tool to combat the toll of diet-related chronic disease on US health. Diabetes, cancer, heart disease, and stroke not only rank among the leading causes of death, but also disproportionately affect Black, Indigenous, and Latin American populations and people experiencing food insecurity. The FIM approach to disease prevention and management treats food as medicine, literally, via prescription programs and other interventions that integrate access to medically appropriate foods into the patient's health-care plan.

Research has increasingly demonstrated the importance of food and nutrition as drivers of overall health. A key component under the FIM rubric is the growth of Food Is Medicine prescriptions (FoodRx), which can be tailored to an individual's needs over time, including to levels of food insecurity. Examples of FoodRx include Produce Prescriptions (PRx), Medically Tailored Groceries (MTG), and Medically Tailored Meals (MTM). FoodRx has been shown to improve adherence to care plans, reduce the use of emergency services, and increase the purchases of fruits and vegetables for patients' care plans.<sup>1</sup>

Over the past decade, FIM programs, pilots, and policies have multiplied as clinical evidence of their efficacies mount. A major boost came in September 2022, with the White House Conference on Hunger, Nutrition, and Health, which was instrumental in highlighting issues of nutrition security and equity, as well as public, private, and nonprofit efforts to integrate food with health care. A number of organizations have been building the evidence base and policy recommendations for FoodRx, with support from public, private, and nonprofit funders. Private health insurance companies and public health-care systems are investing in research and trial programs to improve patient care and cost savings. California, Massachusetts, North Carolina, and Oregon, among others, have used policy tools and funding to increase FoodRx access for specific groups of Medicaid and Medicare beneficiaries. A multitude of private delivery and technology solutions, both in-house and third-party, have cropped up to facilitate program implementation.

Yet FIM has been slow to scale. Its mainstream usage is not keeping pace with the rising disease burden. For years, US food and health-care programs have been largely siloed. While various state and federal programs address specific food or health-care needs, they rarely complement one another in comprehensive and equitable ways. Stakeholders cite the lack of overarching federal policy, no clear evidence of return on investment (ROI), insufficient technological and data efficiencies, and a dearth of sustainable funding which has limited progress to small, disaggregated pilot programs.

## PROJECT METHODOLOGY

Greater FoodRx adoption hinges on public-private collaboration to overcome the various funding, policy, data, and technological challenges. To facilitate these efforts, the Milken Institute spoke with more than 70 stakeholders to assess key barriers and potential areas of opportunity to scale the market. In October 2022, the Institute's Innovative

Finance and Feeding Change teams organized a Financial Innovations Lab in Washington, DC, and brought together 40 health plans, policy experts, government representatives, FoodRx technology companies, food retailers, consultants, and community-based food organizations. The goal was to determine areas of technology solutions, funding priority, and the investment vehicles to help finance these efforts.

## ISSUES AND PERSPECTIVES

Chronic disease continues to rise throughout the US population, with 6 in 10 adults suffering from at least one morbidity.<sup>2</sup> Diet-related chronic conditions cause 1.7 million deaths annually, or 7 out of every 10.<sup>3</sup> These diseases are also responsible for 90 percent of the United States' \$4.1 trillion in annual health-care costs, the largest share of health-care spending among high-income countries.<sup>4</sup> Despite record spending on health care, the US continues to experience the lowest life expectancy among high-income countries and demonstrates declining health outcomes year after year. With billions of dollars sunk in medical costs, lives lost from preventable diseases, and lagging productivity, medical and public health experts have increasingly turned to efforts that prioritize food as medicine.

Food insecurity refers to a lack of consistent access to food to avoid hunger or concerns about hunger. Nutrition security goes a step further to emphasize consistent access to foods “essential to optimal health and well-being.”<sup>5</sup> Food assistance programs such as the Supplemental Nutrition Assistance Program (SNAP) provide a critical safety net for low-income families and children to prevent and reduce food insecurity, but food security alone does not translate to nutrition security. An example of supporting food security is providing someone with food, regardless of its nutritional quality, to ensure they do not go to bed hungry. An example of supporting nutrition security would be providing healthy foods, such as produce, to support a healthy diet for someone who is food insecure. FoodRx takes nutrition security to the next level by integrating it into the health-care ecosystem.

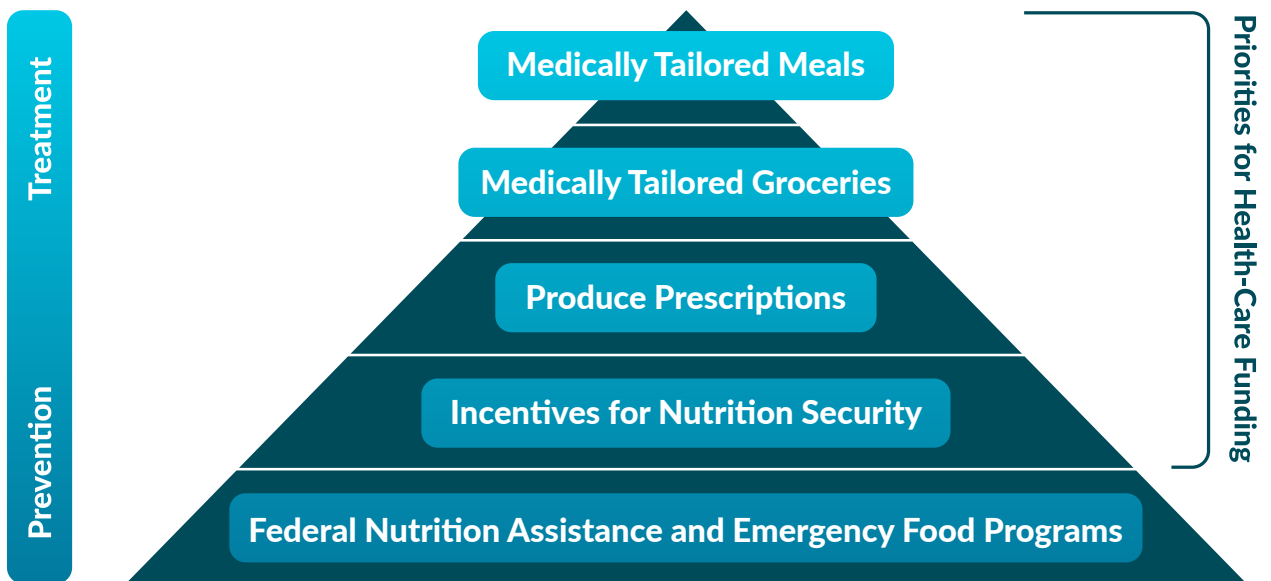
Food security is a screening and outcome metric for many food programs. Still, outside of socioeconomic indicators, the FIM community prioritizes nutrition security because of the relationship between food insecurity and poor diet quality. The term food security or insecurity is used throughout this report only when referring to these institutionalized applications.

## Food Is Medicine Overview

Food Is Medicine, sometimes referred to as “Food as Medicine,” encapsulates a range of nutrition interventions intended to prevent, treat, and manage diet-related health needs. Interest in FIM as a tool to increase nutrition security and address chronic disease rates is also growing. This is not surprising—studies indicate that investing in FIM programs, particularly targeting those most at risk of experiencing both food insecurity and diet-related diseases, can improve key health indicators, save the health-care system billions in costs, and prevent millions of disease-related deaths.<sup>6</sup>

Many FIM interventions can be described as food prescriptions, or FoodRx, because they require referral or sign-off from a physician, other health-care professional, or health plan. FoodRx can include everything from produce prescriptions to medically tailored groceries and meals. Patients “fill” their prescriptions with purchases at eligible locations, such as with partnering grocery stores or food delivery services.<sup>7</sup> FoodRx differs from other programs, such as nutrition incentives, federal nutrition assistance, and emergency food programs, which primarily ensure households have enough food. It makes a direct link between food and health through the prescription mechanism (see Figure 1).

**Figure 1: FIM Framework**



Source: Milken Institute (2023), adapted from the Massachusetts Food Is Medicine State Plan, The Center for Health Law and Policy Innovation of Harvard Law School, and Community Servings (June 2019)

The Aspen Institute and Harvard Law School's Center for Health Law and Policy Innovation provide a comprehensive overview of the various types of FoodRx in their *Food Is Medicine Research Action Plan*. Each category of FoodRx meets the nutritional needs of different populations and health conditions:

- A produce prescription (PRx) is prescribed for patients experiencing food insecurity and a diet-related health risk or condition. These prescriptions are typically disbursed through debit cards, such as a store loyalty card, or vouchers that patients can use to purchase fresh, canned, or frozen produce products at reduced or no cost at participating retailers.
- Medically tailored groceries (MTGs) are packages of shelf-stable foods typically selected by a registered dietitian or physician to treat specific diseases (e.g., diabetes or kidney disease). In addition to the existence of a diet-related health risk or condition, eligibility may include screening for food insecurity or participation in nutrition assistance programs. Food pantries and nonprofits often provide and/or deliver these packages to patients. Patients may also be able to purchase their groceries directly from the store.
- Medically tailored meals (MTMs) are ready-to-eat meals designed by a registered dietitian to address the medical needs of patients with severe illness. These are the most controlled interventions and, as such, the most studied.

