Produce Prescription Programs US Field Scan Report: 2010-2020

April 2021

Prepared by DAISA Enterprises | Commissioned by Wholesome Wave

Wholesome Wave was founded in 2007 by award-winning chef Michel Nischan, the late former U.S. Undersecretary of Agriculture Gus Schumacher, and the late Michael Batterberry. Wholesome Wave is fighting nutrition insecurity across the U.S. by developing and deploying programs, platforms, and seed funding to help a network of community-based organizations address the lack of affordability and access to healthy food. We share outcomes of this work to successfully advocate for food and health systems change. Wholesome Wave has launched numerous Produce Prescription programs throughout the country partnering with health centers, hospitals, farmers' markets, community-based organizations, and food retailers. Visit us at **wholesomewave.org**.

DAISA Enterprises is a national consulting firm working at the intersection of food, culture, and health. We partner with social enterprises, nonprofits, policy makers, and investors to drive equitable food systems change and support the development of vibrant communities. DAISA provides innovative strategic and operational services including national field scan research, large-scale funding initiative design & management, and convening planning & facilitation. The DAISA team also facilitates the National Produce Prescription Collaborative (NPPC) and the National Equitable Food Oriented Development (EFOD) Collaborative. Visit us at **daisaenterprises.com**.

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All map images have been created with public data available at the time of report publication and may include inaccuracies now as this is an ever-evolving field. If you have questions or suggestions, please contact info@nationalproduceprescription.org

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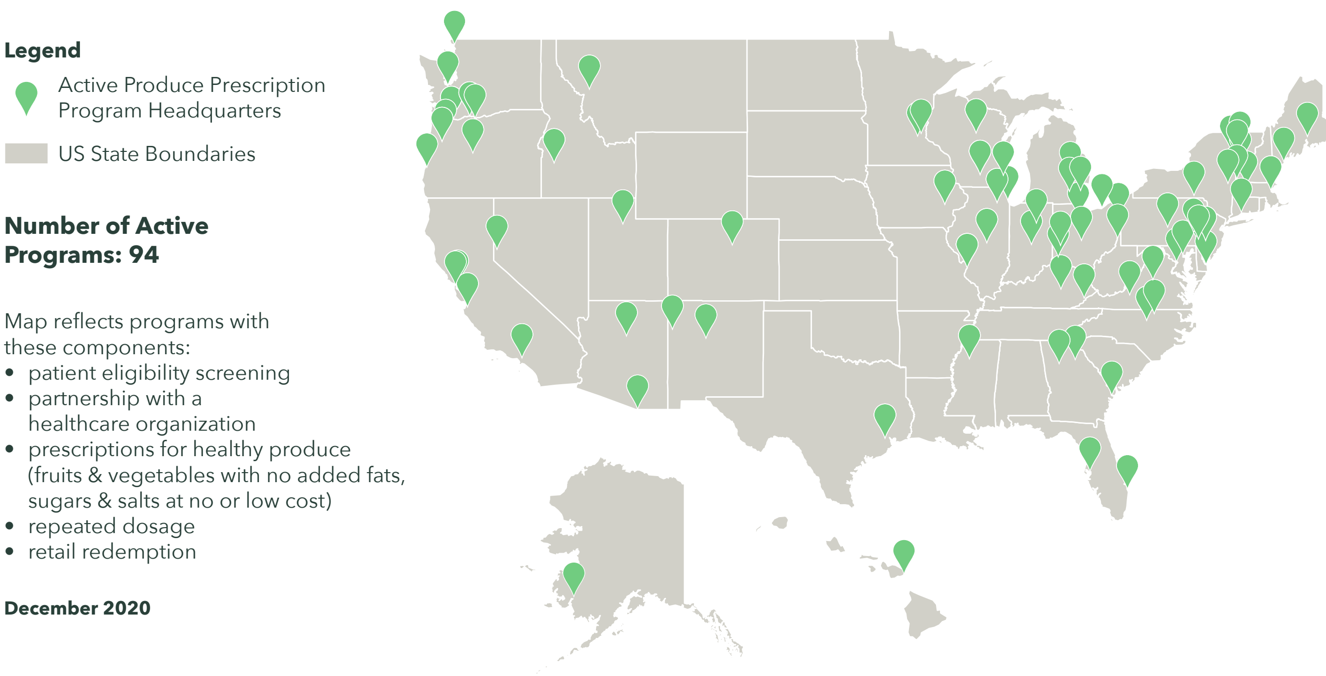
EXECUTIVE SUMMARY

This national field scan research, commissioned by Wholesome Wave and conducted by DAISA Enterprises throughout 2020-2021, documents the fast-growing field of Produce Prescriptions - an innovative prevention tool and health intervention that increases access to fresh fruits and vegetables and improves health outcomes for families in diverse communities across the United States. In the study, we identified 108[1] U.S.-based Produce Prescription programs which began between 2010-2020 that partnered directly with or are housed within a healthcare entity such as a hospital or clinic and track healthcare outcomes through ongoing, regular interactions with program participants. Through analyzing program operation data, interviewing a subset of programs, and conducting a review of relevant literature, this field scan describes the current landscape of the Produce Prescription field and lifts up key learnings and opportunities for growth.

Active Produce Prescription Programs: 2020



Due to the number of programs headquartered in close proximity to one another, the location pins visible on the static maps in this report are fewer than actually exist. To zoom in on program details within regions and states, visit the interactive map at https://arcg.is/18CqL9. View a list of the total number of programs per state in Appendix C of this report.

1 The above graphic shows the current geographic distribution of the 94 active programs as of the publication of this report. The total number of programs indicated above (108) includes 14 programs that were established but subsequently went inactive.

INTRODUCTION

Research Objectives & Purpose

In the spring of 2020, Wholesome Wave engaged consulting firm DAISA Enterprises to conduct national field scan research with objectives to further the evidence base and policy change potential for investment in food and health systems through the Produce Prescription model. Throughout the last decade, the landscape of this field has developed rapidly, receiving widespread interest from media outlets, funders, and policymakers. However, no comprehensive program list or database exists to understand how many programs are operating across the country, what innovations they have developed, and what needs continue to exist to build a more sustainable and more equitable movement. This resulting report documents the reach and complexity of this field, specifically detailing how and where the model has been implemented and sharing program operator challenges and innovations.

We envision this report as vital to policymakers and advocates, foundations and funders, academics and researchers as well as on-the-ground Produce Prescription program operators seeking to better understand the field as a whole. Our hope is that the data and learnings shared here provide a sense of the scale of this movement and will support further efforts for policy change and field-building.

A History of Produce Prescription Programs

In 2010 the co-founder of nonprofit Wholesome Wave, Michel Nischan, learned about an initiative in Ypsilanti, Michigan, that was forging a connection between a local community health center and a nearby farmers' market. The health center was distributing $5 "Fruit and Vegetable Prescription" vouchers to be redeemed at the market in order to increase low-income community members' access to fresh fruits and vegetables. Although this program didn't screen eligible participants for diet-related health risks nor monitored health outcomes, the concept and its possibilities sparked intrigue. Inspired by his own experience having two children living with diabetes, and eager to test the notion of leveraging existing prescription systems and infrastructure to prescribe food as medicine, Michel partnered with pediatrician Dr. Shikha Anand to create a pilot program.

Dr. Anand brought years of experience observing patients' health decline despite her extensive advice that they eat healthier food. She knew her patients needed more than just advice to implement lifestyle changes and that fresh produce can be scarce and expensive. Dr. Anand and Michel saw this experience reflected in a study from a national health foundation where doctors learned that dispensing written healthy food recommendations for patients at-risk or facing diet-related conditions was ineffective. Several doctors noted that providing financial resources for redemption of healthy food prescriptions might prove more effective. Therefore, this new Wholesome Wave pilot program offered a subsidized produce voucher and incorporated nutrition education visits with a nutritionist as well as ongoing monitoring to track progress and measure health outcomes.

While Produce Prescription programs across the country have expanded options for prescription redemption including grocery stores, Community Supported Agriculture (CSA) programs, mobile produce vans, and on-site produce boxes, this early model sought to specifically support the viability and livelihoods of small farmers. The redemption of the healthy food prescriptions at farmers' markets drove sales for these farmers and brought new consumers to enjoy both fresh healthy food and community at these neighborhood market venues. Produce Prescription programs generated a buzz of excitement and new social connections.

In the years since, Wholesome Wave has launched numerous Produce Prescription programs across the U.S., expanding the model to include partnerships with Federally Qualified Health Centers, hospitals, clinics, community-based organizations, and diverse food retailers. Simultaneously, other organizations and healthcare entities were also exploring this possibility and experimenting with pilot programs. As this report shows, Produce Prescription programs have steadily emerged throughout the last decade, spearheaded by innovative healthcare and community-based leaders, in rural, urban, and tribal communities alike.

Photo Credit: Lightfield Studios

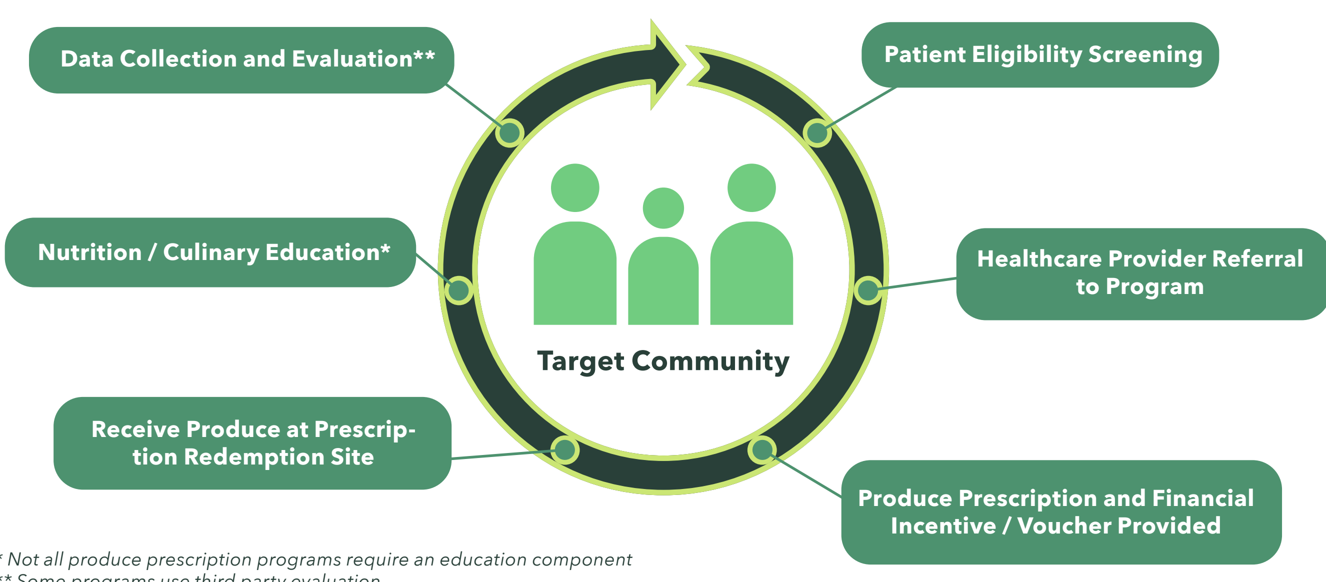
The National Produce Prescription Collaborative

Wholesome Wave, with assistance from DC-based advocacy firm NVG, reached out to a number of stakeholders in the emerging Produce Prescription field to create a collaborative that could coordinate their voices in an effort to inform policy education. In the spring of 2019, the National Produce Prescription Collaborative (NPPC) formed with a purpose of catalyzing the vital role of food and nutrition in improving health and wellness by collectively leveraging the unique opportunities for Produce Prescriptions in the healthcare system, and embedding and institutionalizing Produce Prescriptions within the healthcare payment model. Currently supported by Wholesome Wave and

managed by DAISA Enterprises, the NPPC meets monthly and is active in policy influence, as led by NVG. The group is currently moving towards a more formal governance structure and broader, diverse membership.

