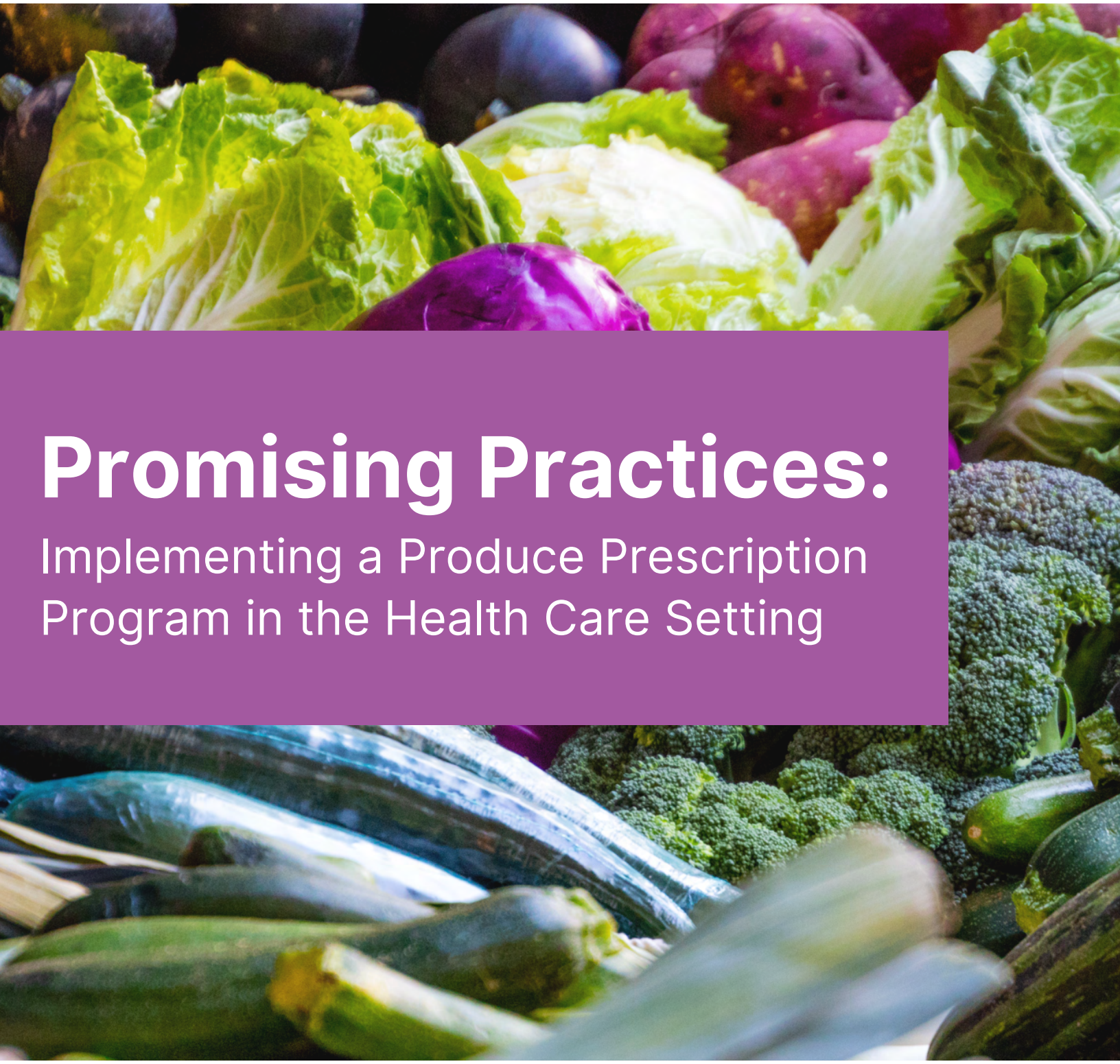

Promising Practices:

Implementing a Produce Prescription Program in the Health Care Setting

Last Revised: July 2021

This is a living document to be amended and updated as the field progresses.

