

# Mainstreaming Produce Prescriptions: A Policy Strategy Report

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## About the Authors

The Center for Health Law and Policy Innovation of Harvard Law School (CHLPI) advocates for legal, regulatory, and policy reforms to improve the health of underserved populations, with a focus on the needs of low-income people living with chronic illnesses. CHLPI works with consumers, advocates, community-based organizations, health and social services professionals, food providers and producers, government officials, and others to expand access to high-quality health care and nutritious, affordable food; to reduce health disparities; to develop community advocacy capacity; and to promote more equitable and effective health care and food systems. CHLPI is a clinical teaching program of Harvard Law School and mentors students to become skilled, innovative, and thoughtful practitioners as well as leaders in health, public health, and food law and policy. CHLPI is comprised of the Harvard Law School Health Law and Policy Clinic and the Harvard Law School Food Law and Policy Clinic. CHLPI's statement on equity can be found at [www.chlpi.org/about-us/mission-statement](http://www.chlpi.org/about-us/mission-statement).

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*The Center for Health Law and Policy Innovation's Policy Strategy Report provides information and technical assistance on issues related to health reform, public health, and food law. It does not provide legal representation or advice. This document should not be considered legal advice. For specific legal questions, consult an attorney.*

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## Acknowledgement

*Mainstreaming Produce Prescriptions: A Policy Strategy Report* is a synthesis of policy analysis and findings from over 60 interviews with organizations, practitioners, and academics. Many of these individuals have been tirelessly working for over a decade to study, improve, and advocate for Produce Prescription Programs as an indispensable health intervention to address rising rates of chronic illness and food insecurity across our nation. The voices of these individuals and the lessons learned from their experiences have played a critical role in shaping the recommendations laid out in this report. These recommendations seek to expand access to Produce Prescription Programs and integrate them into health care delivery and financing and existing food system infrastructure.

Report design by Najeema Holas-Huggins, based upon *Produce Prescriptions: A U.S. Policy Scan* designed by l.vl.agency.

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# Introduction

Produce Prescription Programs are a promising strategy to improve health outcomes, reduce food insecurity, and decrease long-term health care costs. The term “produce prescription” is typically used to describe benefits distributed by health care providers (i.e., physicians, nurses, dietitians) to address a recipient’s diet-affected health condition such as diabetes, prediabetes, or hypertension. Such “prescriptions” are redeemed for produce at food retailers such as grocers, corner stores or *bodegas*, farmers markets, or within Community Supported Agriculture (CSA) programs. Often, non-profit community-based organizations or local health departments act as facilitators for these Programs by ensuring adequate funding; managing administrative duties; overseeing technological infrastructure; and coordinating health care provider, retail partner, and patient relationships.

**Defining Produce Prescription Programs:** The definition of a Produce Prescription Program has varied over time.<sup>1</sup> The National Produce Prescription Collaborative, a coalition of produce prescription practitioners, researchers, and advocates, currently 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 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.”<sup>2</sup>



Funding to support Produce Prescription Programs has historically been provided on a limited or pilot basis by community-based organizations themselves, research institutions, or through private, local, or state grants. Recently, federal grant-based funding opportunities have also been made available through a Congressionally enacted set-aside within the U.S. Department of Agriculture’s Gus Schumacher Nutrition Incentive Program (GusNIP). While such funding sources are vital to the current operation of these Programs, their short-term nature has made it difficult to scale access to all who could benefit and limited the strategic development of Produce Prescription Programs as medical interventions.

Now, as the United States battles the short and long-term health impacts of the COVID-19 crisis while continuing to transition to value-based care,<sup>3</sup> new opportunities are emerging in U.S. health care and food systems that could provide the funding, infrastructure, and political will needed to mainstream access to produce prescriptions. In light of these trends, this Policy Strategy Report provides recommendations for policies that could support widespread access to produce prescriptions for the populations who need them most—low-income individuals living with or at risk for diet-affected health conditions.