The NPPC defines a Produce Prescription Program as *"a medical treatment or preventative service for patients who are eligible due to a diet-related health risk or condition, food insecurity or other documented challenges in access to nutritious foods, and are referred by a healthcare provider or health insurance plan. These prescriptions are fulfilled through food retail and enable patients to access healthy produce[2] with no added fats, sugars, or salt, at low or no cost to the patient. When appropriately dosed, Produce Prescription Programs are designed to improve healthcare outcomes, optimize medical spend, and increase patient engagement and satisfaction"* (NPPC, March 2021).

Flow of a Produce Prescription Program



** Not all produce prescription programs require an education component*
*** Some programs use third party evaluation*

The NPPC emphasizes that Produce Prescription programs are distinct from other nutrition incentive programs and serve as both a powerful prevention tool and healthcare intervention. Notably, Produce Prescriptions are a sustained intervention with participant eligibility requirements and a healthcare partner referral, where the cost of fresh fruits and vegetables is partially or fully covered through a prescription, and prescription fulfillment takes place with an established food retailer partner. The long-term goal is to embed Produce Prescriptions within federal policies and to further integrate them into healthcare systems.

A Broader Movement: Food is Medicine

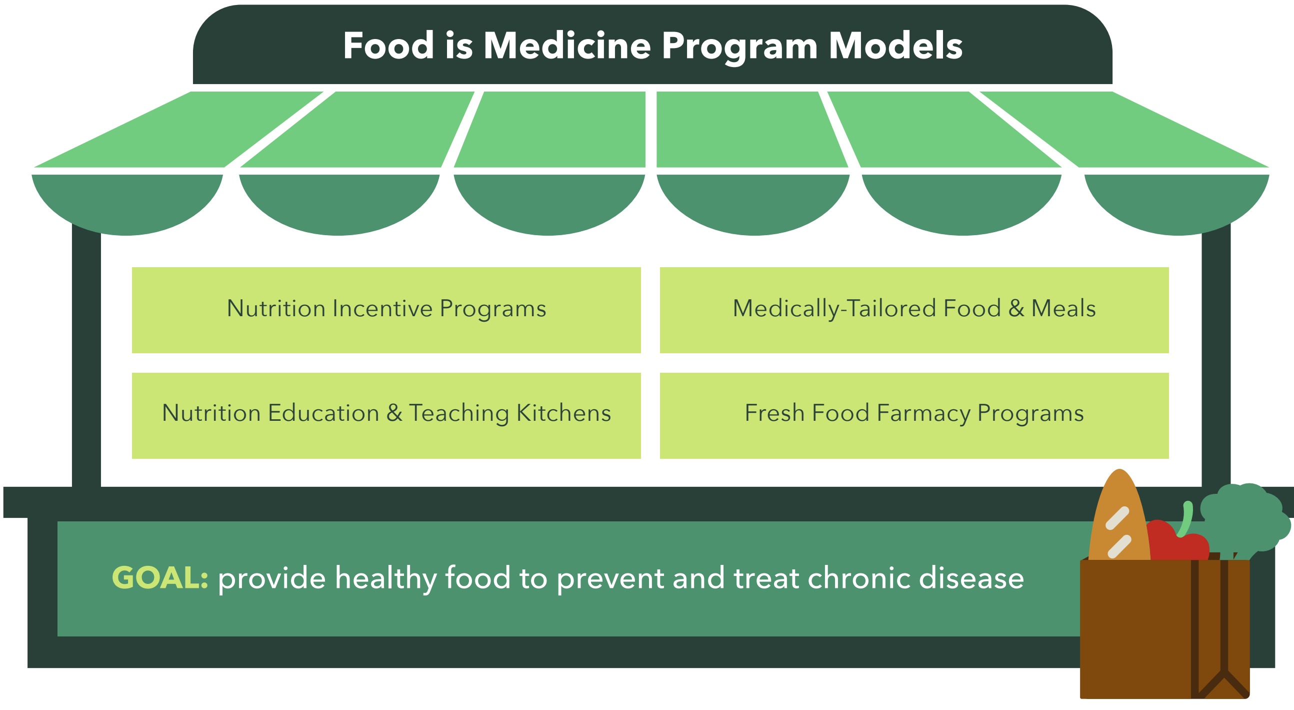
There is a resounding call within the public health and medical fields that our current health system does not do enough to prevent disease and promote overall well being. This is indicated by continually rising healthcare costs, which have tripled within the last 50 years "from 5% of U.S. gross domestic product in 1960 to 17.9% in 2016" (Lee, Y. et al). Heart disease, stroke, and type 2 diabetes - the main three cardiometabolic diseases - specifically pose a heavy burden on the American

[2] according to USDA WIC-eligible fruits and vegetables at https://www.fns.usda.gov/wic/wic-food-packages-regulatory-requirements-wic-eligible-foods#FRUITS%20and%20VEGETABLES

healthcare system. A 2018 report published in the Journal of the American Medical Association found that in the United States diet-related diseases such as diabetes and heart disease are the leading cause of death nationally, surpassing even tobacco use (The U.S. Burden of Disease Collaborators).

Many of the current societal conditions that lead to chronic diet-related diseases and food insecurity are deeply rooted in the structural and institutionalized racism of the U.S. public healthcare system and the food system. Black, Indigenous, and other People of Color (BIPOC) are consistently at higher risk for health inequities in part due to these systemic issues. There exists an abundance of research that illuminates the positive health impacts of regularly consuming fresh fruits and vegetables and many within the public health field have implored healthcare payers to recognize the value of healthy, preventative eating. Nutrition incentive programs such as Produce Prescriptions are a tangible way to direct resources where they are needed most to tackle health inequities, increase food security, and measurably improve quality of life for vulnerable communities.

The Produce Prescription programs detailed in this report are part of a larger "Food is Medicine" movement that seeks to harness the potential that healthy food holds in preventing and treating chronic disease. In this section, we outline some of the most recognized Food is Medicine (FIM) approaches that governments, community-based organizations, and healthcare systems across the country are utilizing, in addition to Produce Prescription programs, to address health disparities through improved healthy food consumption[3].



- **Nutrition Incentive Programs:** These are designed to enhance current federal food assistance programs such as the Supplemental Nutrition Assistance Program (SNAP). Programs such as Double-Up Food Bucks provide funds through a voucher or card to cover some or all of the cost of fruits and vegetables at a farmers' market, mobile market, farm share, farm stand or at a healthcare site. These are distinct from Produce Prescription programs because they do not necessarily have a healthcare partner, sustained duration, or health effects monitoring.

[3] Emergency Food Programs such as food pantries, food banks, and congregate meal programs are not included within the scope of this report. While there is much work being done across the country to improve the quality of the food distributed through these programs, they primarily exist to address the immediate issue of hunger, rather than seeking to prevent and improve diet-related health conditions.

- **Medically-Tailored Food & Meal Programs:** These programs are the most intensive prescription model, indicated for patients with severe health conditions that seriously limit their ability to consume healthy food. Medically-Tailored Food Programs are geared towards patients who are able to cook for themselves and typically include an assortment of foods selected by a registered dietitian nutritionist (RDN) to support dietary needs of treating a chronic illness. Medically-Tailored Meals are also RDN-designed but include prepared meals that are delivered directly to the patient's home, addressing mobility limitations.
- **Nutrition Education & Teaching Kitchens:** These efforts include cooking and kitchen skills workshops, community meals, virtual lessons, or live support on healthy grocery shopping and food habits. As discussed in our findings, many Produce Prescription programs offer nutrition education as a supplement to the prescription. One growing model is that of Teaching Kitchens which are being established in hospitals, schools, nonprofits, and corporate settings. Teaching Kitchens typically offer nutrition education, culinary training, exercise guidance, and hands-on coaching - all with a goal of improving healthy habits and directly impacting health outcomes and medical spending.
- **Fresh Food Farmacy Programs:** This model is an on-site health intervention now being offered in some hospitals and clinics which provides patients direct access to nutrition counseling and a grocery store-style physical location to select subsidized or free healthy foods including fresh produce but also dairy, meat, grains, and shelf-stable goods. It is important to note that some traditional Produce Prescription programs use the "Farmacy" moniker in their program names and also some hospitals and clinics offer on-site produce distribution but without the extended offerings of the Fresh Food Farmacy model.

In addition to these more recognized models, this research also encountered programs that share similar goals of reducing diet-related disease but perhaps do not integrate the healthcare partnerships crucial to a recognized Produce Prescription program. We note them here to share the diversity of existing approaches and as possibilities for continued field development.

- There are numerous community health programs that do not utilize a doctor-prescribed intervention but provide produce vouchers or boxes directly to community members in an effort to treat chronic disease. These programs are managed through nonprofit or social services interactions with community members, peer health outreach programs, or as nutrition education initiatives taking place within healthcare settings such as hospitals and clinics. They typically operate as one-time or occasional food distributions, rather than an ongoing treatment and evaluation model.
- Food pantry sites across the country have been innovating programs to increase pantry participant access to foods that support specific health conditions such as diabetes. One 2012-2014 pilot provided food pantry participants diagnosed with diabetes with dietitian-designed diabetes-appropriate food boxes containing both perishable items such as produce, meat, and dairy as well as shelf-stable products. While participants were not evaluated by a medical doctor, they received healthcare referrals and on-site blood sugar level (HbA1c) monitoring (Seligman, H. K., 2015).

- There also exist many initiatives that seek to increase holistic health and wellness by addressing social determinants of health, reducing chronic stress and isolation, and supporting community members through mental health struggles and addiction recovery. Some programs mirror the Produce Prescription model and allow doctors, social workers, or therapists to write prescriptions for increased physical activity as well as artistic and cultural engagement (Program opens cultural doors, 2020).

ESTABLISHING AN EVIDENCE BASE: Data Gathering Methods

Scope and Limitations of this Field Scan

In order to be included in this field scan, a program must partner directly with or be housed within a healthcare entity such as a hospital, clinic, or rural community health center. In an effort to distinguish between one-time or intermittent food distributions and an intentional ongoing health intervention, we aimed to only include those programs that have multiple or ongoing touchpoints with program participants and that screen, track, and assess individual health and wellness data and program outcomes.

To compile program data, our research team thoroughly explored program websites, news articles and press releases, program evaluation reports, and organizational annual reports. We recognize that the quality of our data is partially dependent on the amount of accurate and publicly-available information, especially when considering programs no longer in existence as well as newly emerging programs that may be less documented. Given these factors - and that the field is actively growing and developing - we understand this report to be a best effort snapshot of a dynamic field as it stands in early 2021.

As a part of this field scan research, we do not examine the total number of field-wide participants enrolled, number of individual redemption sites, or the amount of monetary incentive distributed to program participants. While these data points could be particularly useful to better understand reach and impact, we were not able to make accurate estimates as program partnership and enrollment numbers evolve year to year.

Research & Data Analysis

Our team began research efforts by conducting an extensive internet search of data throughout the last ten years - utilizing the United States Department of Agriculture's Gus Schumacher Nutrition Incentive Program (GusNIP) and Food Insecurity Nutrition Incentive databases as well as searching broadly for related key terms. We expanded our results through consulting colleagues with deep knowledge of the field and by using the "snowball" method of identifying additional programs during interviews with field leaders and program operators. We compiled a list of 120 potential programs to which we then applied our inclusion criteria described above to remove any programs outside our scope. We also removed a small number of programs due to inability to obtain any recent or reliable information on them.