BACKGROUND

Healthy food and adequate nutrition are fundamental to treating, preventing, and managing chronic disease, yet food security and nutrition security remain significant challenges for many Americans.[1,2] Across the country, momentum has increased for produce prescription programs and food is medicine efforts in addressing healthy food access, food insecurity, and health.[3]

Produce Prescription Definition:

A produce prescription, as defined by the National Produce Prescription Collaborative, is "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 health care provider or health insurance plan. These prescriptions are fulfilled through food retail and enable patients to access healthy produce with no added fats, sugars, or salt, at low or no cost to the patient."[4]

Produce prescriptions not only increase access to healthy produce but also lower the cost burden for patients who may otherwise have difficulty purchasing these foods.[5]Growing evidence indicates produce prescription programs not only play a critical role in improving individual diet and health,[3,5,6] but also support the local food system and are cost effective.[7] Despite these proven impacts, widespread access to produce prescription programs is still limited. As a result, there is great opportunity and potential in expansion of these programs at a large scale through the integration and implementation of produce prescriptions into health care settings.

AIM

The aim of this document is to provide collective recommendations and on-the-ground experience on the critical components of successful produce prescription program implementation within health care settings. Produce prescription programs are proliferating across the country, and our organizations are interested in sharing out our combined experience and sparking an ongoing conversation about the program design, implementation, and evaluation choices being made. This document serves as a starting point and is based on over 20 years of combined experience implementing produce prescription programs in urban and rural settings, with adults and families, and in collaboration with multiple types of health care and food retail partners.

RELEVANT ACTORS

Health Care Provider
Implementing Organization
Insurer
Patient
Vendor

COST OF PRODUCE PRESCRIPTION PROGRAMS

Produce prescription programs are generally cost effective to implement.[7] However, the cost of each produce prescription program may vary depending on the following standard cost drivers:

- **Cost per service**
  - Benefit/dosage amount
  - Duration of program
- **Technological set-up costs**
  - Retail - Point-of-Sale (POS) system
  - Clinics - Integration into Electronic Health/Medical Record (EHR/EMR) system
  - Distribution - Benefit delivery system
- **Administrative/Implementation costs**
  - Staff time for health care provider and implementing organization
  - Material, overhead, and other indirect costs
- **Vendor network**
  - Size and complexity of network
- **Other food and nutrition supports** (i.e., Nutrition Education)
- **Evaluation costs**

Implementing organizations should discuss the above variables with potential partnering agencies to inform partnership agreements and ensure adequate coverage of the service.