## Produce Consumption, Food Insecurity, and Health

Poor diet, especially one low in fruits and vegetables, is a leading contributor to morbidity, mortality, and health care costs in the United States. Research shows that:

- Eating fruits and vegetables is associated with a lower risk of chronic diseases such as cardiovascular disease, obesity, diabetes, and some cancers;<sup>4</sup>
- 22.4% of all adult deaths from coronary heart disease are associated with low fruit intake and 21.9% with low vegetable intake;<sup>5</sup> and
- Diet-affected chronic health conditions cost our nation over a trillion dollars in direct medical expenses each year.<sup>6</sup>

The vast majority of Americans do not meet U.S. Dietary Guidelines for fruit and vegetable consumption.<sup>7</sup> For some groups, such as low-income populations and communities of color, meeting fruit and vegetable servings is particularly challenging due to structural inequities and systemic racism.<sup>8</sup> For these groups, the high cost of maintaining healthy diets relative to household income continues to be a primary barrier,<sup>9</sup> even for individuals enrolled in federal food assistance programs like the Supplemental Nutrition Assistance Program (SNAP).<sup>10</sup>

Food insecurity, or the lack of consistent access to enough food for an active, healthy life,<sup>11</sup> can worsen the risk of poor health outcomes. Even after controlling for demographic variables like income and race, a 2017 report from the U.S. Department of Agriculture (USDA) found that food insecurity is associated with 10 of the costliest and most deadly preventable diseases in the country, including hypertension, diabetes, cancer, and stroke.<sup>12</sup> In 2019, 10.1% of households in the United States were food insecure.<sup>13</sup> Rates have risen dramatically since the onset of COVID-19 and the subsequent economic recession. Early calculations estimated that nearly 38% of the population experienced food insecurity in March and April of 2020<sup>14</sup> with numbers stabilizing around 15.6% in October,<sup>15</sup> the highest rates since measurement first began.<sup>16</sup> Moreover, rates of very low food security have more than doubled for all adults since the onset of the pandemic,<sup>17</sup> with Black and Latinx households experiencing particular risk.<sup>18</sup>



**Disparities in Food Insecurity:** Food insecurity disproportionately impacts communities of color. In 2019, rates of very low food security for white households were estimated at 3.3%, compared to 7.6% and 4.9% in Black and Latinx households, respectively.<sup>19</sup> The COVID-19 crisis has exacerbated these disparities. As of December 2020, these numbers had risen to 8% among white households, 19% among Black households, and 21% among Latinx households.<sup>20</sup>

Understanding that poverty alone does not explain health disparities, policymakers at all levels of government have supported a variety of important efforts to improve food environments and incentivize the purchase of healthy foods, including initial efforts to advance Produce Prescription Programs.

## The Evolution of Produce Prescription Programs

Produce prescriptions have emerged over the last several decades as a promising strategy to address the adverse health outcomes caused or exacerbated by poor diet and limited access to fruits and vegetables. Produce Prescription Programs trace their roots to grassroots efforts spearheaded by community-based organizations, individual clinics, and farmers markets across a variety of settings—including rural, urban, and tribal communities—all with the shared goal of improving health, diet, and food security.

In recent years, federal policymakers have increasingly invested in Produce Prescription Programs. In some cases, these investments have been linked with efforts to expand access to broader nutrition incentive programs such as the Healthy Incentives Pilot (HIP) and the Food Insecurity Nutrition Incentive grant program (FINI, now GusNIP). Nutrition incentive programs provide funds for the purchase of fruits and vegetables and generally prioritize locally grown food, enhancing produce access for low-income consumers while boosting small-scale and local and regional agricultural producers.<sup>21</sup>

Produce Prescription Programs use a similar model to nutrition incentives but are tethered to health care settings and goals. They provide participants with additional funds for fruits and vegetables, but typically limit eligibility based on health criteria and include health care providers or payers (i.e., public and private health insurers) as referral partners. They also often have a specific focus on improving health outcomes or health-related metrics (e.g., health care utilization). The evolution of federal investment in Produce Prescription and nutrition incentive programs is outlined in more detail below.