To create a Program Operator Database, our team then researched each individual program to gather and analyze a set of data points related to program eligibility & operations, partnership development, program longevity, prescription redemption mechanism, funding sources, and more. We utilized this data analysis to create a web map series[4] showcasing geographic distribution,

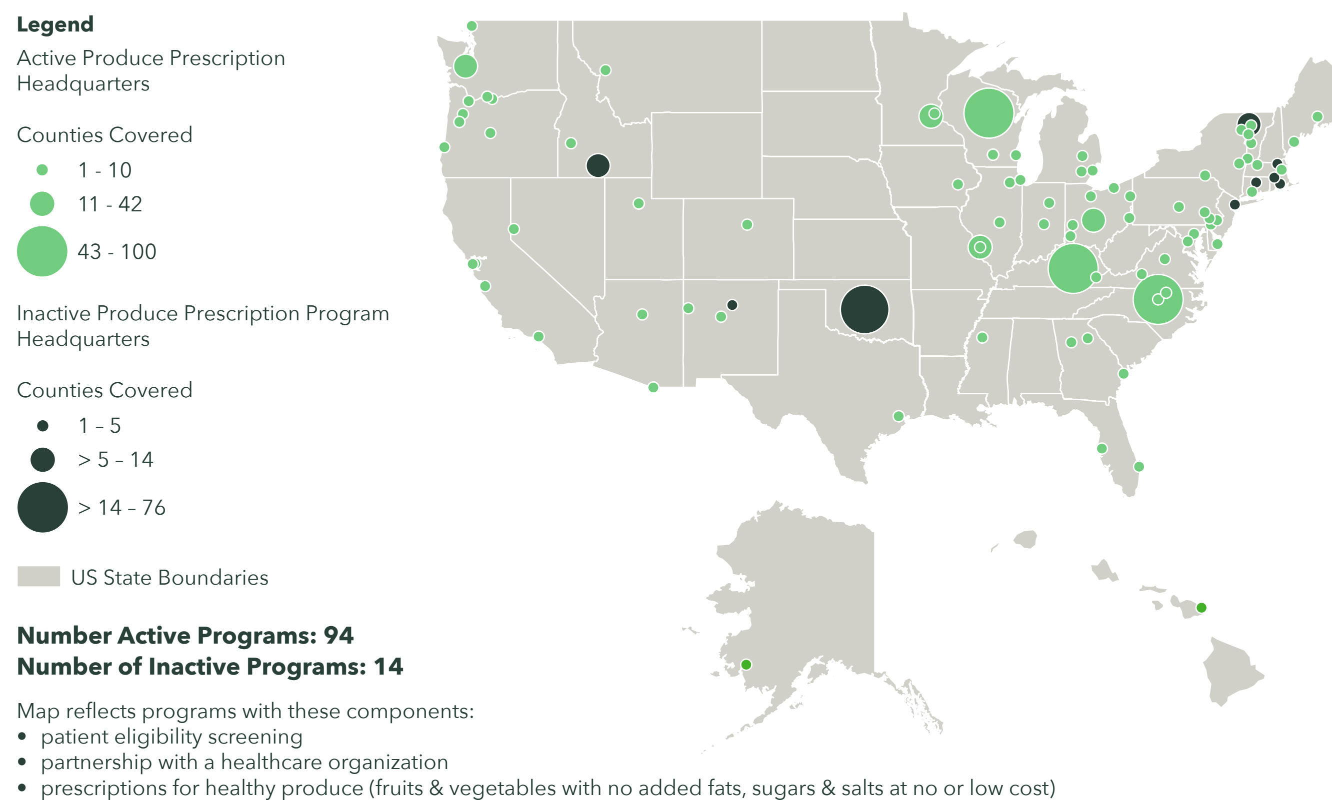
[4] Available at: https://arcg.is/18CqL9

funding source, program reach, and overlap with congressional districts[5]. We also conducted in-depth semi-structured interviews with 19 of the program operators[6] in order to cultivate a more nuanced understanding of operations, challenges, and innovations. Finally, we compiled and reviewed 93 literature and media sources[7] spanning the last 10 years including Produce Prescription-related news articles, press releases, peer-reviewed academic articles, reports & policy briefs, and program implementation guides & toolkits.

RESEARCH FINDINGS: Landscape of The Produce Prescription Field & Emerging Themes

As our team analyzed the compiled program data, literature review, and program operator interviews, certain themes and trends about program status and operations, participant experience, funding, program evaluation, and the impact of COVID-19 began to emerge. In this section, we describe the current landscape of the Produce Prescription field as of early 2021 and present key emerging themes that we hope illuminate the richness of experience of many of those working to advance this field daily.

Produce Prescription Programs in the United States: 2010-2020



Number Active Programs: 94
Number of Inactive Programs: 14

Map reflects programs with these components:
- patient eligibility screening
- partnership with a healthcare organization
- prescriptions for healthy produce (fruits & vegetables with no added fats, sugars & salts at no or low cost)
- repeated dosage
- retail redemption

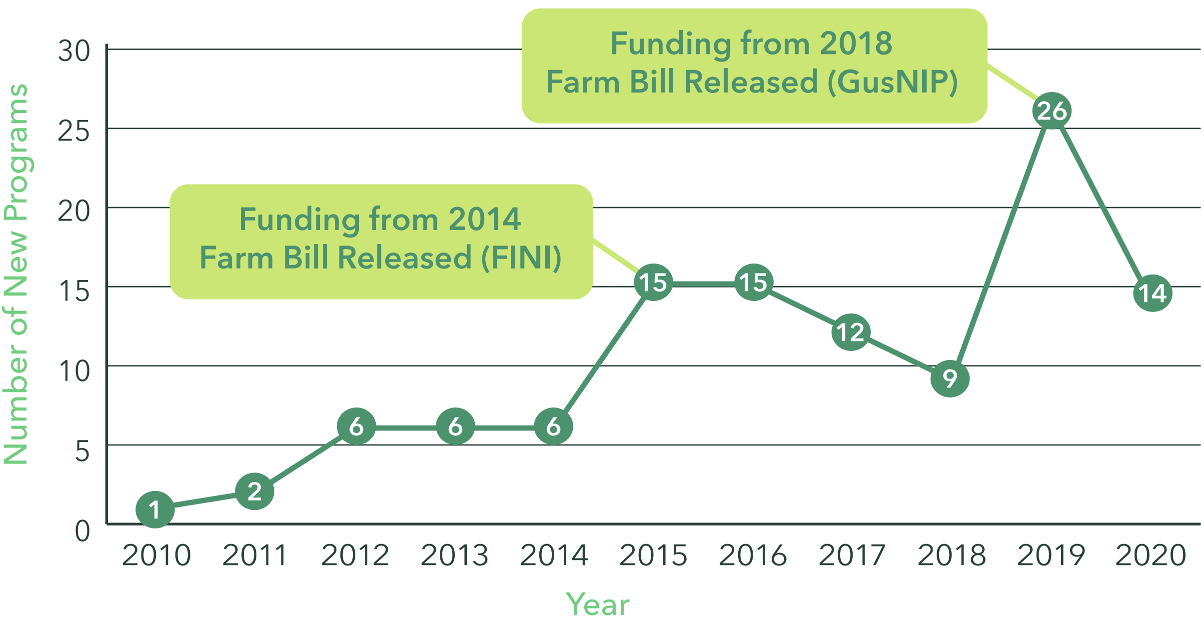
December 2020

[5] Due to the number of programs headquartered in close proximity to one another, the location pins visible on the static maps in this report are fewer than actually exist. To zoom in on program details within regions and states, visit the interactive map at https://arcg.is/18CqL9. View a list of the total number of programs per state in Appendix C of this report.
[6] See Appendix B for a complete list of program operators interviewed for this report.
[7] See Appendix D for a complete list of media sources utilized in the Literature Review of this report.

Overall Field Expansion and Geographic Distribution

The number and geographic distribution of Produce Prescription programs has been rapidly expanding. Between 2010 and 2020, 108 new programs that fit our inclusion criteria began operations, spanning 39 U.S. states, the Navajo Nation, and the District of Columbia. The majority of programs we encountered started between 2015 and 2020, with the highest number of new programs (26) starting in 2019 with the implementation of the Gus Schumacher Nutrition Incentive Program (GusNIP) authorized in the 2018 Farm Bill. Notably, the number of programs started between 2011 and 2015 doubled by 2020. We also found that 14 programs began between 2010 and 2020 that were either one-year pilot programs that did not continue past the first year (7 programs) or fully launched, non-pilot programs that ceased operations by 2020 (7 programs).

Number of New Produce Prescription Programs by Year 2010-2020



At the end of 2020, an additional 10 programs were granted GusNIP federal funding to start or expand Produce Prescription Programs. Of those 10, we consider 8 programs to be newly established programs that will launch in 2021. We have included these 8 new programs in this graph to accurately portray recent national program growth. However due to availability of data, these 8 new programs are not included in the data analysis presented in this report.

We saw a fairly unequal distribution of programs by region: 8% in the Southeast, 8% in the Plains, 28% in the Midwest, 30% in the Northeast, and 26% in the Pacific West. With twelve total programs, Oregon state had the highest number of programs per state. On average, Produce Prescription programs served a total of 5.8 counties, and when adjusting for four state-wide programs, the average number of counties served was 3.4. The unequal geographic distribution of programs indicates strong growth on the coasts and within Midwestern urban cities, but points to a lack of access both in southern states and more rural central states.

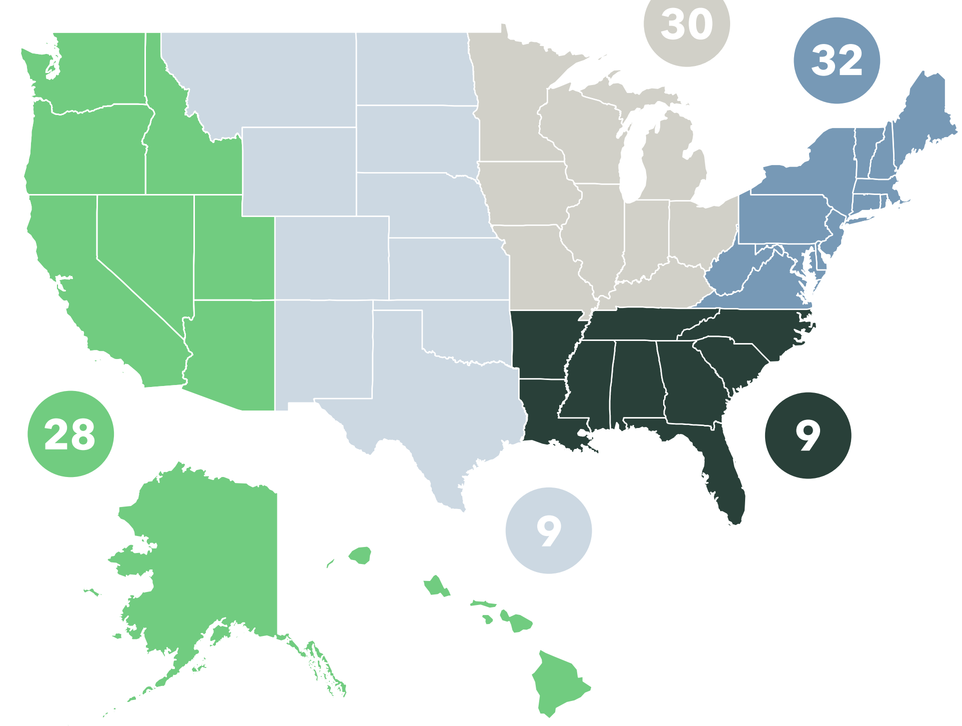
Number of Produce Prescription Programs in Each US Region

Number of Programs in Each Region

Northeast: 32
Midwest: 30
Southeast: 9
Plains: 9
Pacific West: 28

US regional breakdown based upon the geographical regions recognized by the USDA's Agricultural Research Service.