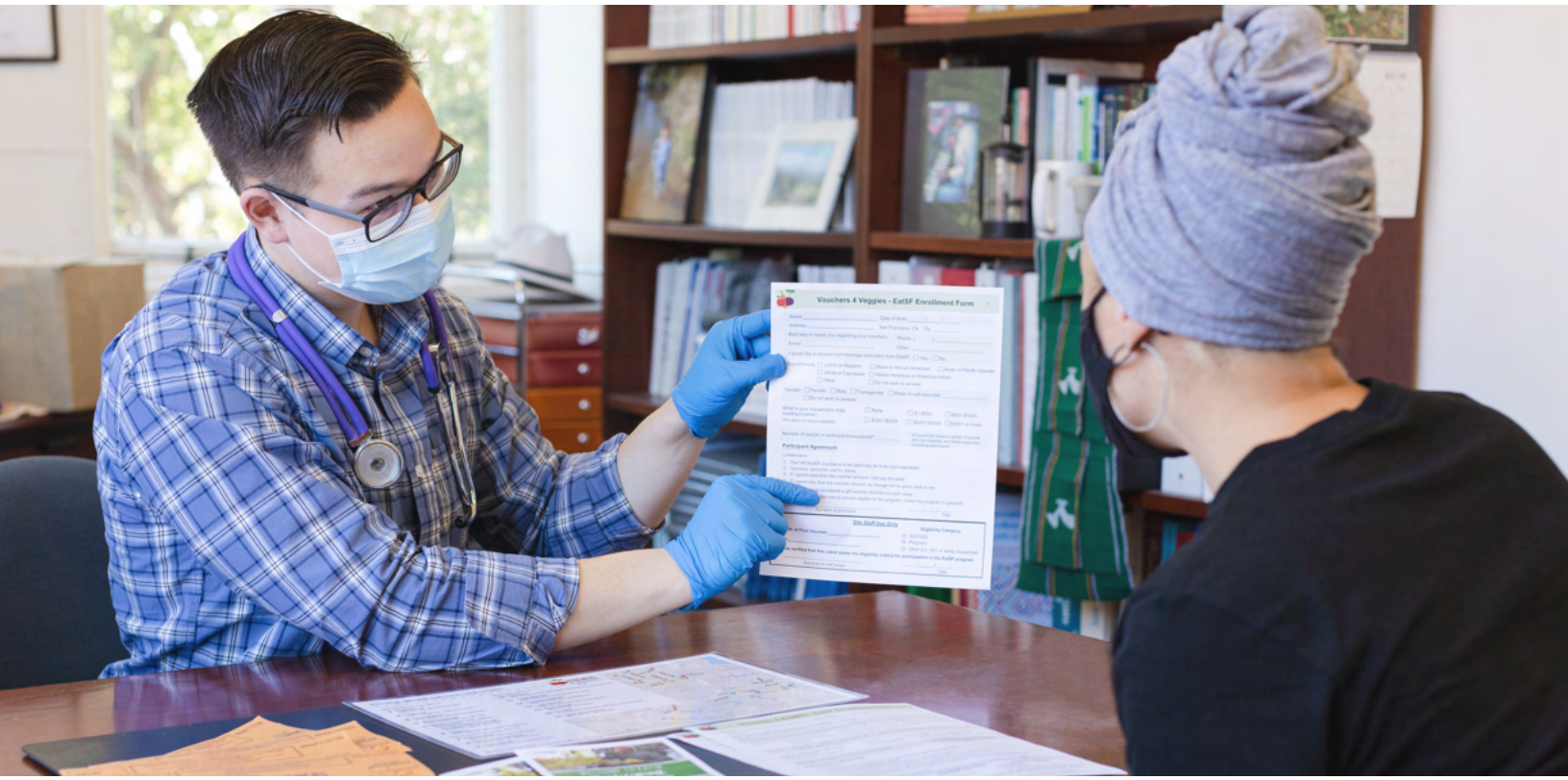

Photo: *Vouchers 4 Veggies*

AGREEMENTS

Type	Recommendation
Partnership Agreements: Statement of Work Health Care Provider & Implementing Organization	A statement of work is recommended between the **health care provider** and the **implementing organization**. • This document should detail the scope of the program (including targeted number of patients served, timeframe, relevant activities and processes), roles and responsibilities for all parties, terms and conditions, pricing and billing, Intellectual Property rights, and any other agreed upon conditions.
Partnership Agreements: Statement of Work Implementing Organization & Insurer	A statement of work is recommended between the **implementing organization** and **insurer**. • This document should detail the scope of the program and roles and responsibilities, including payment details for produce prescriptions, data sharing, technical assistance provision to health care providers, patient recruitment and retention, and any other agreed upon conditions.
Partnership Agreements: Statement of Work Implementing Organization & Vendor Retailer	A statement of work is recommended between the **implementing organization** and the **vendor retailer**. • This document should outline program and redemption processes and procedures to ensure vendor compliance, proper usage of produce prescriptions, reduced instances of fraud, and appropriate day-to-day practices and protocols. • This agreement also provides an opportunity to outline other program terms, such as payment schedule, best communication methods, and program maintenance procedures.
Information & Data Sharing Agreements	A data sharing agreement should outline the specific types of data shared between parties, ownership of any data shared, and best practices for how the data can and should be used. The parties should explore obligations and responsibilities related to data sharing required by HIPAA or other federal and state law. • This agreement must be established in order to protect patient information, clarify each party's roles and responsibilities with the data, and protect against data misuse.