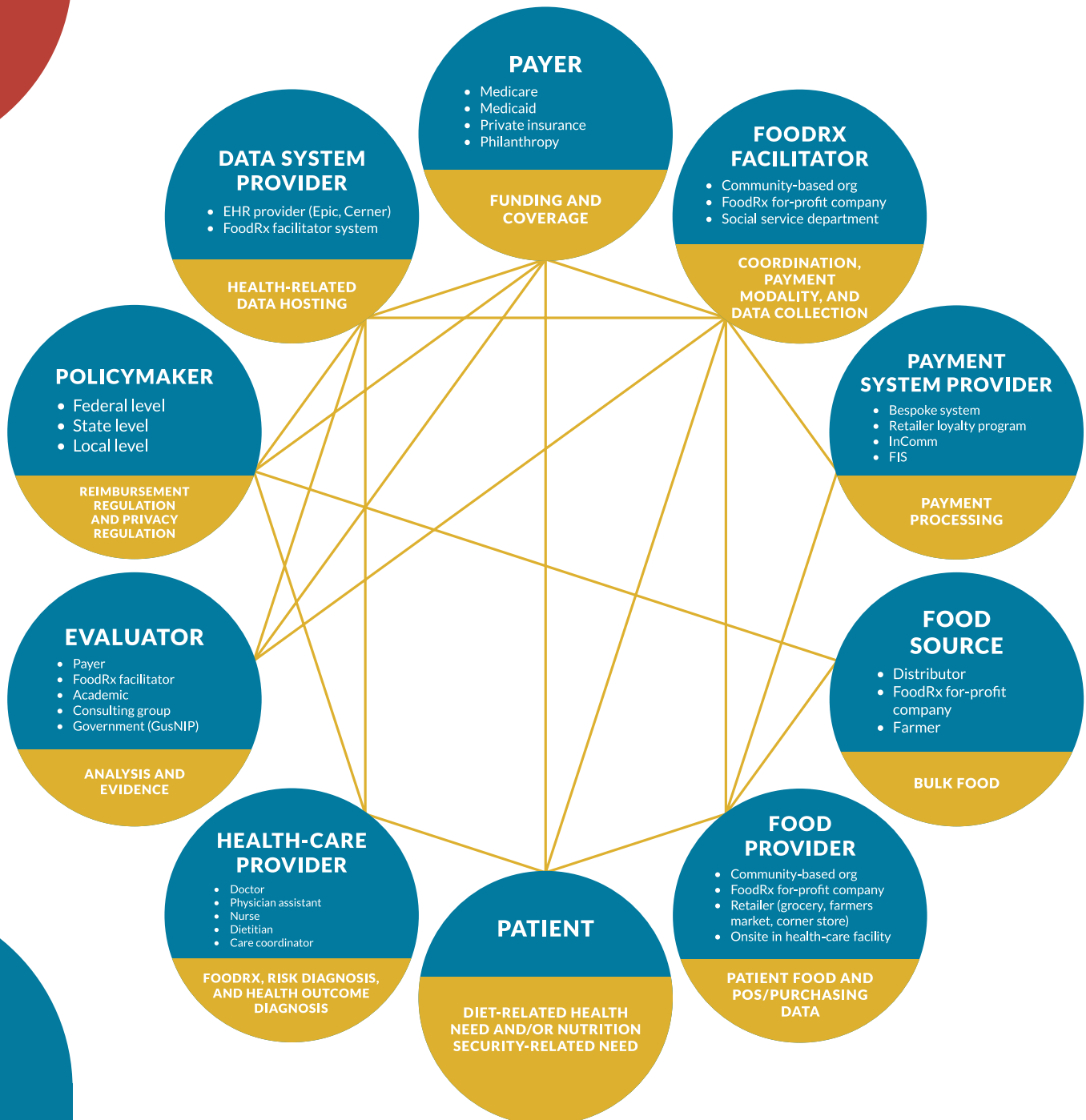
Despite much progress over the past decade, there are significant gaps in implementation. In addition, patients' nutritional requirements often change according to their ongoing health needs. Patients may require flexibility to transition in and out of food programs, depending on those changing needs.



## Food Is Medicine Stakeholders

Transitioning patients in and out of FIM programs means implementing a spectrum of interventions and poses a particular challenge because of the numerous stakeholders involved, directly or indirectly, in every transaction. What should be simple—filling a prescription—blurs into a complex web of interactions, each with its own organizational requirements, operational systems, and implications for the patient.

**Figure 2: FoodRx Stakeholder Map**



Source: Milken Institute (2023)



Figure 2 shows the 10 key stakeholder roles—the patient, payer, health-care provider, facilitator, food provider, payment technology system provider, data system provider, food source, evaluator, and policymaker—the function they contribute, and how they link to other stakeholders during the FoodRx intervention process. To further complicate this web, different interventions and programs involve different stakeholders, and organizations often operate in multiple stakeholder functions. A FoodRx facilitator, for example, coordinates between the insurance company and the health-care provider and might also be the organization providing the food directly to patients. In other programs, different organizations might fill the service delivery role, yet a separate food retailer supplies the food. Conversely, a single hospital or health maintenance organization system might deliver all aspects of the program. To scale FoodRx interventions, it is necessary to understand the roles, the relationships, and the bottlenecks.

## Types of FoodRx Delivery and Technology Providers

As FoodRx programs have multiplied and matured, operational requirements have grown increasingly sophisticated. Technology startups and FinTech companies have created innovative systems and platforms that help health plans and food retailers streamline the pathways to recipients, differentiate their offerings, and increase membership and retention. Over the course of the Lab process, the Milken Institute identified five categories of technology and data use cases around which the tech startups have built up capabilities:

- 1. MTM/MTG curation and delivery:** Companies like FarmboxRx, based in New York, match a Medicare or Medicaid member to a registered dietitian in the patient’s network. The dietitian curates home-delivered FoodRx packages and works with the member according to the member’s specific chronic condition and dietary needs or preferences. Similarly, NourishedRx, based in Connecticut, matches members with clinically appropriate food, including groceries and prepared meals, sourcing from community-based and national food purveyors to personalize options for optimal engagement.
- 2. Access to an all-in-one benefits wallet:** FinTech platforms can consolidate benefits (for members with multiple insurers, pharmacy cards, and payment cards) into a single digital “wallet” for better organizing funds and tracking balances. Boston-based Lynx is a solution that lets the consumer access health-care payments, banking, e-commerce, and investments in one app, which benefits both patients and providers.
- 3. Translate FoodRx spending with health outcomes:** Technologies that analyze large datasets and tie healthy food spending to positive health outcomes are essential for showing that FoodRx work. Health plans may lack the in-house expertise to undertake these efforts alone. Another Boston-based company,

About Fresh, enables health plans to load their healthy food benefits onto its prepaid debit card. The company's Fresh Connect technology is a powerful, Health Insurance Portability and Accountability Act-compliant data analytics platform that translates patient and intervention data to demonstrate the value of spending on health outcomes.

- 4. Connect members to FoodRx providers (e.g., grocery stores, farmers markets, co-ops):** Middleware technology solutions (software bridging otherwise incompatible computing systems, applications, and databases) can serve as a "GPS" for patients as they navigate FoodRx providers. This is especially helpful when accounting for cuisine preferences, specific medical needs, and efficiently identifying the availability of accessible, affordable, and patient-tailored products. Rather than selling meals, some startups fulfill produce prescriptions through existing retailers. Season Health, out of Austin, is another popular service used by large health plans such as Geisinger in Pennsylvania.
- 5. Streamline and expand referrals:** Like Lynx and About Fresh, the tech company Soda Health, out of Bentonville, Arkansas, combines retail, finance, and health care to simplify supplemental benefits usage for users and providers. Patients may not know that their health plans let them access produce prescriptions and may miss out on benefits. Unique to Soda Health is its ability to match people with "personalized" benefits and then provide them with user-specific prepaid debit cards to use at participating retailers. Providers can benefit from platforms with proprietary algorithms that analyze relevant patient metrics and match them to their benefits. Health plans and providers can streamline their referral process so that more patients connect to the services they need.

These kinds of developments are transforming the landscape and creating new opportunities for collaboration. However, new systems and technologies come with costs. Lab participants discussed these as important areas of funding need within the FoodRx space.

## Public Funding for FoodRx

FoodRx funding has primarily come from two public sources: federal insurance programs, like Medicaid and Medicare, and grants.

These funding streams depend on federal policy and are vulnerable to the legislative process, change of administrations and congressional majorities, prioritization of issues, and time-dependent policy cycles like the Farm Bill, which renews every five years. In response, several states and health insurers have utilized



special flexibility and exception mechanisms, such as Medicaid’s pilot demonstration waivers and the Medicare Advantage regulatory guidance and benefit flexibility discussed in the following sections, to make FoodRx programs more widely available. Along with these Medicaid- and Medicare-driven programs, grant funding helps pilot new programs and contributes to the growing evidence base that helps to spur policy expansion.

## MEDICAID

Medicaid, the federal health insurance program for low-income Americans, is the nation’s largest overall source of health coverage.<sup>8</sup> The federal government legislates mandatory eligibility and plan requirements and shares costs with the states, which determine how to administer the program through their plans, including which optional groups and services to cover beyond those that are mandatory.<sup>9</sup> The current mandatory and optional Medicaid benefits don’t include food, except for meals, in some very specific and limited circumstances. Several states, however, have used waivers (e.g., Section 1115 Demonstration Waivers and Section 1915(c) Waivers) that allow them to launch and evaluate new FoodRx-related projects, offerings, or approaches intended to improve their Medicaid programs.<sup>10</sup> Many of these waivers simply provide access to meals as part of a broader set of services meant to keep individuals in the community who would otherwise require care in an institutional setting (e.g., a nursing facility).

However, a small number of states use waivers to offer FoodRx to a broader group of participants. Massachusetts’ Flexible Services Program allows MassHealth accountable care organizations to use Medicaid funding to provide nutrition supports, including FoodRx, to Medicaid enrollees meeting certain risk factors and health-needs based criteria.<sup>11</sup> North Carolina’s Healthy Opportunities Pilots program was approved for \$650 million in federal and state Medicaid funding for a five-year pilot program to prove the value of addressing social determinants of health.<sup>12</sup> Oregon has been approved for a demonstration project that includes PRx, MTGs, and MTMs to support beneficiaries during transitional periods, such as in times of emergency or when moving in and out of institutions.<sup>13</sup> Still, these programs are fairly limited and vary from state to state in the scope of FoodRx offered and the groups covered.