December 2020



To view and click on the Produce Prescription programs located within each state, by region, please go to this web map series: https://arcg.is/1uOu8

Prescription Redemption Venues & Methods

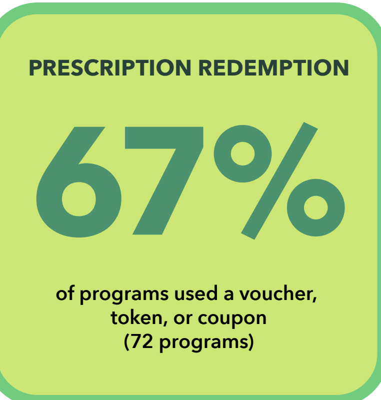
Farmers' markets were by far the most popular venue for prescription redemption with 48% of programs utilizing farmers' markets while grocery retail locations served as a venue for 29% of programs. Another notable venue solution was on-site distribution where participants received their prescribed amount of produce at their healthcare provider or on-premises of the lead organization, with 20% of programs reporting this practice.

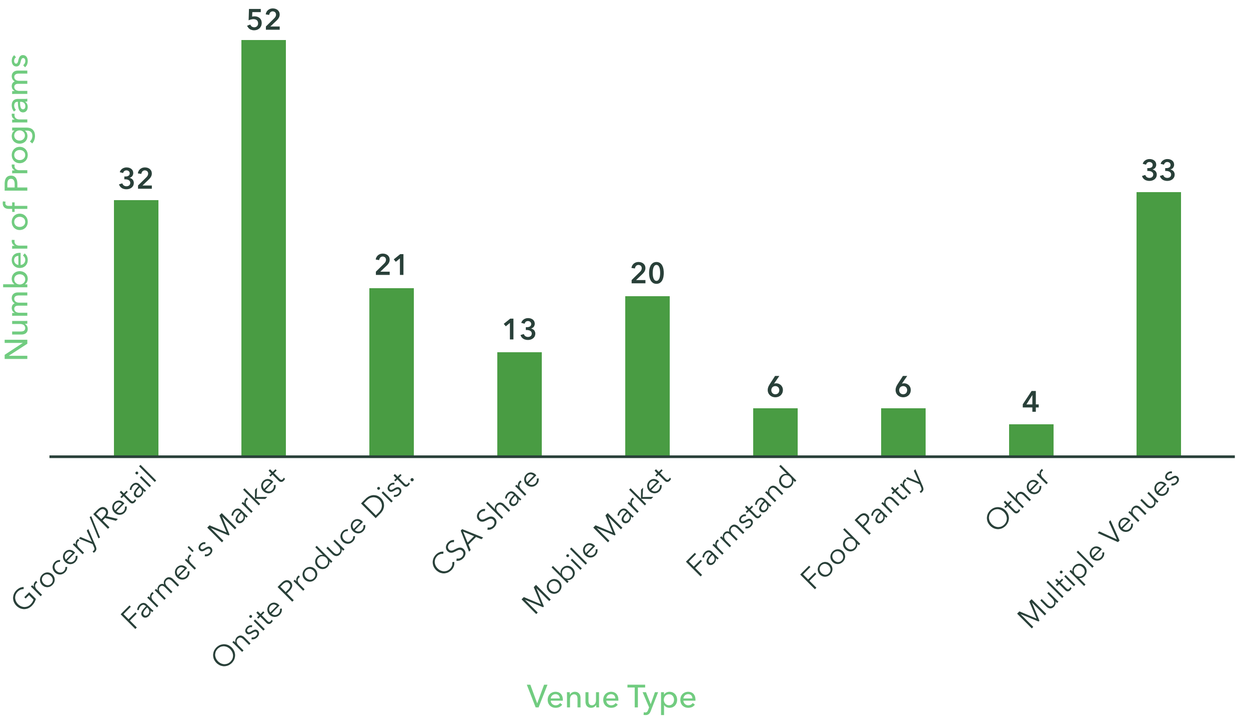
Overall, 32% of programs reported using a combination of prescription redemption venues with other options including CSA farm shares, mobile markets, pickup at farms or farmstands, food pantries, and Native trading posts. As for prescription redemption method, 67% of programs used a voucher, coupon, or token as their mode of transaction. Another 33% of programs distributed a physical produce box or bag on-site, skipping over the process of using a voucher. Currently, only 7% of programs reported utilizing multiple methods for participants to redeem their prescription[8].

PRESCRIPTION REDEMPTION

33%

of programs distributed a physical produce box or bag on-site (36 programs)



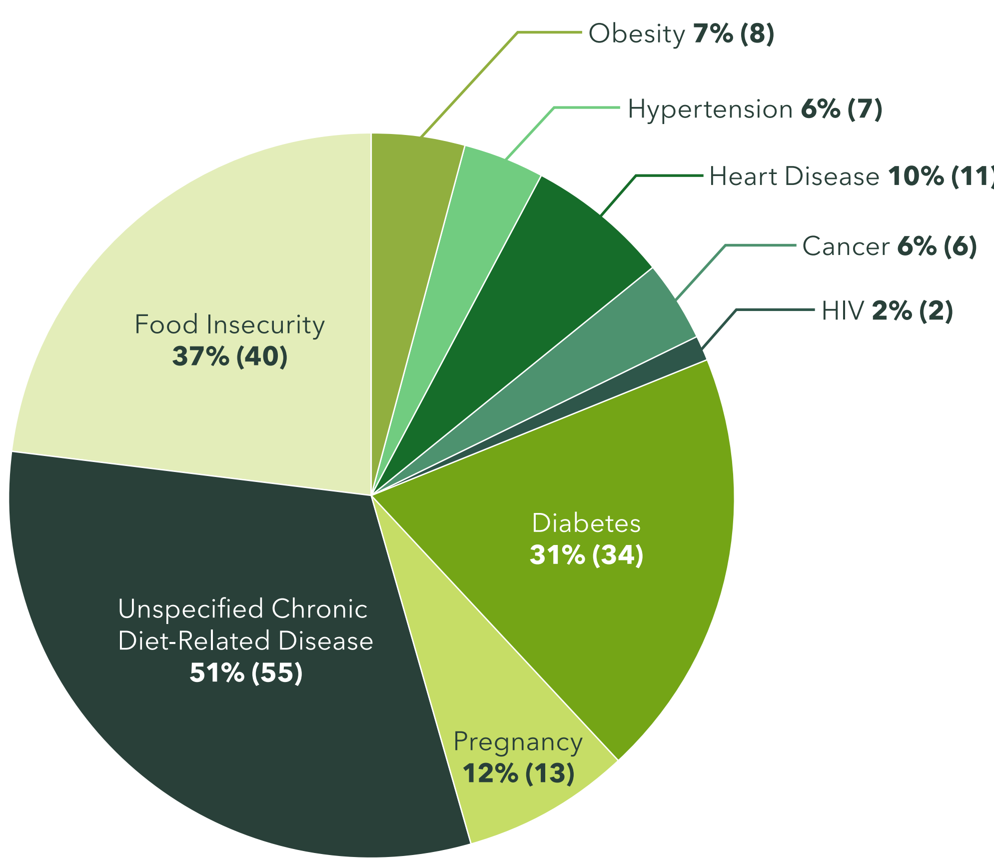


Program Eligibility

Numerous program operators reported a commitment to shifting from eligibility based on a diet-related condition diagnosis (i.e. diabetes, hypertension, heart disease, etc.) to screening broadly for food insecurity or being generally at-risk for diet-related illness. In fact, our program database analysis indicated that among the various health factors using to screen potential participants, the three most common were food insecurity (37%), unspecified diet-related chronic diseases (51%), and diabetes/pre-diabetes (31%). Programs reported that this broader usage of eligibility criteria

[8] The 2019 GusNIP federal funding program encourages the utilization of diverse retail venues; this number may increase in coming years as programs are further developed.

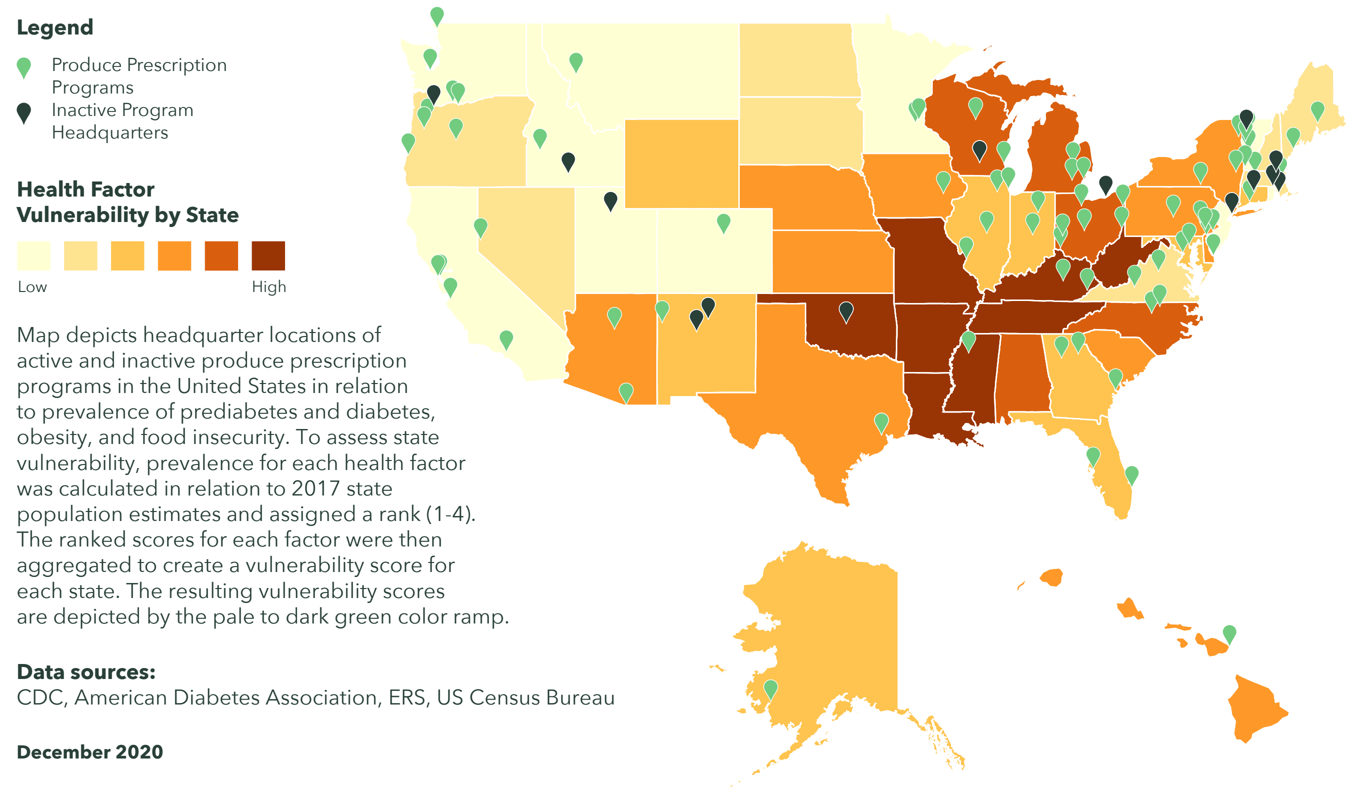
is motivated by a desire to increase program accessibility and equity, expanding the potential participant pool and better recognizing the far-reaching effects of food insecurity on holistic health and wellbeing. Despite these efforts, program operators shared that the majority of their participants do in fact have a diabetes or pre-diabetes diagnosis. However, the intentional expansion of program eligibility requirements plays an important role in recognizing the impact of social determinants of health such as food access, and in supporting nutrition-insecure community members from a place of equity and dignity.