IMPLEMENTATION RECOMMENDATIONS

Category	Recommendation
Patient Eligibility	During the program design and scoping phase, a needs assessment is recommended to provide an accurate representation of the community food and health landscape as well as identify the best target populations. Successful produce prescription programs are patient-centered and properly address patient's unique needs. Consider the following factors when determining eligibility criteria: • **Need** • **Access** • **Equity** • **Insurer/Health care priorities**
Incentive Mechanism	The best incentive mechanism (i.e., paper prescription, benefit card, etc.) is contingent upon factors including patient population needs and vendor capacity. • Providers must consider usability, accessibility, digital literacy, and possible stigma when determining which mechanism is most appropriate for the target population. • Providers must also account for potential program barriers like administrative burden, cost, and available technology. To see additional perceived benefits and challenges of different incentive mechanisms, please visit Appendix B of Harvard Law School's Center for Health Law and Policy Innovation (CHLPI) Mainstreaming Produce Prescriptions: A Policy Strategy Report.
Incentive Amount	While some programs have shown positive results with an incentive amount as low as $20/month for single resident households, many programs recommend an incentive amount of at least $40/month to produce significant health impacts, such as increased fruit and vegetable intake.[6] • While the incentive amount may differ by program and population needs, it should always account for and vary by household size.[8]

Program Duration	Produce prescription programs may be part of a long-term nutritional health management plan for patients experiencing diet-related chronic illnesses, like diabetes, pre-diabetes, and hypertension. As such, the duration of a produce prescription should match a patient's medical needs and should allow for re-dosing as appropriate. • On-the-ground experience has found that a prescription program with a minimum duration of 6 months is recommended for initial impact with ability to re-dose as medically necessary.
Expiration Dates	Produce prescriptions should expire at least annually. • Many programs find more frequent expiration dates for the prescriptions (monthly or quarterly) better match the health management plan put in place for an individual and the needs of Managed Care Organizations (MCO) to ensure only eligible individuals are receiving the prescription.
Fraud Protection	Fraud protection is crucial. The produce prescription should include several security protection functions to prevent instances of fraud. Examples include: • **Paper Prescription** (i.e., voucher): watermarks, heat sensitivity padlocks, unique serial numbers, organization logo • **Electronic Benefit** (i.e., benefit card): unique serial numbers, security code/pin, organization logo
Inventory Protocol	Produce prescriptions have money value and should be treated as such. Organizational leadership must maintain complete and accurate standard inventory records and protocols. • Protocols may include documentation for when the produce prescription is distributed and received as well as the name of the provider that distributed the produce prescription.
Inventory Storage	All physical incentives must be stored in a secure location with access restricted to authorized personnel. • Ensure appropriate personnel maintain consistent and accurate inventory storage practices.
Patient Privacy	Identify and take steps to meet any obligations and responsibilities related to protection of patient data required by HIPAA or other federal and state law. • Identify which parties in the produce prescription program will receive sensitive information and ensure appropriate systems and guidelines are in place to protect patient data.

Vendors	**Network**	Diversity in size and type of the vendor retailer allows for greater choice amongst patients. Vendors may include farmers' markets, corner stores, and grocery stores.
		• Develop set criteria for vendor partners to ensure the network adequately suits the needs of the patient population. Consider the following elements:
		  ○ **Patient shopping patterns**
		  ○ **Quantity and variety of produce**
		  ○ **Quality of produce**
		  ○ **Affordability of produce**
		  ○ **Proximity and accessibility** (See Transportation & Accessibility Concerns)
		Example Assessment Tools:
		• Nutrition Incentive Hub: Brick + Mortal Retail
		• SNAP-ed Evaluation Framework
		• CDC: Built Environment Assessment Tool
		• CDC: Healthier Food Retail

	Cultural Relativity	Partner with diverse food retailers that represent the community being served and sell culturally relevant produce at affordable prices. • Consider the cultural needs of the target patient population when evaluating which vendors to partner with.
Training/Onboarding	**Vendors**	Vendor training is key to familiarize staff and store leadership with redemption procedures, fraud identification, and reimbursement protocols (including use of any Point-of-Sale (POS) technology systems). • Conduct regular trainings to update staff on implementation procedures and address any staff turnover. • Ensure there is strong communication with each vendor to help build partner relationships.
	Health Care Implementation Staff	All health care providers implementing the produce prescription must be fully onboarded to program processes. Conduct comprehensive trainings for health care providers.