## MEDICARE

Medicare is the federal health insurance program for individuals over 65 and people with disabilities. In summer 2021, Harvard’s Center for Health Law and Policy Innovation released a report, *Produce Prescriptions as a Novel Supplemental Benefit in Medicare Advantage*,<sup>14</sup> that details the ways insurance plans may offer food benefits through Medicare Advantage that are not covered in Original Medicare:

- **General Supplemental Benefits** can typically only be used for meals for short periods, such as post-surgery or after a hospital discharge.

- **Special Supplemental Benefits for the Chronically Ill** is more flexible, allowing plans to offer a range of FoodRx services to Medicare Advantage members who qualify for one of many eligible chronic illnesses.
- The **Value-Based Insurance Design** pilot model provides additional flexibility regarding patient eligibility. In this pilot, qualified insurance plans may waive certain requirements that would prevent food-related services and expand service to members with chronic illness and/or low income. More than 451 plans have participated in this model, covering approximately 16 percent of Medicare Advantage members and 7 percent of Medicare members.
- **Quality Improvement and Care Management** spending broadly allows health plans to spend non-benefit dollars that can be attributed to the medical loss ratio on programs that may include FoodRx as a component of broader initiatives geared to address quality and/or disease management.

Similar to the Medicaid FoodRx landscape, Medicare FoodRx coverage varies from plan to plan but is expanding as plans come to better understand the potential impact on patient outcomes and costs. As these policies and programs continue to expand, the technology, implementation stakeholders, and sustainable financing mechanisms must be in place to support that growth.

## GUS SCHUMACHER NUTRITION INCENTIVE PROGRAM

The Gus Schumacher Nutrition Incentive Program (GusNIP) is the largest federally funded (US Department of Agriculture, or USDA) grant program providing, through local and state project grants, incentives to low-income participants to help them buy fruits and vegetables. Since 2019, when the Farm Bill authorized GusNIP, 195 grants have been awarded across 43 states and the District of Columbia.<sup>15</sup> The Gretchen Swanson Center for Nutrition (Center) in Omaha serves as the lead for the GusNIP Training and its Technical Assistance, Evaluation, and Information (NTAE) Center and oversees the evaluation of the GusNIP grants.<sup>16</sup>

The Center reports positive results from the nutrition-incentive programs.<sup>17</sup> Fruit and vegetable intake was higher among nutrition-incentive recipients than for the average US adult, and among produce prescription recipients, food security and self-reported overall health status improved over the course of the program.<sup>18</sup> Funding for these programs, however, is limited to program research and development (R&D), which is insufficient for implementation and scaling. As the evidence base grows, a sustainable funding model must be developed.



## 2022 White House Conference on Hunger, Nutrition, and Health

On September 28, 2022, the Biden administration hosted a White House Conference on Hunger, Nutrition, and Health, the first in over 50 years. The conference renewed focus on a national strategy to decrease hunger, improve nutrition, and address inequities within food systems. The conference and the accompanying National Strategy on Hunger, Nutrition, and Health were designed around five goals: (1) improve food access and affordability, (2) integrate nutrition and health, (3) empower all consumers to make and have access to healthy choices, (4) support physical activity for all, and (5) enhance nutrition and food security research.

The White House Conference generated \$8 billion in commitments from the private sector to help fight hunger, including \$2.5 billion in venture capital from the Food, Nutrition, and Health Investor Coalition and FoodCorps. The Rockefeller Foundation, the American Heart Association, and other philanthropies and organizations pledged another \$4 billion to expand access to healthy food.<sup>19</sup> Some of the most ambitious proposals—expanding SNAP and launching a pilot program to cover MTMs as part of traditional fee-for-service Medicare—require congressional action, an uncertain prospect. Nonetheless, the conference and its national strategy present significant milestones, particularly for FoodRx. The federal government’s commitment to integrating food and health is key to attracting large-scale funding and policy support.

As these policies and regulations become more inclusive of additional conditions, demographics, and social determinants of health, they are likely to cover the cost of the food. The operational cost—the costs of implementation, administration, staffing, technology, and reporting—remains underfunded, and this is where private funding plays an increasingly important role.

## Private Funding for FoodRx

Before federal funding became available for programs like GusNIP, project funding typically came from grants provided by community-based organizations (CBOs), nongovernmental organizations (NGOs), or other private entities.<sup>20</sup> As FoodRx usage has grown, private-sector participation has expanded to help meet demand. In addition to nonprofits, many food retailers and health plans have begun to support efforts, diversifying the range of financing instruments used.

### FOOD RETAILERS

Food retailers occupy a unique space within the FoodRx world. Like small, food-centered CBOs, they sell healthy foods. But unlike CBOs, NGOs, or nonprofits, food retailers range

in scale from small local stores to large multinational corporations, many of which have a pharmacy component. The larger retailers are most likely to have the existing health-care integration capabilities, access to capital, and geographic reach to operate FoodRx efforts. A single giant grocery chain can pilot mobile apps (and other technologies) that facilitate ordering and delivering foods for FoodRx prescriptions, show produce availability, and approve benefit redemption eligibility in several thousand locations at once.

There is a “buy or build” dynamic at play where some retailers choose to invest in upgrades to in-house computer systems to support FoodRx eligibility and redemption functionality, whereas others are outsourcing the technology to third-party platforms. There is an opportunity for retailers to consider their role in the health-care ecosystem and promote their unique offerings not only to increase customer retention and profit but also to support their surrounding community. While there are opportunities to provide more fiscal and technical support to smaller and medium-sized retailers to integrate FoodRx programs, since larger retailers already stock the food, they can more easily allocate funding toward building or buying backend technology, payment infrastructure, or functions that involve database management, security, and other server-side capacities.

## HEALTH PLANS

Health insurance companies can see firsthand the improved health and subsequent cost savings from FoodRx, and many provide financial support to local organizations working directly with disadvantaged communities in the firms’ vicinities of care. In April 2022, the Massachusetts-based health insurance company Point32Health, for example, granted \$270,000 to supply produce for three nonprofit organizations operating mobile farmers markets in communities where many of its members reside (Coastal Foodshed in Maine, the Organization for Refugee and Immigrant Success in New Hampshire, and the FEED Center in Connecticut).<sup>21</sup> Grants are crucial in high-need areas. But, again, they remain small, at a few hundred thousand dollars each, and usually cover only day-to-day operational expenses. The sweeping backend technology advancements needed for mainstream access and industry-wide coordination require larger, ongoing pools of capital.

Health plans may try to overcome financing roadblocks in part by making equity investments in innovative FoodRx technology and delivery startups. With these partnerships, health plans can pilot technology that simplifies the benefit redemption processes, provide valuable feedback to the startup, and in some cases, create a new revenue stream to cycle back into their own technology development. In January 2018, Blue Cross Blue Shield of Massachusetts participated in an \$18 million Series B funding round led by venture capital firms Seventure Partners and Zaffre Investments for Zipongo (now Foodsmart), a single mobile app that combines registered dietitian services and meal planning tools with online food ordering via partnerships with a network of food retailers.<sup>22</sup> Aetna and other national health plans also use Foodsmart technology to

manage their FoodRx benefits. Personalized experiences attract members and encourage them to use their benefits more often, and health plans are increasingly investing in companies that develop FoodRx technology and delivery services.

Other health plans like Geisinger have decided instead to build technology internally, using a combination of grant funding and their own in-kind contributions. In 2017, the Geisinger Health System launched its Fresh Food Farmacy pilot for food-insecure patients with type 2 diabetes. Ninety-five Geisinger members received prescriptions for healthy foods in addition to diabetes education and access to Geisinger's Fresh Food Farmacy app, which includes recipes and nutrition information. Within 12 months, program participants lowered their HbA1C levels by more than 2 points.<sup>23</sup> By comparison, traditional diabetes medication typically causes HbA1C levels to drop between 0.5 and 1.2 points.

The program's success led Giant Food in 2021 to provide a \$200,000 grant to support the project's extension beyond its pilot phase.<sup>24</sup> Moreover, Geisinger saw average annual costs for this group drop from \$240,000 to \$48,000 per member—an 80 percent decrease.<sup>25</sup> The benefit of in-house technology innovation is especially evident for integrated systems like Geisinger's, which has its own health insurance company. As both payer and provider of services, it can see the direct financial benefit from these programs that save payers money. Most insurance provider systems are unlinked in this way and cannot realize these same payer-side savings.

## FOUNDATIONS AND NONPROFITS

As FoodRx program needs expand, CBOs have begun partnering with health plans and foundations to deploy grant funding at a larger scale. According to a 2010–2020 produce prescriptions field scan from the financial consultancy DAISA Enterprises, private grant funding from foundations and trusts is still a primary source of financial support for 46 percent of US-based produce prescription programs.<sup>26</sup> Federal nutrition incentive funding (like GusNIP) was the primary funding source for only 16 percent of all programs (Figure 3).

In November 2022, for example, Rockefeller Foundation pledged \$4.6 million in grants to various US FoodRx organizations.<sup>27</sup> Recipients range from Adelante Mujeres, which improves accessibility to healthy food options for marginalized Latinas in Oregon, to About Fresh, which provides meals to communities in need and builds technology-enabled solutions to FoodRx payment infrastructure inefficiencies. Nonprofit organizations Open Hand Atlanta and Atlanta Community Food Bank partnered with the Grady Health System and UnitedHealthcare Community and State to open a food pharmacy, serving an estimated 8,000 patients.<sup>28</sup> Beyond expanding the impact and capital access, cross-sector partnerships can motivate other health plans or providers to use similar models to support nutrition security and become more competitive.