### *Evolution of Federal Investment in Produce Prescriptions and Nutrition Incentives*

- **Late 1960s:** Dr. H. Jack Geiger and colleagues offer “prescriptions” for food to families with malnourished children out of a community health center in Mound Bayou, Mississippi.<sup>22</sup>
- **Late 1980s:** Pilot programs linking low-income shoppers with local farmers are implemented in states around the country.<sup>23</sup>
- **1990s – mid-2000s:** Success of the model leads to the establishment of the WIC Farmers Market Nutrition Program in 1992<sup>24</sup> and the Senior Farmers Market Nutrition Program in 2002,<sup>25</sup> as well as the implementation of dozens of grant-supported nutrition incentive initiatives at the local, state, and even national level.<sup>26</sup>
- **2008-2012:** Produce prescriptions emerge as a distinct intervention with grant-supported pilots launching in states such as Michigan,<sup>27</sup> Connecticut, Maine, Massachusetts, New Mexico, New York, Rhode Island, and Washington, D.C.<sup>28</sup>
- **2014:** The 2014 Farm Bill establishes the Food Insecurity Nutrition Incentive (FINI) grant program, dedicating \$100 million to support produce incentive programs

for SNAP recipients.<sup>29</sup> The FINI program permits the ‘produce prescription’ design for patients/shoppers participating in SNAP.<sup>30</sup>

- **2016-2018:** The Centers for Medicare & Medicaid Services (CMS) approve requests from states such as Massachusetts<sup>31</sup> and North Carolina<sup>32</sup> to implement Medicaid Demonstration Waivers that include programs to address health-related social needs. These programs allow states to use Medicaid funds to provide nutrition interventions, including produce prescriptions, to certain Medicaid participants.<sup>33</sup>
- **2018:** The 2018 Farm Bill renames FINI as the Gus Schumacher Nutrition Incentive Program (GusNIP) and expands funding to \$250 million, with a maximum of 10% of program funding set aside to support Produce Prescription Programs over five years (2019-2023).<sup>34</sup>



Over this time period, our understanding of the value of produce prescriptions—especially for low-income individuals living with or at risk for diet-affected health conditions—has grown significantly.

### Impact of Produce Prescriptions

A growing body of research illustrates the impact that produce prescriptions can have on diet, disease management, and, potentially, health care costs. Most notably, Produce Prescription Programs have been shown to improve nutrition-related outcomes including increased fruit and vegetable consumption<sup>35</sup> and increased nutrition and cooking knowledge.<sup>36</sup> Individuals participating in these Programs have improved their Healthy Eating Index scores<sup>37</sup> and their adherence to the Dietary Guidelines for Americans.<sup>38</sup>

Participation in Produce Prescription Programs has also been shown to:

- Improve blood pressure;<sup>39</sup>
- Reduce body mass index (BMI) scores;<sup>40</sup>
- Reduce hemoglobin A1c levels in individuals with diabetes;<sup>41</sup>
- Decrease food insecurity;<sup>42</sup>
- Decrease depressive symptoms and improve overall health management;<sup>43</sup> and
- Improve patient-provider relationships.<sup>44</sup>

Finally, while additional research on health care costs is ongoing, initial modeling indicates that Produce Prescription Programs have the potential to be highly cost-effective. Results from Lee et al., 2019 estimate that providing Medicaid and Medicare enrollees with a 30% subsidy for the purchase of fruits and vegetables would save \$39.7 billion in formal health care costs if enacted on a national level over a lifetime (costing \$18,184 per quality-adjusted life year (QALY) when considering net costs).<sup>45</sup>



**Table 1. Select Peer-Reviewed Research on Produce Prescription Programs Focusing on Food Insecurity, Dietary Intake, Health Outcomes, and Health Care Costs**