		• Training topics include, but are not limited to, integration of the produce prescription program into clinical workflow (i.e., identification of eligible patients, referral processes, use of available technology systems (EHR or EMR)) as well as provider-focused didactic education on purpose, utilization, and impact of produce prescriptions.[9] • These trainings ultimately seek to empower health care workers and improve self-efficacy in program provision.
Technological Infrastructure	Alignment of technological infrastructure ensures proper communication and data access for all appropriate entities. These systems will help with streamlined enrollment processes, tracking, and evaluation. Ensure that there is adequate funding and time allotted for the setup of necessary technology systems: • **Vendors**: Point-of-Sale (POS) or other retailer technology to process the incentive and allow for the purchase of eligible items (i.e., fresh or frozen produce) • **Implementing Organization/Insurer/Health Care Provider**: Data sharing through Electronic Health/Medical Record (EHR/EMR) systems and payment and billing infrastructure (See Example Information Flow).	
Enrollment	Enrollment processes may differ based on clinic workflow and available staff. However, ensure that enrollment processes are simple and low burden for all parties, including the patients, the implementing organization, and the health care provider. • Enrollment processes should be embedded within existing clinical pathways and, if possible, coordinated with the existing EHR/EMR systems to ease administrative burden (See Technological Infrastructure section).	
Addressing Barriers to Participation	**Transportation & Accessibility Concerns**	Vendors and the vendor network should be at a reasonable proximity to program patients to increase geographic accessibility and address any transportation issues and concerns. Assess the following factors: • **Geographic accessibility** • **Disability considerations** • **Available transportation routes** • **Possible delivery options**

	Alignment with other food and nutrition support programs (i.e., WIC, MTM, Food Pharmacy, and Nutrition Education)	Like any medical intervention, produce prescriptions are a good fit for individuals who meet eligibility criteria and are able to shop at a food retail store. For others, prescribing participation in other food as medicine programs is an important way to meet the long term nutritional needs of individuals experiencing chronic conditions. • For example, home-delivered medically tailored meals may be a better fit for individuals who are home-bound. Produce prescriptions should be amongst a menu of food as medicine options for health care providers to prescribe to their patients.