**Figure 3: Primary Funding Sources for Produce Prescription Programs in the US from 2010 to 2020**

Primary Funding Sources	Percentage
Private Funding: Foundation, Trust, Enterprise, or Large-Scale Grant Support	46%
Private Health-Care Funding	7%
Federal Nutrition Incentive Funding (GusNIP + Food Insecurity Nutrition Incentive)	16%
State, Municipal, and Other Governmental Funding	15%
Crowdfunding/Donations	7%
Self-Supported/Organizational Budget	4%
Unknown	5%

*\*Data represent the primary funding source for the 108 identified programs, as of 2020*

*Source: Milken Institute (2023), adapted from DAISA Enterprises*

Some insurance companies and food retailers allocate philanthropic capital to community organizations through their foundations, which vet projects for alignment with the company mission and benefit member populations directly. In January 2020, for example, the Humana Foundation and the Blue Cross Blue Shield of Louisiana Foundation jointly provided \$715,000 to Baton Rouge-based Healthy BR's Geaux Get Healthy Project, which combats food deserts by establishing access points for affordable healthy food.<sup>29</sup> Since FoodRx programs are not yet widely available across states, grantees are usually organizations that increase access to healthy foods in food-insecure areas and address food security broadly. For context, a scan of produce prescription programs completed at the end of 2020 showed only 94 active programs in the US, ranging from a few dozen participants to a few hundred, with many states without a single program. Healthy food access organizations help fill such gaps in underserved communities until FoodRx reaches scale.

Some large nonprofits have expanded into impact investing in addition to providing grants and loans to local FoodRx organizations. The DC-based nonprofit Fair Food Network (FFN) has an impact investing arm dedicated to supporting historically underrepresented entrepreneurs who are Black, Indigenous, and people of color (BIPOC) through catalytic capital.<sup>30</sup> Such customized capital packages are patient, risk-tolerant, concessionary, and flexible in ways that traditional investment capital is not (i.e., they accept disproportionate risk and below-market financial returns). Depending on a recipient organization's needs and development stage, FFN blends equity, debt, and grants. Ranging from \$50,000 to \$300,000, these tailored capital packages have made it possible for community-based developers to pay for routine business expenses.

But large private investors can't yet assess the total ROI of their programs, and the federal government hasn't passed policies that guarantee reimbursement for FoodRx services. Thus, new financing structures must be added to the mix if funding is to reach smaller nonprofits and local food stores that lack the financial and/or workforce



capabilities for growth. The field is not level even among the larger health plans and commercial food retailers. Some health plans double as both a payer and provider of health-care services and can realize cost savings from internal FoodRx investments. But most don't, and therefore the incentive to build these systems may not be as apparent.

On the other hand, whereas some food retailers may see the benefit in the upfront investments needed to onboard new operating systems, others may not be willing to bear the costs of such a massive undertaking. Without private capital, FoodRx programs may remain stuck in short-lived demonstrations. Mainstreaming FoodRx access requires a reassessment of the most urgent FoodRx obstacles that innovative financial tools and new sources of private capital can help overcome.

## Barriers

The Milken Institute Lab identified four chief barrier categories: (1) a lack of supportive **policies and regulations**, (2) a disparate and uncoordinated **evidence base**, (3) inconsistent and short-term **funding** pathways, and (4) **data and technology** systems that inhibit collaboration and communication.

The White House Conference generated significant research commitments and legislative momentum for the first two categories, and they are not the focus of this report. Instead, the Lab focused on financing, data and technology, and the need for public-private funding partnerships to accelerate adoption and optimization of FoodRx technology and infrastructure systems. Thus, recommendations emerged to streamline efforts and drive greater private investment into addressing the following areas:

- Data and Technology: a lack of interoperability standards and universally accepted research metrics
- Data and Technology: inefficient and manual coding processes
- Financing, Data, and Technology: significant hurdles to navigating patient privacy
- Financing and Technology: problematic and ad hoc benefit redemption technologies

### **DATA AND TECHNOLOGY: A LACK OF INTEROPERABILITY STANDARDS AND UNIVERSALLY ACCEPTED RESEARCH METRICS**

The creation of many independent FoodRx services and programs has resulted in the absence of a common language for metrics, inputs, and processes. This makes it more difficult for retailers and payers to exchange information with one another and with researchers, who need real-time, real-world data to better support their studies on FoodRx efficacy. It also makes interoperability a challenge for providers to work with multiple payers, and vice versa, ultimately hurting the individual who needs the food because it limits access to where they can fill their Food Is Medicine prescriptions.

For researchers, the lack of established benchmarks means they must use their best judgment to determine standards to gauge an intervention's effectiveness. As a result, multiple studies may investigate the impact of healthy foods on type 2 diabetes, yet each may examine different health markers or interventions to do so; one may look at the impact of fruit and vegetable intake on HbA1C, while another may measure the reduction in sugar intake on blood pressure. Consequently, it's hard to compare outcomes and make conclusions about treatments. Undefined outcomes metrics are particularly detrimental to research integrity and reproducibility—and, ultimately, to the work of attracting funding.

Until clear standards and processes for handling complex data analyses are established, studies may struggle for decades to reach meaningful scale. Even the most robust studies have been unable to expand beyond pilot size because they lack the funding or workforce to support essential research functions. In September 2021, for example, Blue Cross Blue Shield of North Carolina (Blue Cross NC) dedicated \$3.2 million for a two-year study (results expected in 2024) to investigate the impact of healthy food on health outcomes of food-insecure, hypertensive patients.<sup>31</sup> The funds pay for the food vouchers or produce boxes for study participants, as well as the data scientists and analysts from the University of North Carolina at Chapel Hill, its partner in the study.

Larger health insurance plans like Blue Cross NC have the flexibility to allocate significant funds to research. But studies don't generate revenue. Even after supporting millions of dollars for research, the pilot will only cover FoodRx services for 1,400 hypertensive Blue Cross NC members, demonstrating the significant costs but limited reach of the study itself.<sup>32</sup>

Similarly, requirements for data interoperability among health plans, FoodRx program administrators, health-care providers, insurance companies, and food retailers are just beginning to emerge. Nor is there a standardization of claims data among USDA, Food and Drug Administration (FDA), and private insurance plans that could easily integrate health-care utilization, costs, and savings metrics. Organizations are left to take on the burden of harmonizing data from disparate claims engines themselves or outsource this expensive function.

Lab participants discussed data collection inefficiencies within the differentiated market of patients' electronic health records (EHRs). Many EHR systems are built upon Epic or Cerner's technology, which together make up 56 percent of the market share.<sup>33</sup> Hospital systems that don't "speak" to one another present obstacles not only in data cleaning and translation but also in programming patient eligibility data, baseline health data, and biometric improvements into health outcomes and costs. The lack of data reporting and interoperability standards is a pervasive issue, inhibiting convenient EHR interconnectivity among stakeholders.

On a more positive note, the White House Conference generated a commitment from the Rockefeller Foundation and the American Heart Association, in partnership with Kroger, to launch a \$250 million national Food Is Medicine Research Initiative. The initiative will



“generate the tools and definitive evidence necessary to help the health sector design and scale ‘food is medicine’ programs.”<sup>34</sup>

This commitment has the potential to fill the evidence gap. However, without robust standards for measuring treatment efficacy, efforts like this may still fall far short of their objectives, and FoodRx program input and data tracking standards should be established first. The market can then better develop technology to automate processes. While either undertaking alone could push the FoodRx movement forward significantly, without established standards or more efficient coding processes, FoodRx programs will struggle to attain the necessary scale.

### **DATA AND TECHNOLOGY: INEFFICIENT AND MANUAL CODING PROCESSES**

Maintaining accurate databases is a challenge, especially given the high-capacity coding requirements of food retailers and health-care providers. For the food retailer, this means identifying and tracking inventory by means of barcodes like Stock Keeping Units (SKUs) and Universal Product Codes (UPCs) and maintaining and updating nutrition data online and in stores.

Existing technology lacks the capacity to monitor and populate databases automatically, so this task is typically done manually, making it labor-intensive, time-consuming, and prone to mistakes that could affect benefit redemption. For example, a pre-approved FoodRx box of strawberries may change packaging, as commonly occurs with produce. Because the SKU and UPC database doesn't update automatically, the strawberries are now registered in the system as a different, non-approved item. Additionally, SKUs and UPCs are not necessarily tied to nutrition information, so the process of combining purchasing data with nutrition consumption information is arduous and error prone.

Even if SKU lists were kept up to date, they might not include culturally relevant foods. Since there is no common “playbook” of what is considered nutritious, different cuisines are commonly omitted, and members may not use all their FoodRx benefits because items with which they're familiar don't qualify.

Health-care providers have their own coding issues. They use diagnosis-related group coding for reimbursement for services rendered and determine which codes to use according to a number of factors, including diagnosis, procedure, demographic information, and complications or co-morbidities. Here, too, data automation is crucial for maintaining and updating databases. Coding discrepancies can lead to improper reimbursement; in fact, doctors reportedly leave approximately \$125 billion on the table annually as a result of poor coding practices.<sup>35</sup> That lost revenue could be better used to build technology tools to streamline data standardization and automation efforts.

Furthermore, no standardized billing codes exist for Food Is Medicine interventions. There is a Healthcare Common Procedure Coding System code for meals, but it doesn't distinguish between normal meals and MTM. And there currently aren't any codes for MTG or produce prescriptions. Additionally, many FIM organizations don't yet have the infrastructure for submitting standardized claims, so many have relied on less efficient invoicing.

## **FINANCING, DATA, AND TECHNOLOGY: SIGNIFICANT HURDLES TO NAVIGATING PATIENT PRIVACY**

The federal Health Insurance Portability and Accountability Act of 1996 (HIPAA) and state privacy laws establish privacy and security standards, including requirements as to when and how protected health information may be used and disclosed. It is not always clear, however, what compliance with these laws mandates where health-care payers and providers are sharing patient data with food banks, grocery stores, and other external organizations as a necessary function of program implementation.