Source Study Design	Program Design	Dietary and Health Outcomes
<p><b>Berkowitz et al., 2019<sup>46</sup></b></p> <p><i>RCT</i></p>	<p>A 13mo CSA prescription program for adults (n=122) with obesity at a community health center provided \$300 toward small (\$480) or large (\$690) CSA share for the CSA season.</p>	<ul style="list-style-type: none"> <li>• Mean Healthy Eating Index total score improved for participants (60.2) compared to control (55.9) (p=0.03)</li> </ul>
<p><b>Emmet-Aronson et al., 2019<sup>47</sup></b></p> <p><i>Pre-post Intervention</i></p>	<p>A 4mo program for adults (n=49) with behaviorally mediated conditions (including cardiovascular disease, diabetes, and depression) and poor social determinants of health (such as food insecurity) provided \$10 produce vouchers redeemable at a clinic-based Food Pharmacy. The program included robust supportive programming for 2 hours/wk.</p>	<ul style="list-style-type: none"> <li>• Hypertensive patients (n=24) saw reductions in systolic blood pressure (b=-4.04) (p&lt;0.01), but not diastolic (b=0.04) (p=0.95)</li> <li>• Marginal reduction in BMI (b=-0.10) (p=0.05)</li> <li>• Increased daily servings of fruits and vegetables (b=0.31) (p&lt;0.01)</li> <li>• Depressed patients (n=11) reduced depression scores (b=1.72) (p&lt;0.01)</li> <li>• Increased participant exercise (b=11.50) (p&lt;0.01)</li> <li>• Overall acute care utilization decreased by 77% from 22 emergency department visits/ days of unplanned hospitalizations prior to the intervention to 5 in the 6m follow-up, but the change was not significant (p=0.14)</li> </ul>
<p><b>Lee et al., 2019<sup>48</sup></b></p> <p><i>Microsimulation</i></p>	<p>This microsimulation study evaluated the effect of providing a 30% fruit and vegetable subsidy for all adult Medicaid and Medicare enrollees over a lifetime.</p>	<ul style="list-style-type: none"> <li>• A 30% fruit and vegetable subsidy would increase mean intake of fruits by 0.4 servings/day and vegetables by 0.4 servings/day</li> <li>• A 30% subsidy on fruit and vegetable purchases would prevent 1.93 million cardiovascular disease (CVD) events, gain 4.64 million quality-adjusted life years (QALYs), and save \$39.7 billion in formal health care costs if enacted on a national level over a lifetime</li> <li>• This approach would cost \$18,184/QALY considering policy costs and health-related cost-savings</li> </ul>
<p><b>Ridberg et al., 2019<sup>49</sup></b></p> <p><i>Retro Cohort</i></p>	<p>A 4-6mo pediatric program for families with at least one child with overweight or obesity (n=883) provided \$0.5-\$1 per household member per day (redeemable up to 6x) that could be used to purchase produce at farmers markets. Additional support services were provided.</p>	<ul style="list-style-type: none"> <li>• Improved adherence to U.S. Dietary Guidelines for fruits (93% to 100%), vegetables (64% to 70%), and combined fruits and vegetables (78% to 86%) (all p values &lt;0.001)</li> </ul>
<p><b>Trapl et al., 2018<sup>50</sup></b></p> <p><i>Pre-post Intervention</i></p>	<p>A 3mo program for food insecure adults (n=137) with hypertension provided four \$10 produce vouchers (\$120 total) redeemable at farmers markets. Additional support services were provided.</p>	<ul style="list-style-type: none"> <li>• Mean daily fruit consumption increased from 1.6 servings to 2.4 servings (p&lt;0.001)</li> <li>• Mean daily vegetable consumption increased from 1.7 to 2.5 (p&lt;0.001)</li> </ul>

Source Study Design	Program Design	Dietary and Health Outcomes
<p><b>Bryce et al., 2017<sup>51</sup></b></p> <p><i>Pre-post Intervention</i></p>	<p>A 13wk program for adults with diabetes (n=65) at a Federally Qualified Health Center in Detroit provided \$10/wk (\$40 total) on a debit card for up to 4 wks that could be spent at farmers markets.</p>	<ul style="list-style-type: none"> <li>Decreased HbA1c from 9.54% to 8.83% (p=0.001)</li> <li>No change in weight and blood pressure from pre- to post-study (p&gt;0.05)</li> </ul>
<p><b>Cavanagh et al., 2017<sup>52</sup></b></p> <p><i>Retro Pre-post Intervention with Case Control</i></p>	<p>A 13wk program for low-income adults (n=54) with diabetes, hypertension, and/or obesity provided 13 \$7 coupons redeemable at a mobile produce market. Coupons were provided at quarterly health care appointments that included a nutritionist visit.</p>	<ul style="list-style-type: none"> <li>Statistically significant difference in mean BMI change between the intervention and control groups (p=0.02)</li> <li>Participants experienced a mean decrease in BMI kg/m<sup>2</sup> of 0.74; control group experienced mean increase of 0.35 kg/m<sup>2</sup></li> </ul>
<p><b>Omar et al., 2016<sup>53</sup></b></p> <p><i>Pre-post Intervention</i></p>	<p>A 12wk program for adults (n=27 survey; n=16 bio measures) with obesity provided \$10 on a debit card for completing nutrition education sessions, cooking demonstrations, and other events. The benefit was redeemable at farmers markets or for boxed produce deliveries. Patients could receive \$40 max over 6wks and another \$20 for participating in a 12wk follow-up.</p>	<ul style="list-style-type: none"> <li>96% of participants reported they were better able to manage their health</li> <li>78% of participants reported an increase in their daily fruit and vegetable intake</li> <li>48% of participants reported a decrease in their daily intake of unhealthy food items</li> <li>5/16 participants lost weight</li> <li>5/16 participants improved their blood pressure</li> </ul>
<p><b>Freedman et al., 2013<sup>54</sup></b></p> <p><i>Repeated Measures</i></p>	<p>A 22wk program for low-income adults (n=41) with diabetes provided produce vouchers redeemable at a Federally Qualified Health Center-based farmers market. Participants received \$25 at baseline, \$25 at midpoint, and \$40 at follow-up.</p>	<ul style="list-style-type: none"> <li>Marginally significant average increase (1.6 servings) in daily fruit and vegetable consumption (p=0.07)</li> <li>Participants with diabetes had greater odds of achieving significant improvements in produce consumption when using the produce vouchers</li> </ul>