**29% of all 108 programs (31 programs) considered multiple health factors*
**Health factors considered encompasses both screeening for program eligibility and enrollment data capture*

Produce Prescription Program Locations in Relation to State Vulnerability for Key Health Factors

Key Health Factors include diabetes and prediabetes, obesity, and food insecurity, which were top health factors considered for program participation



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Barriers to Participation

Rural communities often lack equitable access to farmers' markets and grocery stores, making obtaining fresh fruits and vegetables more difficult for these communities. Programs in rural locations have seen success with utilizing a mobile produce van model that more easily reaches community members, and have partnered with food shelves, community centers, and schools to create more centralized drop off points. In rural and urban communities alike, participant ability to redeem prescriptions is negatively impacted by a lack of reliable transportation methods and child care, as well as physical

mobility barriers. Programs can utilize unique redemption methods such as online produce delivery programs (Burrington, et al, 2020) or locating farmers' markets on-site at partnering hospitals or clinics in order to lower these barriers and increase program participation.

Accessibility challenges can span beyond these factors and vary based on socio-economic or cultural aspects as well. Some families reported to program staff avoiding redeeming prescriptions at local farmers' markets because not only is produce more expensive but these spaces are also sometimes viewed as predominantly white, privileged, or potentially unsafe for people of color or undocumented community members. However, some programs have seen success with forging new connections between low-income participants and existing local farmers' markets that participants were previously unaware of (Schlosser, A.V. 2019[2]).

Building Partnerships

Many programs shared how crucial strong and long term-cultivated partnerships were to the success of their program. For programs run by community-based organizations, finding a healthcare staff "champion" who could advocate for the program was often essential as well as building relationships with non-physician healthcare staff who often have more direct patient contact, such as dietitians, social workers, community health workers, and patient advocates. The healthcare "champions" who believed in focusing on preventative care rather than solely treating disease with traditional medications were crucial to program longevity and success, however also left some programs susceptible to collapse when the "champion" staff member left the institution (Joshi et al, 2019). Community-based organizations without a specific health focus reported that gaining credibility and trust from healthcare partners took significant time, a process that was sometimes mediated by the organization if they had a staff member with formal education in nutrition or dietetics who could better communicate program successes to clinical staff.

Nutrition Education

Although having an educational component was not considered part of our research inclusion criteria, our analysis found that 70% of programs incorporated nutrition education and or culinary instruction, with only 30% of programs providing patients with a prescription for produce only. 11 of the 19 programs interviewed remarked that an educational component was critical to increasing prescription redemption rates and fruit and vegetable utilization in the home, indicating the importance of engaging participants beyond a simple medical intervention or prescription transaction. Holistic program supports such as nutrition education, culinary instruction, farmers' market orientation tours, kitchen implement giveaways, and mentorship all play an important role in increasing participation and accessibility and also shifting attitudes towards healthy eating and wellness (Forbes et al, 2019). However, there is also growing critique of traditional nutrition

education efforts that sometimes assume a lack of existing nutritional knowledge or culinary skill on the part of program participants, frame curriculums primarily from a white cultural perspective, overlook healthy characteristics of traditional cultural diets, or pose an additional barrier to access while stigmatizing program participants.

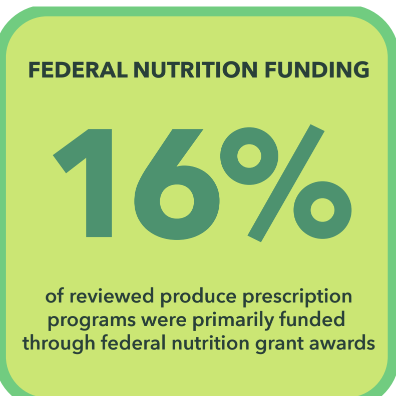
Evaluation & Metrics

Very few programs had direct access to participant health data through integration with their Electronic Medical Record, though those that did shared very high success with both participant identification and recruitment as well as tracking accurate changes in biometric data, healthcare utilization, and medication usage. The majority of programs that lack this access to patient data struggle with implementing separate evaluation processes and gathering sufficient program metrics. Short-term or seasonal programs have an additional challenge of tracking changes to biomarkers or overall wellness within this shorter duration. Additionally, smaller, underfunded programs often do not have staff members with evaluation and data analysis skills to translate participant survey data into meaningful statistics that adequately communicate program outcomes.

All of these above factors make it difficult or impossible to prove program effectiveness both to maintain crucial buy-in from clinical partners and to satisfy funder reporting requirements or attract new funders. Funders and policymakers typically seek highly detailed program outcome data to make the case for the efficacy of fruit and vegetable prescriptions, while providing this data can be beyond program staff's capacity of time, costs, or skills (Hennessee, E., 2020). There can also be tension between collecting extensive biomarkers to prove program effectiveness and honoring a participant's autonomy, privacy, and holistic wellbeing - a conflict that can be exacerbated or driven by a funder's requirements for data collection (Swartz, H., 2018).

Primary Funding Sources

Across all programs identified, private funding (including foundation, trust, enterprise, or large-scale grant support) was overwhelmingly the most represented primary source of funding (46%). Federal nutrition incentive funding was the primary source for 16% of all programs and overall, 31% of all programs were primarily funded through government sources. Of that percentage of government funding, 27% were GusNIP grantees, 21% were FINI grantees, 12% had another source of federal funding, and 40% were funded through state, county, or city mechanisms. When comparing this to program longevity, the longest lasting programs were self-supported programs (average duration 4.5 years[9]); however, at 4% these programs make up the smallest funding category of programs in the field scan. Following self-supported programs, private healthcare funded programs were the next longest-lasting category (4.1 years), but also represent a small percentage of programs, 7%. The next longest lasting funding category was privately-funded programs (3.6 years), followed by government-funded programs (2.8 years), and programs supported by crowdfunding mechanisms or a mass of individual donors (2.1 years, 7% of all programs).



[9] Data includes program years prior to the field scan's timeline, when adjusted for program years limited to 2010 - 2020, self-supported programs had an average duration of 4.5 years.

Primary Funding Sources*		Percentage
Private Funding: Foundation, Trust, Enterprise or Large-scale Grant Support		**46%**
Private Healthcare Funding		**7%**
Accountable Care Organization (ACO) **	**4%**	
Non-ACO Private Healthcare Funding	**3%**	
Federal Nutrition Incentive Funding (GusNIP + FINI)		**16%**
State, Municipal, and other Governmental Funding		**15%**
Crowdfunding / Donations		**7%**
Self-Supported / Organizational Budget		**4%**
Self-supported (Healthcare Origin)	**3%**	
Self-supported (Nonprofit)	**1%**	
Unknown		**5%**

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

***Private ACO funding was calculated based on publicly available data from reviewed programs, not all programs disclosed if their health-care funding was sourced from an ACO, so the true percentage may be higher*

Produce Prescription programs are chronically underfunded and face an uphill battle to invest in program expansion, technology development and integration, or staff training. Due to historical inequities, BIPOC communities in particular have fewer or less accessible pathways to funding and new program support. While funding is sometimes more accessible for program implementation (i.e. funds designated for subsidizing the direct purchase of produce) there is a notable lack of funding for ongoing program management. Coordination of Produce Prescription programs tends to be complex and high-touch by design - operators must simultaneously build community trust and strong partnerships while managing participant recruitment, organizing logistics, encouraging prescription redemption, tracking and analyzing evaluation data, and reporting to funders on their outcomes. Programs need better access to flexible funding that can be used to hire and train additional staff to increase program effectiveness.

Across the board among program operators interviewed and literature sources reviewed, there exists a resounding call to classify Produce Prescription programs as a preventative healthcare service, embed the model within Medicare/Medicaid, and make it eligible for reimbursement by health insurance companies. This would not only provide more sustainable program funding but could also have long-reaching effects for reducing overall healthcare costs and medication usage for chronic conditions such as diabetes or hypertension. A 2019 Tufts University research study showed that healthy food prescriptions embedded in Medicare/Medicaid "could improve health, reduce healthcare costs, and be highly cost-effective after five years" (Lee, Y. et al).

Impact of COVID-19

As the COVID-19 pandemic has raged across the country throughout 2020 and into 2021, food insecurity among low-income families has soared and the need for Produce Prescription programs has increased (Hirschfeld, A. 2020). Strong pre-existing partnerships with healthcare providers have

proven crucial in keeping programs functioning, as healthcare partners advocate for programs to receive essential service designation and continue patient recruitment and prescription distributions. While the majority of programs we researched seem to have been able to remain open, we did identify 4 programs that paused operations completely and an additional 3 new programs that were prevented from starting due to the pandemic.

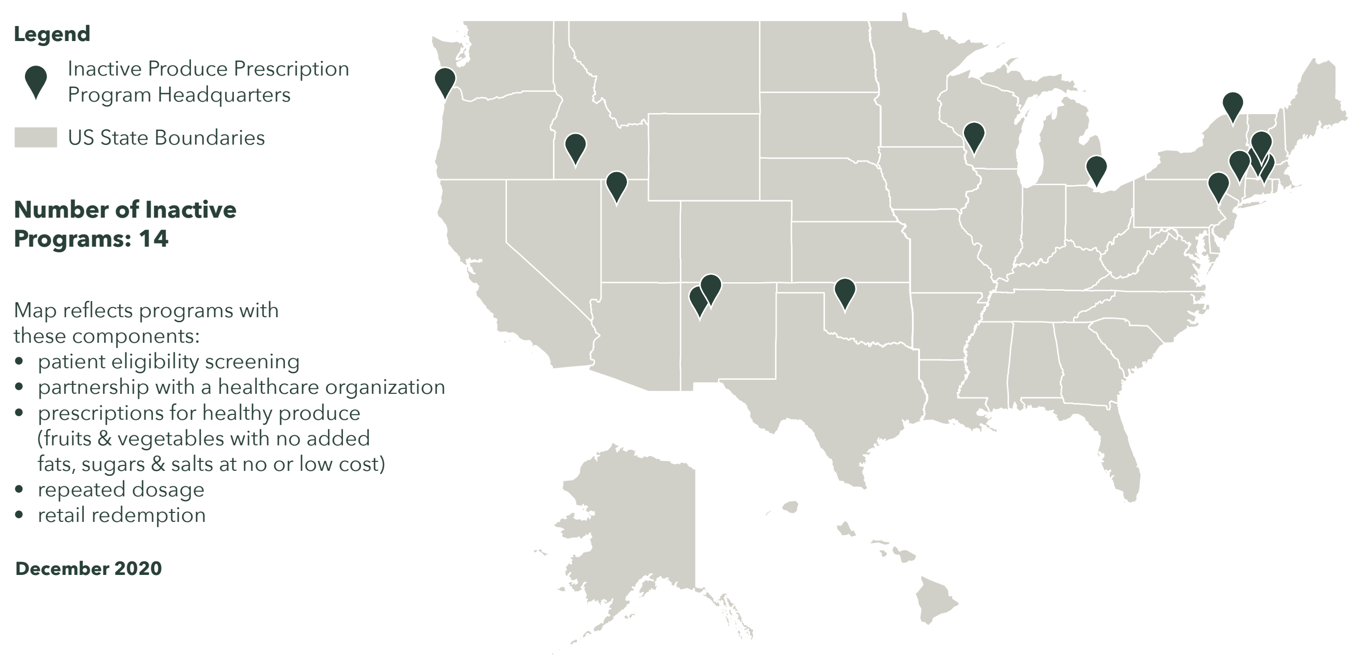
Programs have pivoted their operations quickly to adapt to social distancing requirements, the closure of some farmers' markets and of schools and community centers, and the transition to virtual program support, nutrition education, and participant survey collection. Some COVID-19 related changes may end up sticking around; multiple programs reported streamlining program logistics to a mobile produce van or delivery model and enjoy the newly gained efficiencies. However, the lack of equitable internet access hinders data collection via online surveys and limits participation in virtual nutrition education. The closure of farmers' markets or switch to a drive-through model further isolates community members who previously benefited from the social cohesion gained from embedded community-building programming and regular person-to-person interactions.