Becoming a HIPAA-compliant partner can be burdensome and expensive, especially for smaller businesses and organizations in rural and underserved areas that are ill equipped with the technology to adapt.<sup>36</sup> Even larger grocery chains are proving unwilling to do so, as the financial returns aren't immediate. Taking on a new legal responsibility can create additional hesitation when the retailers are expected to handle any future litigation.

Some nascent technologies provide HIPAA-compliant data-sharing solutions, but even the most prominent and fastest-growing of these have fewer than 10,000 patients on their platforms. Barriers to scale arise from the cost-prohibitive nature of paying for the service and integrating these technologies into existing operating systems. Moreover, storing patient information within a single company may not be the most appropriate approach for long-term security, especially without stricter regulations on third-party services.

The absence of funding for these added costs or technologies may make it unfeasible for smaller community-based organizations or local retailers to enter into agreements with health-care providers. Larger food retailers that can afford these extra costs are often less accessible in rural and underserved areas due to transportation or cost barriers. In addition to broader accessibility, local food organizations are more likely to supply culturally relevant foods that consumers want to eat, a crucial component of lasting dietary change.

Private-market solutions can provide valuable insights into platform structure and management because one thing is certain: The industry is moving toward technology integration.

## FINANCING AND TECHNOLOGY: PROBLEMATIC AND AD HOC BENEFIT REDEMPTION TECHNOLOGIES

The inconsistencies in capacity and implementation are starkly evident in payment redemption, where technology fragmentation has led to options that operate in a handful of ways. Some health plans, for example, Humana, UnitedHealthcare (UHC), and Anthem Blue Cross Blue Shield, issue their own member benefits cards, which include food and nutrition, and use different payment technology providers, the most common being Solutran, InComm, or FIS Global.

Each card comes with a different method of dispensing funds from a proprietary technology platform. Humana and UHC members can redeem benefits at several participating retailers, but Anthem benefits are redeemable only at Kroger stores equipped to accept InComm payments. The benefits to Kroger of its partnership with Anthem are that Anthem members can use all their benefits there and Kroger can reach new customers. But it's unreasonable to expect retailers to process the particular payment technologies behind each health plan's card. Further complications arise when individuals switch plans and see their benefits change and may no longer be able to use their new health plan's card at their preferred grocery store.

In an effort to streamline benefit redemption, chain retailers have leveraged new technologies. Giant Food in Washington, DC, has partnered with About Fresh to allow Fresh Connect program participants (a benefit provided through its health plans) to use their cards at any Giant Food store in the metro area. Since Giant Food customers whose health plans lack Fresh Connect benefits will need to use their own health plan-specific benefit cards, Giant Food has also linked food benefit funds to its customer loyalty card system. Thus, any customer can redeem food benefit funds, regardless of which program they use.

But this isn't the norm. Most food retailers aren't able to follow suit without adequate funding or resources. Additionally, point-of-sale system disharmony among health plans and the differing levels of system compatibility will likely persist.

Small retailers are typically shut out of these types of partnerships as well. Some farmers markets and bodegas still track food benefit redemptions on paper. Without the budgets to modernize payment systems, they risk losing their customer base altogether. Rural and underserved communities bear the greatest risk, particularly since access to larger retailers is not a given.

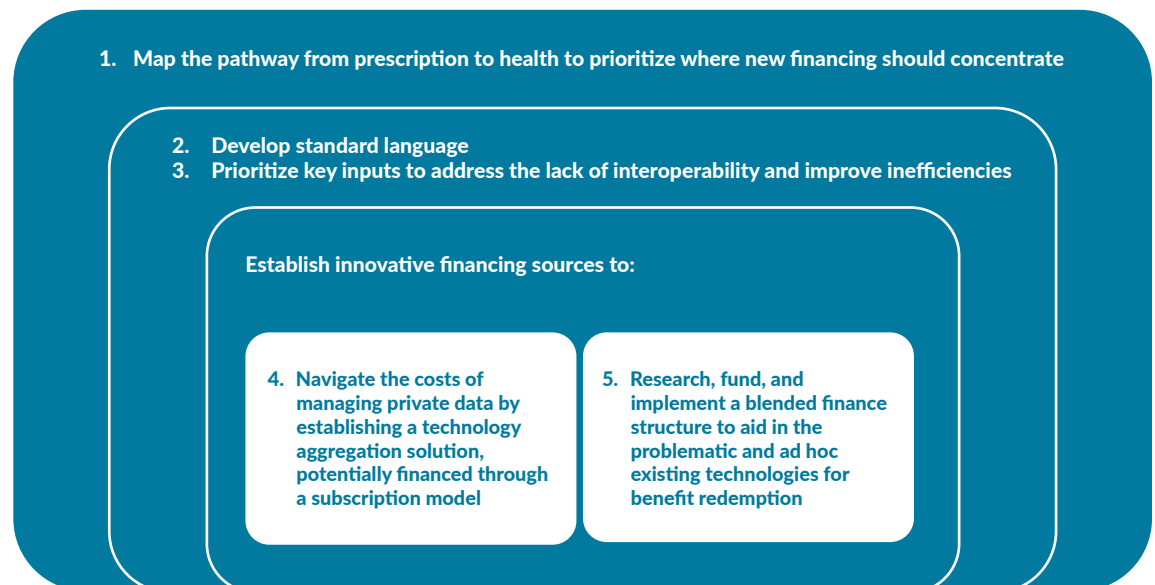
All of these barriers have their own consequences and underscore the need for better system-wide coordination and communication. Underfunded efforts can result in redundancy and inefficiencies that prevent researchers from amassing the evidence that will attract retailers, nonprofits, philanthropies, and private-sector investors who will fund startups that can deliver new technologies to help scale up treatment programs to state and national levels.

# INNOVATIVE SOLUTIONS

Having identified primary barriers in funding and data and technology, the Lab set out to explore what role the private market can take as a participant in the FIM space and to frame a set of recommendations, including key next steps and actionable solutions. However, individual and group discussions quickly exposed an initial hurdle: the need to develop a stronger understanding of where current gaps exist and agreement on where capital is most needed and will have the biggest impact. In other words, it is necessary to map the space, showing how the stakeholders are connected, or need to be connected, in order to discover the greatest funding needs and potential impacts.

The Lab process also emphasized the need to establish a consistent language for new programs and standardize key nutrition inputs. As it relates to the technology infrastructure, participants designed potential financing mechanisms for a streamlined payment process and establishing a technology aggregation solution. Below outlines specific solutions to address both the financing and technology barriers (Figure 4). The first critical step is a full mapping of the FoodRx efforts to better understand where new investments can have the biggest impact.

**Figure 4: Connect Existing Barriers with Innovative Solutions**



Source: Milken Institute (2023)

## 1. Map the Pathway from Prescription to Health

Over the course of the Lab, it became clear that stakeholders need a greater understanding of how the system operates and the processes at work beyond their own roles. A comprehensive mapping of the FIM landscape, one that links all the pieces, is necessary to identify gaps and opportunities for improvement for each component, and the ramifications for other nodes. Many existing FoodRx interventions map out specific programs or leave out certain stakeholders, like for-profit FoodRx organizations or logistics systems. While Figure 2 (in “Issues and Perspectives”) shows the 10 key stakeholders, stakeholders need the full picture of linkages and effects.

An industry leader and working group should complete the mapping process to visualize each link, from legislation and reimbursement to prescription renewals and adjustments. An industry leader will have name recognition, credibility, and stature to attract representative views and perspectives. The exercise should include program variations for each FoodRx prescription (i.e., for produce prescriptions or medically tailored groceries).

This process should include mapping data transfer, and evidence generation will need to cover data flow and quality and who is responsible for capturing the data critical to generating the ROI evidence and optimizing interventions.

Once this initiative has been accomplished, in concert with standardizing language and metrics (as discussed further below), conversations will be more effective. With a stronger understanding of the pain points, implications, and opportunities for new approaches, the solutions can be tailored, and FoodRx interventions will be better primed for scale.

### Next Steps:

- **An industry leader should research and assemble a working group with representation from stakeholders across the public, private, and nonprofit sectors to participate in regular working sessions to develop the FoodRx map to:**
  - **Expand on the mapping already completed to understand the reimbursement, data, and other logistical relationships for a wide range of FoodRx programs.**
  - **Build in equity and intersectional patient-centered considerations at all stages of mapping, from screening to evaluation. This includes examining how to engage and support FoodRx BIPOC- and minority-owned companies in food sourcing and program management.**

## 2. Develop Standard Language and Metrics

As in any new industry, defining program goals and targets from the onset is important. By pausing to clarify the scope of existing projects and articulate metrics, the FoodRx space should be able to expand in a way that benefits providers and members alike.

Terminology standards start at the top, with organizations explicitly articulating their program's goals and aims. Currently, FIM verbiage is getting muddled. FoodRx refers specifically to programs that use food as a prescription to address a diet-related medical diagnosis. For example, a health plan prescribing lower sugar foods to a patient with type 2 diabetes to improve their HbA1C levels and monitoring their progress over several months is a FoodRx program. Programs targeting a broader improvement to social determinants of health and long-term health through food should not be labeled as FoodRx but rather integrating "food as health." Accurately characterizing the intent of programs is an important first step to reducing confusion in outcome evaluation.

A coalition of industry experts should create a universal set of metrics for use by all US FIM programs. Producing standard information across pilot programs would enable direct comparison among programs and standardize patient information. As to the patient information collected, programs should focus on consumer-focused cultural needs, including food priorities.