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## Vision for the Future

We believe it is possible to establish widespread, affordable access to produce prescriptions to improve the health of low-income individuals living with or at risk for diet-affected disease and to increase access to produce more broadly to better support population health. More specifically, we believe in a future where:

- Low-income individuals living with or at risk for diet-affected health conditions have access to produce prescriptions mediated through their health care provider(s) and sustainably funded through the health care system.
- Federal food assistance programs provide a sufficient supplement to household budgets to enable recipients to purchase produce to prevent many diet-affected health conditions and assist individuals transitioning off of produce prescription services.
- A robust body of high-quality research grounded in equity principles clearly establishes the value of produce prescriptions for a range of stakeholders—including Program participants, retailers, and health care payers.
- Produce Prescription Programs are able to effectively exchange data with health care payers, providers, and retailers.
- Cost-effective infrastructure is in place to support participation in Produce Prescription Programs by a diverse range of participants, retailers, and health care partners.
- Guidance is available to facilitate the implementation and scaling of effective, equitable Produce Prescription Programs.



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## Current Landscape

Despite our growing understanding of their potential to improve diet and overall health, access to produce prescriptions remains limited across the United States. As a nation, we are in a moment of change that could provide new opportunities to establish the infrastructure, funding, and policies needed to achieve the goals described above. Four trends in particular are converging to create a unique opportunity for growth:

- **Health Care Reform:** To achieve the Triple Aim of improved patient experience, improved population health, and reduced health care costs, state and federal policymakers continue to encourage the adoption of value-based payment models that reward health care providers for quality rather than quantity of care. As part of these efforts, there is increasing interest in allowing health care payers—especially those in the Medicaid and Medicare programs—to direct health care dollars toward addressing health-related social needs that play a critical role in determining health outcomes and costs.
- **Food is Medicine:** Produce Prescription Programs are part of a growing Food is Medicine movement that seeks to integrate a range of medically tailored food and nutrition services into health care delivery and financing to address rising rates of chronic illness and health care costs.<sup>55</sup> Interest in this movement has already resulted in the emergence of large state and national coalitions;<sup>56</sup> a commitment to research from the National Institutes of Health;<sup>57</sup> enactment of several state-level pilot programs;<sup>58</sup> Congressional support for allocation of GusNIP grants to Produce Prescription Programs;<sup>59</sup> and introduction of federal legislation that would establish a medically tailored meals pilot in the Medicare program.<sup>60</sup> The retail sector is also interested in these opportunities, recognizing that these programs deliver economic benefits for retailers and enhance the services they can provide to the communities they serve.<sup>61</sup>
- **Right to Food:** While the United States does not formally recognize the right to food, a human-rights based approach offers an important framework for addressing food insecurity and related health challenges of U.S. residents. The right to food is realized when food is available, accessible, and adequate for current and future generations.<sup>62</sup> Some advocates are now applying a right to food lens to push nutrition intervention programs to look beyond the immediate food needs of individuals and, instead, change systems to better address structural inequities that inhibit the availability of accessible and adequate food. For Produce Prescription Programs, it can mean leveraging resources in the health care sector to support and promote sustainable food systems in the community<sup>63</sup> and supporting local economies.<sup>64</sup> Applying this lens can also amplify the role of Produce Prescription Programs as more than a smart mechanism for improving efficiency (i.e., return on investment) in health care.
- **COVID-19 Pandemic:** Finally, since March 2020, the COVID-19 crisis has overwhelmed hospital capacity, resulted in long lines at food banks, and illuminated deep, systemic inequities. The crisis has also placed a spotlight on the connection between nutrition and