CONCLUSION

What Happens When Produce Prescription Programs End?

While Produce Prescriptions are highly effective in improving health and wellbeing, they require complex management and increased technology to forge connections, maintain participant access, and document outcomes. A key theme that emerged throughout this research was the ongoing challenge facing program operators to piece together enough funding to keep their programs afloat - and the devastating consequences to low-income families of abruptly ending nutrition incentive programs that are often a lifeline to putting fresh fruits and vegetables on the table. Through our analysis, we estimate that at least 14 Produce Prescription programs have completely ceased their operations throughout the past 10 years - though the number is likely much higher. Some of these programs were launched as pilots intended to try out the model in a particular community, though some longer-running programs have closed due to lack of adequate and sustainable funding.

Inactive Produce Prescription Programs: 2010-2020



There are also some programs whose model "graduates" participants and un-enrolls them after a certain amount of time receiving the benefit - the idea being that the program is not a long term fix but instead intended for participants to develop healthier eating habits through being exposed for a time period to easier access to fresh produce. However, programs reported being unsure about what length of time was truly effective in producing these changes and also skeptical about low-income program participants' ability to continue purchasing fresh produce after the prescription ended. Those program operators who felt committed to not removing participants from the program after a certain time period subsequently struggled with expanding enrollment to other families, due to limited funding.

Removing low-income participants from subsidized nutrition supports makes it immediately more difficult for those families to access fresh fruits and vegetables, having a particularly negative effect on overall health and wellbeing for those who experience or are at risk for chronic disease (Forbes et al, 2019; Schlosser et all, 2019[1]). Prescription redemption partnerships with farmers' markets, CSA farmers, and retail grocery stores can also be a source of regular income and sales (Graebner, L., 2016) and these partners feel the swift negative economic impact when nearby programs close and their previously-stable client base shrinks.

Recommendations: Advancing the Field

Through conducting this research and listening to the stories of field leaders and operators from around the country, we noted several needs and opportunities. Below we provide 10 recommendations across two primary areas: *Establishing & Sustaining Programs and Bolstering Research for Understanding & Policy Advocacy*. This short list is a starting point for **how to better support on-the-ground program operators and partners to continue building a robust, equitable, and sustainable Produce Prescription field.**

Establishing & Sustaining Programs

1. Form an open, inclusive Produce Prescription **Community of Practice** or Learning Community for program operators focused on information exchange, field coordination, and mutual support among existing and emerging programs.
2. Ensure that the evolving **National Produce Prescription Collaborative** includes a diverse, representative body of operators and representatives of all the sectors engaged in Produce Prescription programs, with core objectives of advancing equity and policy changes.
3. Identify dedicated Produce Prescription **technical assistance** consultants, alongside the services available for GusNIP recipients, in order to:
    a. guide emerging programs and advance or scale up program operations.
    b. support hospital-based program staff who need guidance in implementing community-based programs or building relationships with local food vendors.
    c. assist programs' compliance with patient privacy laws (e.g. HIPAA) and integrating Electronic Medical Record referral technology.
4. Create a public, searchable database of federal and state-level **funding opportunities** for Produce Prescription programs. Specifically research and compile models of state 1115 Waiver (Medicaid) funded programs and reimbursable structures to increase awareness and utilization and advocate for adoption in additional states.
5. In addition to program implementation funding, ensure designated funding is available for robust Produce Prescription program **data collection and evaluation,** alongside what is available for GusNIP recipients.

Bolstering Research for Understanding & Policy Advocacy

1. Advance research on the extent of Produce Prescription **programs led by and for Black, Indigenous, and other People of Color (BIPOC)** and recommendations to ensure a racial equity imperative is embedded within all policy and program resources.
2. Compile **all current and past Produce Prescription field research** into one easily accessible location.
3. Research and compile **strategies and tools to support healthcare partners** to increase patient recruitment and better capture healthcare cost savings. Simultaneously work to also affirm a values-based care model that not only assesses Return-on-Investment (ROI) but is inclusive of Patient-Oriented-Metrics (POM) including patient satisfaction, sense of wellbeing, social cohesion, and mental health.
4. Research and design a broadly-applicable, culturally-based **nutrition education curriculum** to complement Produce Prescription program development.
5. Building upon the findings in this report and others, **continue researching effective program design components** including eligibility requirements, prescription redemption methods, dosing levels, and program duration - to better understand variations and efficacy, towards best practices.

We encourage individuals and organizations with access to resources or institutional support to consider the above opportunities within our two key categories of *Establishing & Sustaining Programs and Bolstering Research for Understanding & Policy Advocacy* and take action where possible. For additional ways to engage in advancing the Produce Prescription field, we have compiled a list of collective field resources and organizations in Appendix A - spanning policy and advocacy, research, funding, and technical assistance and evaluation. While identifying policy barriers and opportunities falls outside the scope of this particular research and report, we point to the *Mainstreaming Produce Prescriptions: A Policy Strategy Report*[10], released March 2021 by the Center for Health Law and Policy Innovation (CHLPI) at Harvard Law School.

Ultimately, the big promise of Produce Prescription programs is the betterment of peoples' health and well-being for whom this effective model is both a prevention tool and a healthcare intervention. This research demonstrates the broad, community-driven movement to design and operate programs, in a variety of urban, suburban, tribal, local, regional, and statewide formats. We must simultaneously continue to bolster all of the existing programs and to drive forward a unified wave to embed and institutionalize Produce Prescriptions within the healthcare payment model. We hope you will join in this collective effort towards better health and wellness for all.

[10] Available at: https://bit.ly/ProduceRxReport

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PROJECT SPOTLIGHT

Vermont Farmers Food Center—Rutland, Vermont

The Farmacy Project is a CSA share produce prescription program aimed at addressing food insecurity to residents of Rutland County while supporting local organic and emerging farms.

Location	**Rutland, Vermont**
Year Founded	**2015**
Program Eligibility	**Food insecure patients living with or at-risk for a diet-related chronic disease**
Rx Delivery Method(s)	**Prescription for a weekly 12-15 pound CSA share (15 weeks)**
Redemption Site(s)	**Multiple convenient pick-up sites for participants across the region**

Background: The Vermont Farmers Food Center (VFFC) is an innovative community resource addressing the needs of food entrepreneurs, decreasing food insecurity, and nurturing the growth of the state's agricultural economy through job creation and community economic development. VFFC is an initiative of the Vermont Farmers Market Education Center, Inc., a nonprofit founded in 2012. To enhance their impact, VFFC is creating an operational hub that will provide logistics support such as storage and aggregation to enable sustainable access to larger markets for area small-scale and family farms. The hub also includes a Community Kitchen and Community Kitchen Institute which will provide opportunities for local food entrepreneurs to create value-added products and will expand educational efforts.

Produce Prescription Program Approach: Food insecurity concerns in Rutland County sparked the creation of The Farmacy Project in 2015 to address the coupled concerns of improving access to fresh local produce and increasing outlets for organic food produced by local farmers. Community partnership is essential for the success of The Farmacy Project. Built on the pillars of agriculture, public health, and economic development, key partners include farmers, volunteers, the regional food network, healthcare providers, and educators. Specific healthcare partners include Rutland Regional Medical Center, the Rutland County Free Clinic, VNA Hospice Care, and a federally qualified health center - the Community Health Centers of the Rutland region.

Eligible patients are issued a produce prescription from their primary care provider for a CSA share which can be picked up from one of several convenient distribution points across Rutland County. The program lasts for 15 weeks with participants receiving 10-12 pounds of fresh produce weekly. Each produce box can feed an entire household and distribution is augmented with ongoing nutrition education from healthcare partners. Enrolled patients are surveyed for food insecurity, based on a standard 2-question inquiry, and diagnosis of a diet-related chronic disease from a participating healthcare partner. The Farmacy Project was initially funded by the Browse Trust of the Rutland Regional Medical Center and has been subsequently funded by individual grant awards.

Success Factors

- By focusing on small-scale organic farmers, The Farmacy Project has changed local agriculture's role in the health of the community by positioning partner growers to be the crucial link between healthcare providers and a nutritious diet.
- Strengthening logistics to champion small-scale regional farmers has bolstered Vermont's agricultural economy and increased access to local produce for area residents. This approach has also solidified the framework to improve access to organic regionally grown food for communities beyond Rutland County.

High Desert Food & Farm Alliance—Bend, Oregon

The VeggieRx Program has leveraged partnerships between clinicians and Central Oregon farmers to reduce food insecurity, increase patient fruit and vegetable consumption, and stimulate the region's agricultural economy.

Location	**Bend, Oregon**
Year Founded	**2018**
Program Eligibility	**Participants are eligible if they identify as food insecure and self-report a diagnosis of heart disease or diabetes/pre-diabetes**
Rx Delivery Method(s)	**Tokens, for redemption at participating farmers markets for fresh produce, veggie "kits" (produce box + meal kit hybrid)**
Redemption Site(s)	**Participating farmers' markets or drive-through pickup at farmer's markets or mobile pantry**

Background: High Desert Food & Farm Alliance (HDFFA) is dedicated to reducing food insecurity and championing food equity and food justice in Central Oregon. Through their work supporting farmers and ranchers, increasing food access, and building a sustainable food system, HDFFA applies a holistic strategy to strengthening their community's food and farm network to benefit all. Their approach includes providing technical support and grant awards to farmers, connecting residents to local food, and food access programs like the Veggie Rx Program, which provides access to fresh foods with nutrition education to increase healthy eating behaviors in participants.

Produce Prescription Program Approach: In 2018 the High Desert Food & Farm Alliance utilized funding from the state allocated for a regional health improvement plan to create VeggieRx, a produce prescription program. HDFFA already had a strong connection to locally produced food and farmer's markets, but needed the support of clinicians to bring their program vision to life. The VeggieRx program director built and fortified a network of clinical and community support through persistent work and strategic partnership with the Central Oregon Health Council.

VeggieRx participants receive up to $20 worth of tokens that can be redeemed at farmers markets during normal operations. During the pandemic the model has shifted to a drive-through system where participants pick up their veggie kits. The meal kits are compiled by a registered dietitian and come with recipes and healthy eating handouts. Participants complete pre, post, and follow up surveys about program participation which includes self-reported health outcomes such as consumption of fresh food and experienced food insecurity. Results have shown a yearly increase in program participation, an average 70% attendance rate, a 1.4 cup/day increase in fruit and vegetable consumption, and increased post program spending on fruits and vegetables.

Success Factors

- HDFFA's solid relationships and working knowledge of the region's agricultural economy enabled the VeggieRx program to increase farm-direct sales to $49,242 in 2020 and also contributed $85,507 to the local food economy based on a Central Oregon multiplier of 1.74.
- VeggieRx has proven a lot can be accomplished with a small dedicated team. One full time registered dietitian, with the supplemental support and mentorship of three other staff, was able to bring the program to life and increase program growth year after year. This is a great success, but program sustainability still depends on a reliable source of funding, ideally from federal and/or insurance providers.

Local Food Hub—Charlottesville, Virginia

The Fresh Farmacy: Fruit and Veggie Prescription Program addresses the needs of individuals living with diet-related chronic diseases and who have limited access to fresh produce in the Charlottesville area.