There are lessons to be learned from the National Council for Prescription Drug Programs (NCPDP), which operates independently of, but in collaboration with, the government and sets standards for the drug prescription process. Since its inception, NCPDP has set guidelines around "claims adjudication, eligibility and benefit verification, real-time ordering by the physician, and sharing of medication history."<sup>37</sup> Integrating individuals and organizations already part of the NCPDP body to develop standard language would likely help to get the effort off the ground.

As core datasets are constructed, organizations need a coordinated way to report and access the information. The coalition must build on existing efforts. For example:

- The Fast Healthcare Interoperability Resources (FHIR) standard "defines how health-care information can be exchanged between different computer systems, regardless of how it is stored in those systems."<sup>38</sup> The developer of FHIR, the nonprofit standards developer HL7 International, intends for the standards to help define core information shared across most use cases.<sup>39</sup> The FIM coalition should similarly define a list of core metrics targeting specific health outcomes. This will help standardize output data and, if aligned with existing FHIR standards, will ensure more efficient information sharing.
- For programs addressing food as health only, the new coalition should pull from work by the Gravity Project, a multistakeholder group working to define how social determinants of health information are documented and exchanged across digital health and human service platforms. Its work already aligns with FHIR standards and encompasses three areas: terminology, technical, and pilots.<sup>40</sup> The conversations during the Lab highlighted the need for more interoperable food-as-health data. Therefore, it makes the most sense for the coalition to plug into and/or build on the Gravity Project's technical workstream.



### Next Steps:

- **A coalition of industry experts should document and define a system-wide difference between FoodRx and food as health. Existing programs must then be diligent about communicating their goals to address one or the other.**
- **Determine the cost of setting up a coalition; invite industry stakeholders to participate. It is important to have representation across the supply chain.**
- **An initial task of the coalition must be to develop a universal set of metrics that all FoodRx programs will employ. An initial focus should be on collecting health information specific to consumer-focused needs rather than those prioritized by health plans.**
- **Analyze existing structures to establish standards for FoodRx programs.**

## 3. Standardize FIM Program Package Components

There will also be a need for some standardization across data inputs and tracking. Industry competition remains a hurdle. Health plans and food retail chains differentiate their offerings via benefits, and this topic sparked debate throughout the Lab process. Some participants argued for alignment, while others maintained that forcing private-market actors to set aside natural market competition here was a non-starter.

It was agreed that putting strict standards on the program packages was too limiting, and discussions turned to opportunities to help key industry representatives understand the overlaps in leading nutrition frameworks. Lab participants are keen to work toward harmonizing key nutrition information components to make program comparisons easier and to encourage broad adoption of FoodRx.

The FDA and USDA both take leading roles in dispensing nutrition information to consumers. The FDA is responsible for nutrition fact labeling on packaged food and drinks.<sup>41</sup> Every five years, the USDA updates its “Dietary Guidelines for Americans” for a professional readership ranging from health-care workers to policymakers.<sup>42</sup>

While both areas provide critical nutrition information, the FDA food labels and USDA guidelines don’t always make it easy for retailers, for whom nutrition information can be confusing across different brands of the same product, making it difficult to identify which items are eligible for an approved product list.<sup>43</sup> Thus, FoodRx program developers must compare the USDA’s recommended consumption guidelines with the FDA’s nutrition labels and do the math to produce data specific to their program packages. This is particularly problematic when programs are currently designed to track inventory consumption rather than nutritional information. Lab participants felt it imperative to convene industry representatives from key federal agencies, food retailers, and major payers and aggregator platforms to discuss harmonization to a basic dataset of nutrition requirements.

For many organizations, the challenge of harmonized data starts at the SKU/UPC level. As mentioned earlier, SKU-level information is often manually entered, leaving room for human error and creating an arduous update process. Representatives of community-based organizations argued for the need for more technical assistance to maintain HIPAA compliance. One opportunity for improvement is to develop a database of SKU-level nutrition information, which FinTech companies would then be able to align with the plans' restricted spend lists. If the depository were robust enough, customers could redeem benefits on traditional Visa or MasterCard payment rails.

Many organizations are setting up their own benefit redemption systems because they can't receive purchase-level data when food is bought on a traditional rail system. However, a database of SKU information would provide program organizers (e.g., food retailers or health plans) with personalized and sophisticated information on a member level.

#### **Next Steps:**

- **Determine the convening organization and participant organizations, including but not limited to the USDA, FDA, National Institutes of Health, Centers for Medicare and Medicaid Services (CMS), food retailers, the National Restaurant Alliance, key payers, and aggregator platforms, to work toward harmonizing nutrition metrics.**
- **Quantify costs of data management, maintenance, and ensuring accountability of standardized data usage.**
- **Survey the market to understand options around which providers will be able to develop a depository of SKU-level nutrition information. The chosen developer could potentially leverage the electronic data interchange to establish a standardized digital warehouse that all food retail organizations would access and thus reduce the human capital requirements of inputting restricted spend lists.**

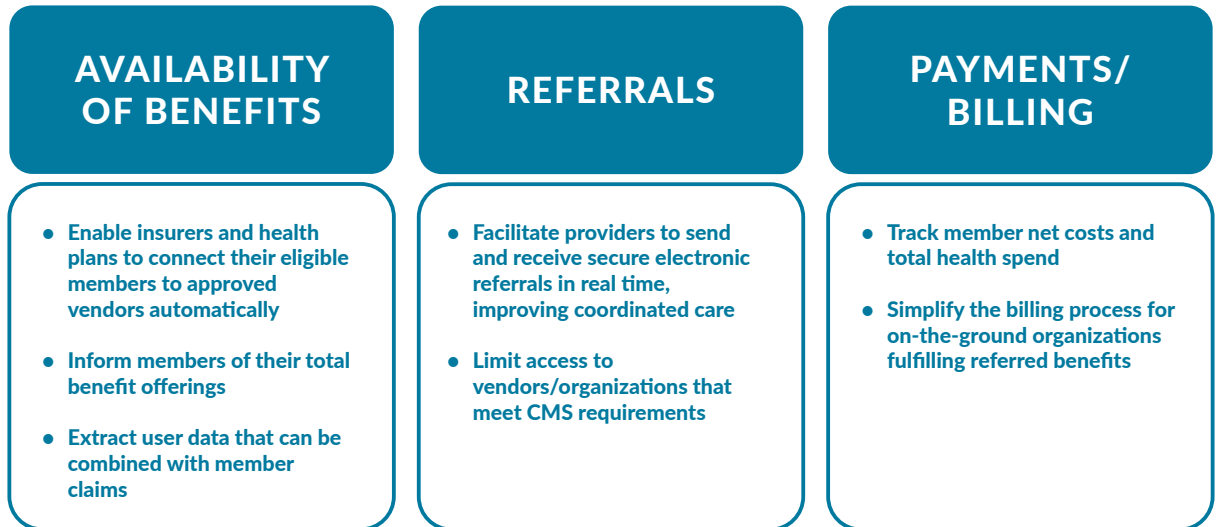
## **4. Aggregate Stakeholders' Technologies**

Lab participants highlighted three areas of opportunity for leveraging technology to better inform participants, organizations, and individuals of what is available to them (see Figure 5):

- software that better collects and communicates the availability of benefits to members, enabling insurers and health plans to connect eligible members to approved vendors automatically;
- a platform to facilitate providers to send and receive secure electronic referrals in real time to improve coordinated care; and

- a system to improve the payments and billing process, track member net costs and total health spending, and simplify the options for on-the-ground organizations fulfilling referred benefits.

**Figure 5: Areas of Need for Aggregator Platforms**



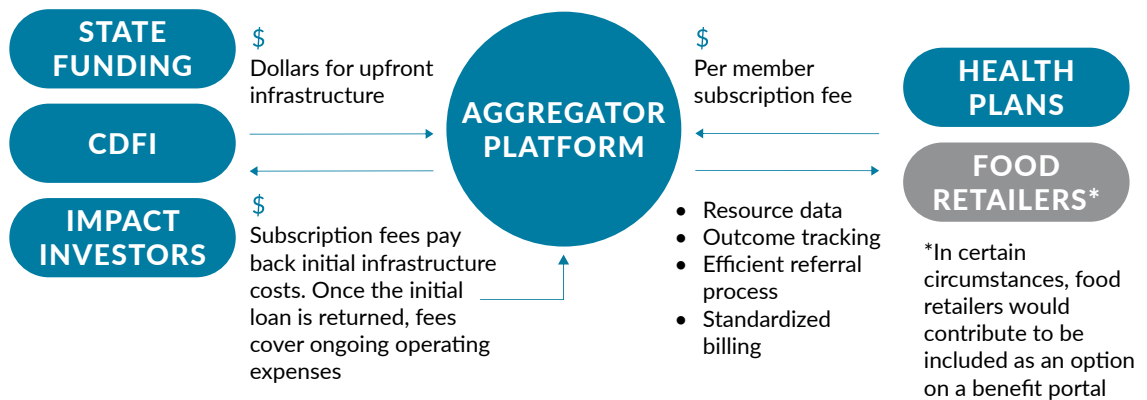
Source: Milken Institute (2023)

Even with agreement that aggregation should be a high-priority solution that can draw in private investment, Lab participants had many unanswered questions. In interviews, some said the FoodRx market needs a clearer understanding of the role and limitations of HIPAA and third-party accountability.

Governance was another topic: who is best suited to manage a central exchange of data? Additionally, there was concern about putting all FIM health plan data “in one basket,” particularly that of a private company. There was consensus that representatives from the major health plans should identify the best type of governance structure. This type of structure could allow oversight by multiple organizations, reduce the likelihood of data misuse, and ease some policy hurdles.