health, with diet-affected conditions such as diabetes, obesity, and cardiovascular disease placing individuals at increased risk for severe illness from the virus.<sup>65</sup> To meet immediate nutrition needs and prevent the spread of the virus, our food and health care systems have stretched in extraordinary ways. Health care systems, states, and the federal government are now preparing to address the long-term impacts of COVID-19. As a part of these efforts, there will be an unprecedented need for services that improve chronic disease management and food access for years to come, especially among populations hardest hit by the pandemic.

This Policy Strategy Report seeks to respond to this moment by: (1) identifying key challenges that currently inhibit the growth of Produce Prescription Programs and (2) providing recommendations for policies at the federal, state, and institutional level that could support their expansion.

While we recognize the potential for Produce Prescription Programs to improve the health of all populations, the recommendations in this Policy Strategy Report have the specific goal of improving access for populations most in need: low-income individuals living with or at risk for diet-affected health conditions.

**Key Terms:** Throughout this report, we use the terms “scaling,” “expansion,” or “growth” to mean expanding access to produce prescriptions to new geographies and populations. We use these terms to mean *both* the growth of existing Programs and the proliferation of new Programs across the country, as both strategies will be necessary to establish widespread, equitable access.

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## Methodology

### Policy Scan

From March to August 2020, CHLPI staff reviewed laws, regulations, and guidance related to federal health insurance and food assistance programs. These programs included: Medicaid, Medicare, Dual Eligible programs, the Supplemental Nutrition Assistance Program (SNAP), the Special Supplemental Nutrition Assistance Program for Women, Infants, and Children (WIC), the WIC and Senior Farmers Market Nutrition Programs (WIC FMNP and SFMNP), and the Gus Schumacher Nutrition Incentive Program (GusNIP). Through this process, we identified both existing opportunities and policy gaps that must be addressed to grow and sustain Produce Prescription Programs in the long term. CHLPI published the initial findings from this scan in October 2020 as: [Produce Prescriptions: A U.S. Policy Scan](#).

### Stakeholder Interviews

From June to October 2020, CHLPI staff conducted 62 stakeholder interviews.<sup>66</sup> These interviews

were designed to gather insights into common barriers and innovative practices emerging in the field of produce prescriptions and related services. Interviewees included individuals from organizations across the following categories:

- **Produce Prescription Programs**
- **Health Care Payers**
- **Health Care Providers**
- **Food Retail Organizations**
- **Federal Food Assistance Programs**
- **Food System Advocacy & Research Organizations**
- **Nutrition Incentive Programs**
- **Retail Transaction Technology Experts**

The primary themes from these interviews are summarized in **Table 2** below.

### **Feedback Session**

In the fall of 2020, CHLPI used information gathered through the Policy Scan and stakeholder interviews to develop initial recommendations for this Policy Strategy Report. In November 2020, CHLPI conducted a feedback session—with both interviewees and non-interviewees—to review and refine these recommendations.

### **Limitations**

While we strove to achieve geographic diversity, some states, such as Massachusetts and California, were over-represented in our data-gathering efforts. We also worked from standardized interview guides within each stakeholder category but tailored interviews slightly based on each organization's history in the produce prescription space. This tailoring may have introduced some bias in the responses. Importantly, although we sought to engage a broad range of leaders and experts in our interview process, we found that racial diversity among our interviewees was limited, the majority being white or white-presenting. While the observation led to fruitful conversations about diversity and systemic racism in the health and food sectors more broadly, it does narrow the perspective brought to bear on the challenges we seek to address in this report.