Location	**Charlottesville, Virginia**
Year Founded	**2015**
Program Eligibility	**Interested patients are screened for diet-related chronic diseases**
Rx Delivery Method(s)	**A biweekly farm share compiled from produce of participating farms**
Redemption Site(s)	**Home delivery or patients pick up their share from their health clinic**

Background: Local Food Hub (LFH) has served the Charlottesville community for the past ten years and strives to increase community access to locally produced food by partnering with area farmers. To mend a link in the conventional food supply chain, LFH provides much-needed infrastructure for streamlined logistics, communication, and group capacity for local small-scale farmers. Through their efforts, locally produced food is provided to area institutions such as hospitals and universities as well as neighborhood businesses like food retailers and restaurants. Local Food Hub also works closely with local food distributor 4P Foods to enhance distribution, sales, and marketing capacity for partnering farmers.

Produce Prescription Program Approach: In 2015 Local Food Hub embarked on their Fresh Farmacy program which provides biweekly farm shares to participating patients via prescription, which is obtained from their medical provider. Selected patients are typically diagnosed with a diet-related chronic condition such as diabetes or hypertension and in addition to a share of fresh produce, they also receive support materials regarding nutrition, food storage, culinary tips, and how to make the most of local foods throughout the changing seasons. To bring program operations to life, LFH partners with 4P Foods for farm distribution, Harvest Moon Catering to compile and package the shares, and Yellow Cab of Charlottesville and participating clinics for delivering the shares to patients.

Both biometric data and qualitative feedback are collected from the participants. Early analysis revealed successful weight loss and reduced blood pressure, while participants themselves have self-reported a change in dietary habits, drive to increase physical activity, and reduced reliance on medications.

Success Factors

- During the early response to the COVID-19 pandemic, a flexible funding source increased the autonomy of the program operators and logistics manager. This footing coupled with strong, diverse partnerships ensured quick and creative adaptation to a changing environment.
- Working in close contact with other regional food hubs and producers to ensure high quality area produce can be supplied seamlessly throughout the year without compromising nutritional quality and providing continued support to small-scale growers.

Just Roots—Greenfield, Massachusetts

Just Roots' Farm to Family Program provides convenient delivery of local produce in the form of CSA shares to eligible pediatric patients and their families in Franklin, Hampshire, and Hampden Counties of Massachusetts.

Location	**Greenfield, Massachusetts (Serving Franklin, Hampshire and Hampden Counties)**
Year Founded	**2020**
Program Eligibility	**Member of Boston Children's Health Accountable Care Organization (BCH ACO), meets eligible health criteria, and experiencing food insecurity**
Rx Delivery Method(s)	**Weekly farm share delivery June – October, monthly farm share delivery November – May. Sourced from Just Roots Farm and other local farms.**
Redemption Site(s)	**Home delivery**

Background: Just Roots is a nonprofit food justice organization and farm that builds equity, connection, health and empowerment in its community through food- and land-based programs and systems change. Through its robust CSA program, Just Roots facilitates meaningful access to local, farm-fresh food.

Produce Prescription Program Approach: In 2020, Just Roots expanded its Greenfield-based produce prescription program to launch the Farm to Family Program (F2F) with Boston Children's Health Accountable Care Organization (BCH ACO). BCH ACO is piloting food prescription and community-based nutrition programming as part of the MassHealth (Massachusetts Medicaid) Flexible Services Program. Through F2F, eligible pediatric patients are prescribed year-round produce boxes, offered through Just Roots' CSA program weekly June through October, and monthly November through May. CSA shares are delivered directly to participants' homes. Additional program features include local farm and farmstand tours, nutrition education, monthly cooking workshops, monthly local protein packages, and kitchen tools and appliances to assist families in preparing nutritious meals.

Patient eligibility is based on membership in the BCH ACO, health criteria, and food insecurity identified via a BCH ACO screening tool or patient/family interactions with practice staff and community health workers. The program currently serves patients who receive primary care from one of seven BCH ACO primary care practices in Western Massachusetts. Just Roots routinely collects qualitative survey data from participants to assess behavior change and skill or knowledge building. Survey questions cover topics such as habits of fruit and vegetable consumption, understanding of and willingness to try new fruits and vegetables, comfort with cooking skills, and self-reported wellbeing. BCH ACO is also conducting an evaluation of the program that includes measurement of changes in participants' emergency department utilization, food security, parent stress, and child overall health status.

Success Factors

- To continue to improve upon F2F, advocate for expansion of Produce Prescription and similar models, and connect with unique partners and funding opportunities, Just Roots takes part in Communities of Practice and advocacy organizations such as Food is Medicine Massachusetts. Through these coalitions, Just Roots learns and shares best practices, supports the building of the field, and forges new partnerships and Produce Prescription initiatives such as F2F.
- Just Roots advocates for longer duration interventions such as the full year enrollment used in F2F. The design facilitates a deep relationship between the patient and the organization, fostering behavior change. Just Roots finds that building the longer duration timeframe into the program design from the start creates more sustainable workflows internally and for healthcare partners, and facilitates trust between staff and the patients receiving services.

The following Appendices provide additional information on some aspects of the data collection and analysis for this report, *Produce Prescription Programs: U.S. Field Scan*.

If you would like to request access to program data from this research for use to advance the produce prescription field, please contact, please contact: info@nationalproduceprescription.org

APPENDIX A: Collective Field Assets & Resources

POLICY

Center for Health Law & Policy Innovation (CHLPI)

The Center for Health Law and Policy Innovation at Harvard Law School (CHLPI) works through legal, regulatory, and policy avenues to enhance the health of underserved populations, especially low-income communities and people living with chronic illnesses and disabilities. CHLPI also works with partners across the country to strengthen the evidence and policy framework to integrate Food is Medicine interventions into healthcare delivery and financing. https://www.chlpi.org/

Harvard Food & Law Policy Clinic

Housed within Harvard's Center for Health Law and Policy Innovation (CHLPI), the Food Law and Policy Clinic (FLPC) is committed to engaging stakeholders of diverse disciplines to develop guidance on impactful food systems issues. Specific aims include increasing access to healthy foods, minimizing food waste, supporting equitable and sustainable food production, and championing community-led food system change. https://www.chlpi.org/food-law-and-policy/

Population Health Alliance

The Population Health Alliance is a unique multi-stakeholder trade and professional association centered on population health. PHA represents diverse healthcare stakeholders aiming to optimize healthcare medical spending, enhance affordable care, and improve health outcomes. Recognizing the preventative health benefits of a well-balanced diet, PHA is partnering with leaders in the Food is Medicine and nutrition incentive fields to inform pathways to cost-effective population health management. https://populationhealthalliance.org/

NVG, LLC

NVG is a versatile government relations firm with a focus on public policy, advocacy, strategic guidance and network development. Through thoughtful preparation, the NVG team prepares organizations for strategic conversations and communication with Congressional leadership, committee influencers, the White House, and various executive branch agencies. NVG leads the Policy Working Group of the National Produce Prescription Collaborative, with support and partnership from Wholesome Wave, and in collaboration with DAISA. https://www.nvgllc.com/

RESEARCH

Food & Society Program, Aspen Institute

The Aspen Institute's Food and Society Program convenes leaders in public health, policy, agriculture, research, culinary arts, food production, and food entrepreneurship to create feasible solutions to food system inequities and challenges. Key projects include the development of a research road map for Food is Medicine initiatives and augmenting data collection to support the treatment and prevention of diet-related chronic illnesses. Across workstreams, the Food and Society Program aims to help people of all income levels enjoy more healthful diets.
https://www.aspeninstitute.org/programs/food-and-society-program/

Tufts University Friedman School of Nutrition Science and Policy

The Gerald J. and Dorothy R. Friedman School of Nutrition Science and Policy at Tufts University is a hub for a wide breadth of research programming focused on national and international nutrition and food access goals. Through focus areas such as Healthy Food for All and Healthy Aging, researchers are addressing questions related to the dual burden of obesity and undernutrition, including fresh food access for communities in need, and preventing diet-related illness in the world's aging population through reliable access to a well-balanced diet. https://nutrition.tufts.edu/research

FUNDING

GusNIP Program

The Gus Schumacher Nutrition Incentive Program (GusNIP) is authorized under 7 U.S.C. 7517, providing funding for programs and evaluation to provide nutrition incentives to low-income consumers, specifically for the purchase of fruits and vegetables. In convening stakeholders from the food and healthcare systems, this funding opportunity helps increase understanding around promoting household health through a well-balanced diet. GusNIP grants also help increase program growth in states with low program participation rates, and gather data to improve program operations and best practices across the field.
https://nifa.usda.gov/program/gus-schumacher-nutrition-incentive-grant-program

Wholesome Wave

Wholesome Wave is dedicated to eliminating nutrition insecurity in the United States through program development, and providing seed funding to community-based organizations that strive to improve access and affordability of healthy food. A community of practice is nurtured through Wholesome Wave and the insights learned are used to advocate for food and health systems change. https://www.wholesomewave.org/

TA & EVALUATION

Nutrition Incentive Hub

The GusNIP Training, Technical Assistance, Evaluation, and Information Center (NTAE) Center is led by the Gretchen Swanson Center for Nutrition. In partnership with Fair Food Network, they created the Nutrition Incentive Hub, a coalition of partners and thought leaders that provide industry insight, operations guidance, and technical assistance to nutrition incentive and produce prescription projects. Focus areas include improving access to affordable, healthy food for all, increasing sales and traffic at markets, and increasing profits for participating farmers. The Nutrition Incentive Hub is building an online repository of accessible field resources including detailed case studies and recommended evaluation metrics and indicators. https://www.nutritionincentivehub.org/

View GusNIP Core Metrics for Produce Prescription Programs here:
https://www.nutritionincentivehub.org/core-metrics-produce-prescriptions-programs

Fair Food Network

The Fair Food Network investigates the role of food in improving health, stimulating local economies, and creating opportunities for actors throughout the food system. FFN's initiatives include the Double Up Food Bucks program and impact investment through the Fair Food Fund. Utilizing a holistic approach, the FFN is driving innovations to help communities transform their access to healthy food and increase economic opportunities in their food systems.
https://fairfoodnetwork.org/

Gretchen Swanson Center for Nutrition

The Gretchen Swanson Center for Nutrition is a unique and independent non-profit research institution. Using expertise in measurement and evaluation for nutrition-related programs, the Gretchen Swanson Center provides resources and strengthens a network of program practitioners working to increase physical activity and improve dietary practices among youth and their families. https://www.centerfornutrition.org/

APPENDIX B: Program Operators Interviewed

Below is a list of organizations and Produce Prescription Program operators that were interviewed during Fall 2020 as a part of this field scan.

Adelante Mujeres (Oregon)
Idaho Hunger Relief Task Force (Idaho)
Washtenaw County Health Department (Michigan)
Vermont Farmers' Food Center (Vermont)
Forsyth Farmers Market (Georgia)
Yukon-Kuskokwim Health Corporation (Alaska)
High Desert Food and Farm Alliance (Oregon)
Marion County Public Health Department (Indiana)
About Fresh (Massachusetts)
All In Alameda (California)
Hungry Harvest (Maryland)
Ten Rivers Food Web (Oregon)
The Food Trust (New Jersey & Pennsylvania)
Medstar Hungry Harvest (Maryland)
Local Food Hub (Virginia)
Geisinger Hospital (Pennsylvania)
Utah Department of Health (Utah)
Just Roots (Massachusetts)
Green Rural Redevelopment Organization (North Carolina)

APPENDIX C: Total Number of Programs Per State

This appendix provides a list of the total number of Produce Prescription programs per state that we encountered in our research spanning from 2010 to 2020. These numbers are based on our best effort to compile updated program information using publicly-available data, and due to the quality of this data, may not be fully accurate. We have also included the number of programs that are currently inactive, per state.