Concerns about providing health data in an open-source format also emerged. Even so, the opportunity to put some metrics behind a paywall was flagged as a potential way to finance the development of such a platform. Paying a monthly or annual fixed rate for access to data is often referred to as subscription financing. The upfront capital could come from a private grant or state and Community Development Financial Institution (CDFI) funding sources, which would be less costly than a traditional bank loan and cheaper than an individual company investing the equity alone. The initial loan would be repaid through a subscription or license model, with major health plans paying a fixed per-member fee for access. This arrangement (see Figure 6) could incentivize consistent access and delivery of high-quality metrics and provide a sustainable financing mechanism for ongoing operations and maintenance.

**Figure 6: FoodRx Aggregator Platform Subscription Model**



Source: Milken Institute (2023)

Streamlining data reporting would help solve the current lack of complete datasets from the payer to the retailer. Parallel to the payer and retailer solution, a patient-facing platform that aggregates benefit offerings would help consumers understand what is available to them and where they can use benefits, and thus increase FoodRx utilization. These platforms would help bring together data in a privacy-preserving way to promote the expansion and utilization of FoodRx programs.

#### Next Steps:

- **Convene key policy stakeholders to understand existing policy hurdles related to HIPAA. Identify the challenges of providing health data in an open-source format.**
- **Determine costs of proper governance and oversight of outputs from the central data exchange.**
- **Establish a governance committee of all major health plans to assess challenges and opportunities and oversee the management of an aggregator platform of health data.**
- **Develop a subscription model funding stream that incentivizes consistent access and delivery of high-quality metrics and provides a sustainable financing mechanism for ongoing operations and maintenance.**
- **Understand the landscape of companies that can build an online platform.**

## 5. Develop a Food Is Medicine Financing Fund

Neither the public nor private sector by itself can address food insecurity and chronic disease in the US. However, designing public-private partnerships that allow the two sectors to collaborate will be a big winner for all stakeholders. Early public-private partnerships helped finance large-scale projects such as infrastructure improvements

to roads, buildings, and hospitals. Over time, as needs and incentives have evolved, this innovative tool has been applied to deploy capital in areas where private-sector technology or specialization is financed in part with government guarantees.

The federal government already participates in a prominent public-private partnership in healthy food access that has laid the groundwork for broader implementation: the USDA's Healthy Food Financing Initiative (HFFI). Federal funding is distributed to local HFFI entities and their sponsoring organizations through community development finance institutions in targeted communities. This financing partnership has provided much of the capital allocated in healthy food access over the past two decades. The impact of HFFIs, particularly among small- and medium-sized businesses, cannot be understated.

### **Public-Private Partnerships at the State Level**

The California FreshWorks Fund is a loan fund created within a public-private partnership whose parties include the federal and state government, private investors, nonprofits, and food industry businesses and associations. The fund aligns with HFFI and provides financing for community-based food providers that offer nutrition incentives to SNAP beneficiaries.

For instance, a partnership between FreshWorks and Capital Impact Partners, a community development financial institution, resulted in a loan to Mandela Marketplace in Oakland, which then became an intermediary lender to very small local businesses for whom the typical loan process would have been prohibitive. In its first two years, the new entity, Ladder Up Financing, loaned over \$125,000 to small-business owners. The loans stipulated that the businesses must “use the funds to grow, expand, or convert to healthy food businesses to improve access in underserved communities.” In return, at the end of the loan repayment, the borrowers received back all the interest they had paid.<sup>44</sup>

Additionally, Mandela's established presence and foundation of trust built within its network of communities is a strong incentive for large-scale public capital to leverage these ties to local residents. The benefit is twofold—federal dollars are guaranteed to flow into organizations that can maximize the utility of those funds, and underserved communities can access healthy foods they may not otherwise easily obtain.

HFFIs have taken root in other states; the Massachusetts Food Trust and Michigan Good Food Fund carry out these same functions.

In partnerships like HFFI, pooling different types of financing, often referred to as blended capital, is already a reality. However, based on research and discussions throughout the Lab process, challenges and lessons have been learned from the existing structures. For example, no current structures focus on financing the technology or payment infrastructure needs of a scaling system. Lab participants assessed the opportunity to direct private capital sources into a pooled structure to then be allocated among opportunities with the greatest impact.

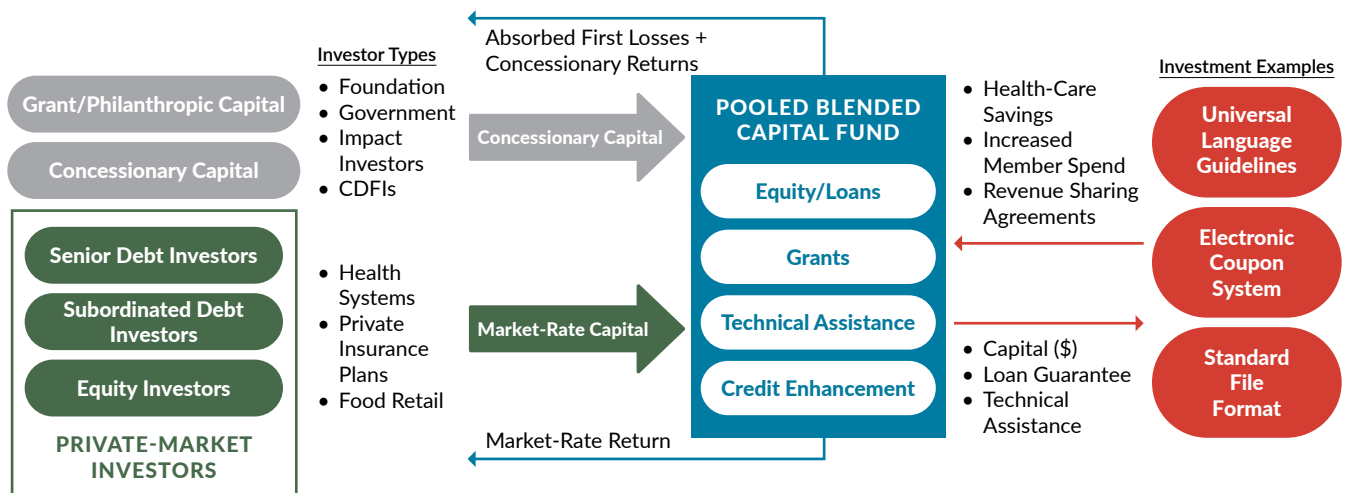
The benefit of blended finance is that different “layers” of capital “stack” can go toward opportunities with different risk-return profiles. Certain technologies lack an immediate path to financial returns and will therefore need grant or philanthropic support without expectation of repayment. If a company has revenue potential but doesn’t necessarily reach a market-rate return, investors can access low-cost concessionary capital through first-loss protection and guarantees, also offered by public or philanthropic partners. Then more traditional forms of capital can come into play. Senior debt is the least risky form of these more traditional investments because it is the first capital to be repaid in case of default. In increasing order of risk are subordinated debt, preferred equity, and common equity.

Blending different types of funding and financing in a single investment structure dedicated to FIM infrastructure would allow companies and technologies to move through various stages of development more seamlessly. For example, as a company works out its technology kinks, it can be supported by concessionary capital that is more patient and willing to accept a lower rate of return. As adoption grows, the business can move on to raising more traditional forms of financing, such as debt and equity.

Lab participants discussed the opportunity for Community Benefit Dollars, which are tax-exempt charitable obligations made by nonprofit hospitals; investments by community development financial institutions (CDFIs); or impact funds as providers of concessionary capital. With the White House working to expand the definition of community benefit activities for nonprofit hospitals to include funding for the social determinants of health, there may be additional opportunities to attract dollars into a fund of this nature.<sup>45</sup> The funding organizations are typically willing to take a decreased rate of financial return because the social needs addressed will have an outsized impact; the tax-exemption benefit only enhances the opportunity. Commercial organizations, such as insurance plans, food retail organizations, or market-rate investors, would provide the later-stage capital, which is typically necessary to scale and reach a sustainable business model.

Figure 7 illustrates the possible flow of capital in an FIM Financing Fund. The left side depicts the types of investors who might participate in a blended structure and what form of capital they would be likely to provide. Resources would be pooled into a central fund then distributed to investment opportunities in the form of loan guarantees, technical assistance, or capital (either market-rate or concessionary). While not a comprehensive list of possible return options, investors might be able to receive health-care savings, increased member spend amounts, and even the potential for revenue-sharing agreements.

**Figure 7: Food Is Medicine Blended Financing Loan Fund**



Source: Milken Institute (2023)

Blended capital structures exist now in the FoodRx space, but they don't support technology innovation. One example of how this financing fund could be applied to FIM infrastructure is a more streamlined payment process, which many market stakeholders are interested in seeing. Lab participants debated the most effective approach for blended financing to cover the costs of a universal payment system. Although the technologies don't yet exist, participants suggested putting resources behind:

- R&D to determine best practices for payment providers to establish a universal language to enable closed-loop system interoperability,
- building an automatic discount coupon system that can be accepted across different types of point of sale (POS) terminals to create a universal form of benefit redemption, and
- implementing a standard file format for restricted spend requirements by product UPC.

To ensure the blended capital fund is strategically mobilized at every phase of development toward actualizing a centralized payment system, Lab participants broke down the project into its individual stages, starting with establishing a universal framework on which the future payment technology would operate. Eligible shoppers, the primary users of this payment technology, can be grouped into two general categories: those who already have SNAP and redeem benefits using an electronic benefit transfer (EBT) card and those who are not on SNAP. Under either scenario, it is critical to consider how small- and medium-sized enterprises and community-based organizations, in addition to larger retail chains, will be integrated into a harmonized POS system. Lab participants discussed the opportunity to develop best practices or guidelines for payment providers to encourage them to establish a universal language, eliminating the need to build and pay for multiple variations of the same back-and-

forth technologies. Capital from a blended financing fund could support organizations designing a template with standard requirements for benefit and payment processing that would enable closed-loop systems to be interoperable.