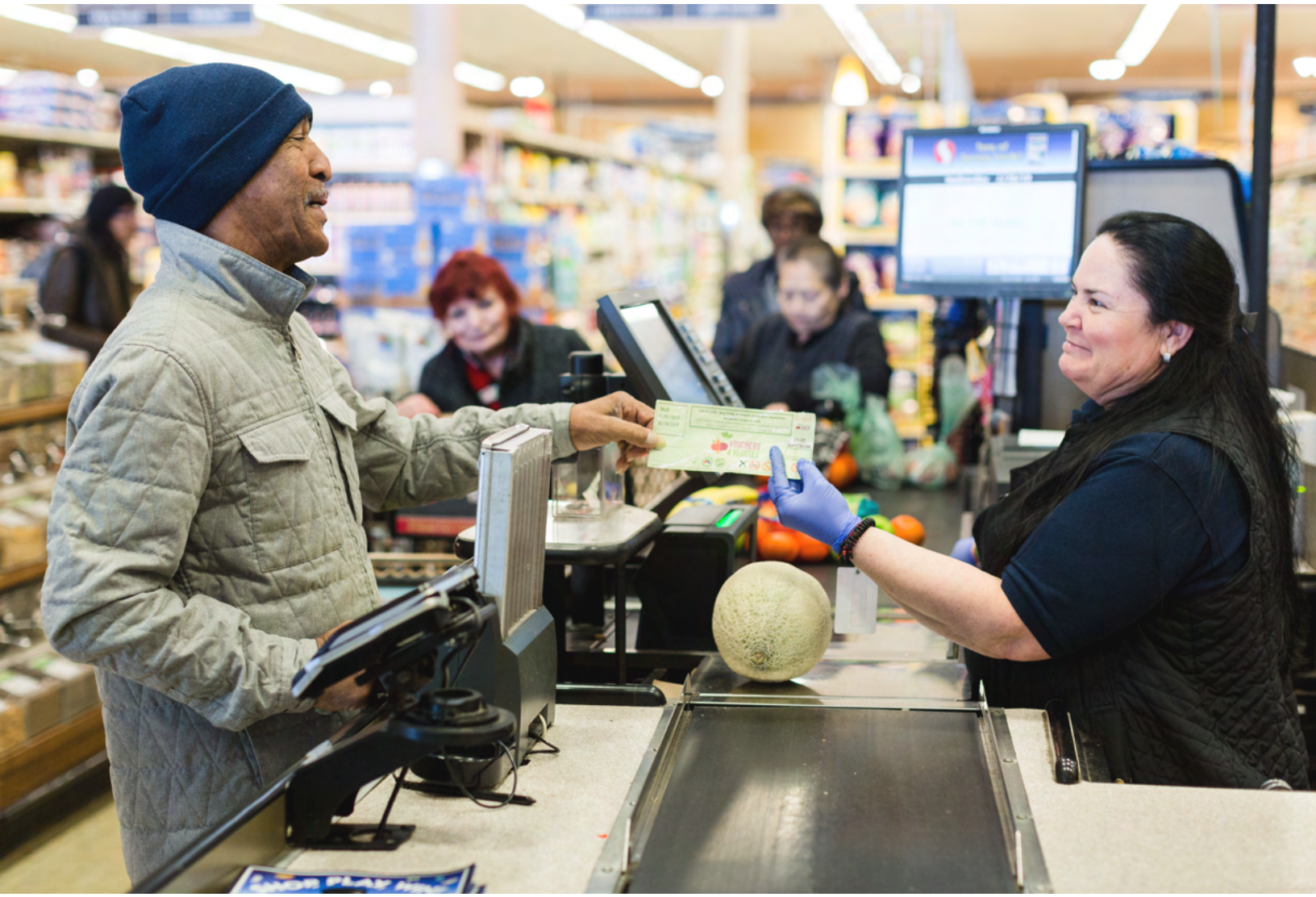

Photo: *Vouchers 4 Veggies*

PURPOSEFUL EVALUATION

Evaluation of produce prescriptions may differ in scope, design, and methodology. All seek to demonstrate program effectiveness, impact, and reach. The evaluation should be conducted purposefully, to minimize burden on patients, providers, and the health care system, while considering evaluation costs. It is crucial to ensure the evaluation conducted is thoughtful, incorporates equity-based principles and ethical considerations, and is narrowed to what is truly necessary.

A growing body of evidence shows strong efficacy of produce prescription programs and its impact on patient health, including fruit and vegetable intake,[3] food security levels,[3] and clinical biomarkers like HbA1c levels.[3,10] This, paired with proven high redemption rates across programs, may suggest reduced need for additional rigorous evaluation about consumption and redemption. Nevertheless, additional evaluation can be helpful to further understand the impact on patients, quality assurance, and overall cost/benefit to the health care system.

Every organization may have differing capacity and resources for evaluation. The best evaluation choice is the one that ensures understanding of program effect, allows for constant improvement to meet patients' needs, and, when possible, builds the larger body of evidence for integrating produce prescriptions into the health care delivery system. Below is a list of evaluation areas:

- **Process Evaluation**
  - Prescription redemption by dollar amount
  - Patient experience/satisfaction*
  - Patient retention in program
  - Quality assurance
  - Cost of implementation*

- **Outcome Evaluation**
  - Health care utilization patterns*
  - Cost of care*
  - Health outcomes
    - Food security
    - Fruit and vegetable intake
    - Clinical markers (i.e., HbA1c, blood pressure, BMI)
  - Patient self-efficacy

***Priority evaluation areas/gaps in research**

Note: Complexity and rigor of evaluation can increase with need and organization priorities.

Please see the following resources for more information on evaluation and suggested evaluation metrics:

- Mainstreaming Produce Prescriptions: A Policy Strategy Report (CHLPI Pg 40)
- Participant-Level Core Metrics Toolkit for Produce Prescription Projects (GUSNIP)

EXAMPLE INFORMATION FLOW

Produce prescription programs operate in a variety of ways depending on the context and partners they work with. Below is an example of how information and data can be shared between entities.