State	Total Number of Programs 2010-2020	Number of Inactive Programs
Alaska	1	
Arizona	2	
California	4	
Colorado	1	
Connecticut	2	1
Delaware	2	
District of Columbia	1	
Florida	2	
Georgia	3	
Hawaii	1	
Idaho	3	1
Illinois	5	
Indiana	2	
Iowa	1	
Kentucky	2	
Maine	2	
Maryland	1	
Massachusetts	8	2
Michigan	3	
Minnesota	1	
Mississippi	1	
Missouri	2	
Montana	1	
Nevada	1	
New Mexico	4	2
New York	4	1
North Carolina	3	
Ohio	7	1
Oklahoma	1	1
Oregon	12	1
Pennsylvania	5	
Rhode Island	1	1
Texas	2	
Utah	2	1
Vermont	5	1
Virginia	2	
Washington	3	
West Virginia	1	
Wisconsin	4	1
Total Programs	**108**	**14**

APPENDIX D: Literature Review Sources

In this section we provide the 93 total literature and media sources that DAISA Enterprises compiled and reviewed for this report, *Produce Prescription Programs: U.S. Field Scan Report: 2010-2020*. This literature informed data analysis and is not an exhaustive list of all articles written about the Produce Prescription field.

FIELD-WIDE ARTICLES & WEBSITES		
Year	Title	Publisher
2015	Fruit and Vegetable (FVRx) Program	The Anthology of Bright Spots
2020	Op-ed: With Food Insecurity on the Rise, Nutrition Incentives Should be More Equitable	Civil Eats
2017	Program: Fruit and Vegetable Incentives	Delivering Community Benefit: The Healthy Food Playbook
2016	Cultivating Fruit and Vegetable Programs from the Ground Up	Wholesome Wave
2020	Hunger is Rising as Food Rots. We Can Learn from Produce Prescriptions to Change the Story.	Medium
2019	Prescribing Healthy Food in Medicare/Medicaid is Cost Effective, Could Improve Health Outcomes	Tufts University Friedman School of Nutrition Science and Policy
2015	Food Prescriptions: Using Healthy Food to Manage Chronic Disease and Improve Community Health	Stakeholder Health
2019	$41 Million for Healthy Food Access Projects Now Available	National Sustainable Agriculture Coalition
2019	Food as Medicine: Massachusetts bill would give Medicaid recipients fresh food and grocery money	The Counter
2019	Doctors Prescribing Fruits and Veggies: Why Nutrition Policy is a National Priority	Blue Zones
2018	Nutrition Prescriptions	County Health Rankings.org
2017	Prescriptions for Fresh Produce and Other World Changing Ideas in Food	Fast Company
2019	"Prescribing" Fruits and Vegetables Would Save $100 Billion in Medical Costs	Fast Company
2018	Eat Your Vegetables: More States Promote Healthy Diet to Fend Off Illness	Governing
2018	Produce Prescription Program to Increase Access to Fresh Food	Healio
2019	Why 'Food Prescriptions' Are the Best Medicine for Chronic Diseases	Healthline
2019	Prescription Vegetables? The Potential of Insurance-Covered Healthy Food	Inverse
2019	How Prescribing Healthy Food Could Save Billions of Dollars in Health-Care Costs	Market Watch

FIELD-WIDE ARTICLES & WEBSITES *Continued*

Year	Title	Publisher
2018	Stakeholders Must Consider All Aspects of Produce Prescription Programs	Medical Bag
2019	Will 'Produce Prescriptions' Show Healthy Returns?	MEDPAGE Today
2019	Doctors Prescribe Fruit and Vegetables Instead of Pills	Treehugger
2016	Fresh Produce Prescription Programs Impact Diet-Related Disease	Natividad
2017	Fresh Food by Prescription: This Health Care Firm is Trimming Costs - And Waistlines	NPR: The Salt
2018	Wholesome Rx	Rural Health Information Hub
2017	Take Three Zucchinis and Call Me in the Morning: The Power of Produce Prescriptions	Smithsonian Magazine
2012	A Prescription for Healthier Eating	Connecticut Public Radio
2020	Food Pharmacies' Fill Physician Prescriptions for Fresh Produce	California Health Foundation
2020	Just What the Doctor Ordered: Produce Prescriptions are More Important - and More Popular - Than Ever	Civil Eats
2010	Doctors as Farmers: How Food 'Prescriptions' Can Save Our Cities	The Atlantic
2013	No Bitter Pill: Doctors Prescribe Fruits and Veggies	NPR: The Salt
2019	Healthy Food Prescriptions Could Save Billions in Healthcare Costs	Popular Science

PROJECT-SPECIFIC ARTICLES

Year	Title	Publisher
-	CNDH: Fruit and Vegetable Prescription Program	University of the District of Columbia
2017	More Fruit, Vegetables for Latinos with malnutrition, doctors say	Al Día News
2019	A Program that Writes Prescriptions for Produce is Expanding to a Ward 8 Supermarket	DCist
2017	Food as Medicine, Reimagined	Farmers Market Coalition
2019	Giant Food Launches Produce Rx Pilot	Progressive Grocer
2019	Building a Bridge from Farm to Pharmacy	The Counter
2015	Skip the Pharmacy, Head to the Farm: Physicians Write Prescriptions for Fruits and Vegetables	WTOP News
2019	VeggieRX provides free vegetables to low-income people and patients in Chicago Food Deserts	Chicago Tribune
2016	Green Rural Development Organization	Conservation Fund
2019	Columbia Gorge 'Veggie Rx' program writes Prescription for Free Food	Oregonian

PROJECT-SPECIFIC ARTICLES *Continued*

Year	Title	Publisher
2019	Food as Medicine: Doctors are Prescribing Broccoli Alongside Beta Blockers	South Florida SunSentinel
2020	Kroger puts "Food as Medicine" to the Test	Supermarket News
2019	Giant Food Pharmacy to Prescribe Fruits and Vegetables	Supermarket News
2012	Prescriptions for Produce Helping to Cut Obesity	The CT Mirror
2018	Denver Food Rescue Plans to Make its Produce Part of a Program Fighting Childhood Obesity and Diabetes at Denver Health Clinic	Denverite
2018	Humana Foundation Gives $620,000 to Fight Hunger in Tampa Bay	Tampa Bay Business Journal
2019	Governor Little Promotes "Prescription for Fresh Fruits and Vegetables" Program	Idaho News 6
2018	Doctor's Orders: Prescription Fruits and Veggies	IdahoNews KBOI-TV
2019	This 'Pharmacy' Dispenses Fresh, Organic Produce to Combat Health Problems on the West Side	Block Club Chicago
2012	Diabetes Initiative Taps Power of Rx Pad to Drive Healthy Food Choices	Business Wire
2019	Johnson County "Veggies Rx" Pilot Program Looks to Reduce Diseases, Ailments Through Diet	KWWL Television Inc.
2016	A Visit to the Farmacy Means Eating Healthier	Public News Service
2019	They Have the Prescription to Improve Your Health	Northeastern University
2019	Let Food Be Thy Medicine - Fresh Rx Supports Nutritional Knowledge, Healthy Behaviors and Food Access in Detroit	Oregon Tilth
2020	Food Bank Seeks to Make Business Case for Food as Medicine	Food Bank News
2020	Missouri Food Bank Seeks to Make Business Case for Food as Medicine	The Counter

REPORTS & POLICY BRIEFS

Year	Title	Publisher
2019	Next Steps in Chronic Care: Expanding Innovative Medicare Benefits	Bipartisan Policy Center
2014	Hospitals and Healthy Food: How Health Care Institutions Can Help Promote Healthy Diets	Union of Concerned Scientists and Johns Hopkins University
2020	Veggie Rx in the 2018 Farm Bill	John Hopkins Center for a Livable Future

IMPLEMENTATION GUIDES & TOOLKITS

Year	Title	Publisher
2019	Rooting Food as Medicine in Healthcare	All In Alameda County
2016	Prescription for Health - Program Implementation Guide	Washtenaw County Health Department
-	How to FARMacy	FARMacy
2018	Produce Rx Program Manual	Adelante Mujeres & Virginia Garcia

RESEARCH (PEER-REVIEWED & SELF-PUBLISHED)

Year	Title	Publisher
2016	Minneapolis Fruit and Vegetable Prescriptions	Self-Published
2019	Impact of Fruit and Vegetable Prescription Programs on Diet Quality and Cardio-Metabolic Risk Factors in Healthy Adults in a Worksite Setting: RCT	Current Developments in Nutrition
2019	A Pilot Food Prescription Program Promotes Produce Intake and Decreases Food Insecurity	Society of Behavioral Medicine
2018	Best Practice Policy Options for Georgia Produce Prescription Programs	Journal of the Academy of Nutrition and Dietetics
2018	Produce Prescription Programs for Diet-Based Chronic Disease Prevention	AMA Journal of Ethics
2019	Cost-Effectiveness of Financial Incentives for Improving Diet and Health Through Medicare and Medicaid: A Microsimulation Study	PLOS Medicine
2018	Implementing a Produce Prescription Program for Hypertensive Patients in Safety Net Clinics	Health Promotion Practice
2018	The FINI Fruit and Vegetable Prescription Program - A Comparison of Clinic Implementation Strategies, Perceived Patient Experiences, and Voucher Redemption Rates	Self-Published
2018	Implementation Evaluation: Grady's Fruit and Vegetable Prescription Program	Self-Published
2019	Impact of Fruits and Vegetables Prescription Program in Wellness Group Visits	Pediatrics
2019	A Pediatric Fruit and Vegetable Prescription Program Increases Food Security in Low-Income Households	Journal of Nutrition Education Behavior
2018	Dietary Impact of Produce Prescriptions for Patients with Hypertension	Preventing Chronic Disease
2016	Vegetable Prescription Programs: A New Take on Holistic Health	Self-Published
2019	Missoula Prescription Produce Program: Lessons Learned 2015 - 2017	Self-Published
2019	Effect of a Fruit and Vegetable Prescription Program on Children's Fruit and Vegetable Consumption	Preventing Chronic Disease

RESEARCH (PEER-REVIEWED & SELF-PUBLISHED) *Continued*

Year	Title	Publisher
2015	Food Rx: A Community-University Partnership to Prescribe Healthy Eating on the South Side of Chicago	Journal of Prevention and Intervention in the Community
2017	Veggie Rx: An Outcome Evaluation of a Healthy Food Incentive Program	Public Health Nutrition
2017	Participation in a Farmer's Market Fruit and Vegetable Prescription Program at a FQHC Improves HbA1C in Low Income Uncontrolled Diabetics	Preventative Medicine Reports
2016	Mixed Methods Evaluation of a Produce Prescription Program for Pregnant Women	Journal of Hunger and Environmental Nutrition
2019	"Prevention Produce": Integrating Medical Student Mentorship into a Fruit and Vegetable Prescription Program for At-Risk Patients	The Permanente Journal
2019	"The coupons and stuff just made it possible": economic constraints and patient experiences of a produce prescription program	Translational Behavioral Medicine
2019	"You Guys Really Care About Me.." A Qualitative Exploration of a Produce Prescription Program in Safety Net Clinics	Journal of General Internal Medicine
2019	A Pilot Study of An Online Produce Market Combined with a Fruit and Vegetable Prescription Program for Rural Families	Preventative Medicine Reports
2019	Local Pediatricians Partner with Food Bank to Provide Produce Prescription Program	Journal of Hunger and Environmental Nutrition
2020	Food Purchasing Behavior of Food Insecure Cancer Patients Receiving Supplemental Food Vouchers	Supportive Care in Cancer
2016	Examining Feasibility of Mentoring Families at a Farmer's Market and Community Garden	American Journal of Health Education
2014	Provider Communication and Role Modeling Related to Patients' Perceptions and use of a FQHC-based Farmer's Market	Health Promotion Practice
2016	P125 Fruit and Vegetable Prescription Program: Design and Evaluation of Program for Families of Varying Socioeconomic Status	Journal of Nutrition Education and Behavior
2019	Fresh Food Farmacy: A Randomized Controlled Trial	Self-Published