There has been excellent work done in this area already. Lab participants highlighted the National Grocers Association Foundation (NGAF) work in partnership with GusNIP that outlines options for retailers to implement nutrition incentive projects without having to invest in one-off custom programming. Its report details two avenues for benefit redemption: register-generated coupons and automatic “instant” discounts.<sup>46</sup> Coupons require more attention, while automatic discounts can be applied immediately as an eligible item is scanned and deducted from the amount owed from the customer’s EBT account.

While both options hold merit, the fund’s investment dollars might best be allocated toward further pursuing automatic discounts because they present a more seamless software solution. NGAF has articulated the necessary steps for applying automatic discounts across retailers. The Lab process and participants have initiated conversations on what it could look like to establish this incentive technology across the market. At this stage, participants are not sure of the harmonizing costs, but a universally applicable discount system could be applied to both SNAP and non-SNAP shoppers and would allow customers to purchase healthy foods at their choice retailer.

Building on the earlier recommendation to standardize program packages, Lab participants weighed the possibility for all supplemental benefits providers to submit restricted spend requirements by product UPC in a standard file format. Many of the retailers around the table said they already try to use standard templates but admit to making exceptions. While it may seem easier to adjust as a near-term solution, over the long term, a consistent input process at the retail level would enable comparison of member spend data across benefit providers. Private financing could support the R&D to establish a standard file format.

The FoodRx space’s opportunity to improve its technology infrastructure and payment systems will play a huge role in enabling the market to reach the scale necessary to address the needs of the US population.

#### **Next Steps:**

- **Set a target fund size by assessing the size of the market opportunity, to the extent possible.**
- **Identify the types of organizations that will provide the various layers of capital in a blended financing vehicle.**
- **Develop a structure with the greatest impact by analyzing lessons learned from past Healthy Food Financing Initiatives.**



## CONCLUSION

Although the link between diet and chronic diseases is undeniable, the shift toward using food as medicine to treat and manage these diseases, in conjunction with pharmaceutical treatments, has not reached mainstream adoption. While policymakers work to integrate FoodRx as a proven method of treatment into the Medicare and Medicaid models, health plans, food retailers, and community-based organizations continue their work of providing food prescriptions to food-insecure populations.

The Milken Institute leveraged our Financial Innovations Lab process to bring together FoodRx experts interested in collaborating to improve the market's function. Mapping the current landscape of stakeholders will help to identify existing gaps and opportunities to streamline coordination and to look for ways to implement industry-wide metrics and automated system updates. Outlining where and how data flow among stakeholder groups is critical to targeting where private investment and new technologies can support or simplify backend functions. All of these efforts could benefit from a technology aggregation platform. Finally, pooling private capital sources to build a universally compatible payment system could harmonize disparate benefit redemption methods and optimize user experience for the health plan, retailer, and consumer.

Without public, private, and nonprofit collaboration, FoodRx programs will continue to operate in an ad hoc and siloed fashion. As the White House call to action suggests, now is the time for creative solutions. Coordinating efforts around the cohesive strategy detailed in this report can help advance the market, capitalize on the current momentum around food as medicine interventions, and allow more patients to receive the continuous and comprehensive care required to treat, manage, and prevent diet-related chronic disease.



## ENDNOTES

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## PARTICIPANT LIST

First	Last	Title	Organization
Uche	Akobundu	Senior Director, Nutrition and Impact	Meals on Wheels America
Stephanie	Archer-Smith	Executive Director and CEO	Meals on Wheels of Central Maryland
Faith	Bontrager	Project Manager, Health	Albertsons
Maressa	Brennan	Director, Innovative Finance	Milken Institute
Lucas	Carlson	Regional Medical Director, Care Transformation	MedStar Health
Lisa	Coleman	Director, Healthy Living	Giant Food
Amy	Crone	Project Manager	National Association of Farmers Market Nutrition Programs
Sarah	Downer	Social Determinants of Health Lead, Health Insurance Specialist	Center for Medicare & Medicaid Innovation
Lauren	Driscoll	Founder and CEO	NourishedRx
Sue	Elias	Executive Director	Moveable Feast
Sarah	Fleisch Fink	Director, Policy Research and Development	Instacart
Holly	Freishtat	Senior Director, Feeding Change	Milken Institute
Luisa	Furstenberg-Beckman	Program Manager, ProduceRx	DC Greens
Jason	Gibson	Innovations Program Lead	Geisinger
Tali	Goldstein	Head, Business Development and Partnerships	Lynx FinHealth Inc.

First	Last	Title	Organization
Megan	Guillory	National Business Development Leader, Food for Health	Umoja Supply Chain Solutions
Amy	Gyau-Moyer	Senior Program Manager, Community Health	Kaiser Permanente
Josh	Hix	Co-Founder and CEO	Season Health
Ivy	Hsu	Associate, Innovative Finance	Milken Institute
Sydney	Hudson	Senior Manager, Product Management, Food as Medicine	Kroger Health
Leslie	Jefferson	Manager, Community Health Program	Giant Food
Nick	Kirley	Chief Operating Officer	Meals on Wheels of Central Maryland
Kasia	Kujawski	Manager, Health Government Affairs	Albertsons
Rachel	Landauer	Clinical Instructor, Attorney	Center for Health Law and Policy Innovation of Harvard Law School
Jason	Langheier	Founder and CEO	Foodsmart
Brent	Ling	Director, External Affairs	Wholesome Wave
Caitlin	MacLean	Senior Director, Innovative Finance	Milken Institute
Ted	Mason	Retail Technologist	National Grocers Association Foundation
Ilana	Moreno	Senior Associate, Feeding Change	Milken Institute
Amelia	Noel	Manager, Nutrition Program Development	Kroger Health



First	Last	Title	Organization
Christina	Nyquist	Vice President	Point32Health.org
Rebecca	Piazza	Senior Advisor, Delivery	USDA Food and Nutrition Service
David	Poms	Manager, Partnerships	DC Primary Care Association
Joelle	Robinson-Oghogho	Worker-Owner	SouthEats
Amanda	Stephenson	Owner	The Fresh Food Factory Market
Tambra	Stevenson	Founder and CEO	WANDA: Women Advancing Nutrition Dietetics and Agriculture
Nicole	Truhe	Senior Director, Medicaid Policy	UnitedHealthcare Community & State
Tommy	Zarembka	Director, Strategic Partnerships	Food and Friends

## ABOUT THE AUTHORS

**Maressa Brennan** was a director of Innovative Finance at the Milken Institute. She contributed to the research, development, execution, and follow-up of the Institute's Financial Innovations Labs, which address market failures and funding gaps within social or environmental issues. During Brennan's time at the Institute, she worked on projects to direct capital to help the economy transition to be more environmentally sustainable, streamline the green and sustainable bond market for municipal issuers, and accelerate affordable housing development. She also helped co-lead the Institute's environmental sustainability content and programming. Before joining the Milken Institute, Brennan worked at Mark Asset Management, a boutique hedge fund in New York, and Russell Investments on the hedge fund research team. Brennan graduated from George Washington University with a BA in international affairs and an MS in sustainability management from Columbia University.

**Holly Freishtat** is the senior director of Feeding Change at the Milken Institute. She is an experienced director, transformative leader, and strategist with a 20-year track record developing and implementing food system policies and programs. Freishtat served as Baltimore City's first food policy director and chief of food policy and planning, where she founded and directed the Baltimore Food Policy Initiative. She spent over a decade building an equitable and resilient food environment by creating policies and programs that directly impact health and economic disparities. She has served as a food systems strategist, agricultural marketing director, nutrition educator, and grower. She holds an MS in agriculture, food, and environment from the Friedman School of Nutrition Science and Policy at Tufts University, a BS in nutrition from the University of Vermont, and an executive certificate from Carey Business School.

**Ivy Hsu** is an associate of Innovative Finance at the Milken Institute. During Hsu's time at the Institute, she has worked on projects around structuring sustainable funding models for new antibiotics to help curb antimicrobial resistance and streamlining the sustainable bond market for municipal issuers. Before joining the Milken Institute, Hsu conducted research addressing the social determinants of health in clinical and lab settings at the University of Southern California (USC). Hsu graduated from USC with a BS in health promotion and disease prevention and an MS in finance.

**Ilana Moreno** is a senior associate with Feeding Change at the Milken Institute. Prior to joining the Milken Institute, she spent over eight years in creative communications, operations, and events, where she worked with a variety of local government agencies, private-sector clients, educational institutions, nonprofits, and startups on campaigns ranging from community investment and financial equity to entrepreneurship and education. A lifelong DC resident, Moreno has enjoyed investing in her local community over the years through volunteer roles with the DC Food Policy Council, Jubilee Jobs, DC Greens, and Martha's Table. Moreno holds a master of science in public health in health education and health communication from the Johns Hopkins Bloomberg School of Public Health (BSPH), a certificate in food systems, the environment, and public health from BSPH, and a BFA from Washington University in St. Louis.

**Athena Rae Roesler** is an associate director at the Milken Institute Center for Public Health, where her work champions and evaluates public health policies, solutions, and partnerships to build a more equitable world. She recently examined the private sector's role in supporting public health, calling for a new model, Partnerships for Public Purpose, that emphasizes sustainable, systemic public impact over the collaborators' sectors. Roesler's experience in public health started literally from the ground up, teaching farm-based nutrition to thousands of students across Arizona; Washington, DC; and South India. Her graduate research centered on the human right to food, a dignified emergency food system, and strategies to reduce health disparities. She was part of a research team evaluating California's sugary drink tax and warning label policies. At Leah's Pantry, a nonprofit supporting California SNAPEd, she furthered behavioral economics-based and trauma-informed nutrition security initiatives. Roesler holds a master of public health in public health nutrition from the University of California, Berkeley and a BA in public health and educational studies from American University.



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