Patients

- Provides enrollment information to **Health Care Provider**
- Receives produce prescription from **Health Care Provider**
- Redeems produce prescription at **Vendor Retailer**

Health Care Provider

- Administers program enrollment and exit questionnaires to **Patients**
- Tracks and reports produce prescription distribution data to **Implementing Organization**
- Monitors health outcomes of patients and reports health claims data to **Insurer**

Insurer

- Receives and monitors health claims data from **Health Care Provider**
- Receives prescription redemption data from **Implementing Organization**
- Uses health claims data and prescription redemption data to determine cost of care/cost savings for patients. Reports cost savings for patients to **Implementing Organization** and **Health Care Provider**

Vendor Retailer

- Accepts produce prescription from **Patient**
- Provides eligible produce to **Patient**
- Provides produce prescription purchase data to **Implementing Organization**

Implementing Organization

- Receives and monitors enrollment and exit questionnaires from **Health Care Provider**
- Receives and monitors produce prescription distribution data from **Health Care Provider**
- Receives and monitors produce prescription purchase data from **Vendor Retailer**
- Calculates and shares produce prescription redemption rate to **Health Care Provider** and **Insurer**

Please see the Agreements section to learn more about appropriate data sharing policies and protocols.

This document was brought to you by:

The Produce Rx Evaluation & Policy Collaborative: a group for Produce Rx programs brought together to share best practices and build alignment of evaluation efforts to gather strong evidence for the integration of Produce Rx programs into the health care system.

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Washington State Department of Health

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For questions and comments, please email producerx@dcgreens.org

References

1. USDA Economic Research Service. Food Security and Nutrition Assistance. https://www.ers.usda.gov/data-products/ag-and-food-statistics-charting-the-essentials/food-security-and-nutrition-assistance/#:~:text=In%202019%2C%2089.5%20percent%20of,than%202018%20(11.1%20percent). Published December 16, 2020. Accessed May 18, 2021.
2. Mozaffarian D, Fleischhacker S, Andrés JR. Prioritizing Nutrition Security in the US. JAMA. 2021;325(16):1605–1606. doi:10.1001/jama.2021.1915
3. Bhat S, Coyle DH, Trieu K, Neal B, Mozaffarian D, et al., Healthy Food Prescription Programs and their Impact on Dietary Behavior and Cardiometabolic Risk Factors: A Systematic Review and Meta-Analysis, Advances in Nutrition, 2021;, nmab039, https://doi.org/10.1093/advances/nmab039
4. Produce Prescription Definition. National Produce Prescription Collaborative. https://nationalproduceprescription.org/. Published March 2021. Accessed May 18, 2021.
5. Marcinkevage J, Auvinen A, Nambuthiri S. Washington State's Fruit and Vegetable Prescription Program: Improving Affordability of Healthy Foods for Low-Income Patients. Prev Chronic Dis 2019;16:180617. DOI: http://dx.doi.org/10.5888/pcd16.180617external icon
6. Ridberg RA, Marpadga S, Akers MM, Bell JF, Seligman HK. Fruit and Vegetable Vouchers in Pregnancy: Preliminary Impact on Diet & Food Security, Journal of Hunger & Environmental Nutrition, 2021;16:2, 149-163, DOI: 10.1080/19320248.2020.1778593
7. Lee Y, Mozaffarian D, Sy S, Huang Y, Liu J, Wilde PE, et al. Cost-effectiveness of financial incentives for improving diet and health through Medicare and Medicaid: A microsimulation study. PLoS Med 2019;16(3): e1002761. https://doi.org/10.1371/journal.pmed.1002761
8. White JS, Vasconcelos G, Harding M, et al. Heterogeneity in the Effects of Food Vouchers on Nutrition Among Low-Income Adults: A Quantile Regression Analysis. American Journal of Health Promotion. September 2020. doi:10.1177/0890117120952991
9. Downer S, Berkowitz SA, Harlan TS, Olstad DL, Mozaffarian D. Food is medicine: actions to integrate food and nutrition into healthcare. BMJ. 2020; 369 :m2482 doi:10.1136/bmj.m2482 https://www.bmj.com/content/369/bmj.m2482
10. Bryce R, Guajardo C, Ilarraza D, et al. Participation in a farmers' market fruit and vegetable prescription program at a federally qualified health center improves hemoglobin A1C in low income uncontrolled diabetics. Prev Med Rep. 2017;7:176-179. Published 2017 Jun 27. doi:10.1016/j.pmedr.2017.06.006