Our analysis also does not capture the experience of Program participants, an important stakeholder group that should be further engaged as Produce Prescription Programs are scaled-up across the nation (**see Recommendations 11-14**). Participant perspectives will be a key focus in forthcoming research supported by The Rockefeller Foundation's Food Initiative.<sup>67</sup>

Finally, in this Policy Strategy Report, we do not make recommendations specific to Tribal nations. Recommendations about Produce Prescription Programs for Tribal nations should be led by or made in partnership with Native leaders. We hope to more fully engage Tribal leaders in the next phase of this work, with careful attention to the unique history, governance, and infrastructure of these sovereign nations and with deference to the leadership and ingenuity of Native-led projects connecting food and health, of which there is a long history.

# Results

Five categories of challenges emerged from our interviews that currently limit the reach of Produce Prescription Programs. These five categories, as well as common details shared about them, are summarized in **Table 2** below.

**Table 2. Stakeholder Interviews - Challenges**

Category	Details
<b>Funding</b>	<ul style="list-style-type: none"> <li>Funding constraints have limited the size and scope of Produce Prescription Programs.</li> <li>Many current Produce Prescription Programs rely on short-term funding streams (e.g., public or private grants) which may not be sustainable over time.</li> <li>Current funding sources emphasize maximizing funding for the food itself (the produce prescriptions). While understandable, practitioners and researchers noted that there are also other costs for successful implementation that should not be short-changed (e.g., costs for evaluation, technology, and administrative oversight).</li> <li>Stakeholders are generally supportive of establishing long-term funding for produce prescriptions via health insurance coverage.</li> <li>Some stakeholders have reservations regarding establishing long-term funding for produce prescriptions via federal food assistance programs, though many recognized the importance of federal food assistance programs for broader population health.</li> </ul>
<b>Research</b>	<ul style="list-style-type: none"> <li>Health care payers and providers noted the need for additional research on the impact of produce prescriptions on health outcomes and on their cost-effectiveness.</li> <li>Some stakeholders also called for additional research to refine Program design, including research on dosage (i.e., the dollar amount of the benefit), Program length, and target health conditions.</li> <li>Retailer organizations emphasized the need for additional research on the retail components of Produce Prescription Program design and implementation.</li> <li>Some stakeholders called for the use of common metrics to expand the research base.</li> <li>Some stakeholders noted that capacity to participate in research differs across Produce Prescription Programs, especially with respect to research involving biometric data.</li> </ul>
<b>Patient Data &amp; Privacy</b>	<ul style="list-style-type: none"> <li>Stakeholders recognized the importance of data sharing for Program implementation and research, but often encountered barriers including:               <ul style="list-style-type: none"> <li>The administrative and technological burdens associated with navigating patient privacy laws, such as the Health Insurance Portability and Accountability Act (HIPAA).</li> </ul> </li> <li>Some stakeholders noted that participants may raise concerns about having their data shared with government entities (e.g., concerns related to immigration status).</li> </ul>

Category	Details
<b>Infrastructure</b>	<ul style="list-style-type: none"> <li>• Health care providers often receive little formal nutrition education, which stakeholders emphasized as a challenge to integrating Produce Prescription Programs into health care.</li> <li>• Stakeholders highlighted the wide range of redemption mechanisms under development that could play a role in scaling produce prescriptions, as well as the benefits and challenges associated with these mechanisms.</li> <li>• Many stakeholders expressed interest in electronic redemption instruments, but noted the costs associated with new redemption technologies and how these costs could pose a barrier to smaller, less-resourced organizations and retailers and those based in rural communities.</li> <li>• Stakeholders emphasized the importance of healthy food access, noting that a lack of retailers carrying high-quality produce or limited transportation options can undermine Program success.</li> </ul>
<b>Advancing the Field</b>	<ul style="list-style-type: none"> <li>• Health care payers, providers, retailers, and Produce Prescription Programs indicated that guidance regarding Program design could help to facilitate creation of new Programs and participation from a wider variety of organizations.</li> <li>• Some health care providers emphasized the importance of providing patient education (e.g., nutrition counseling, cooking skills, redemption of Program benefits) in Produce Prescription Programs, but noted challenges to doing so effectively (e.g., timing, content, cultural competency, etc.).</li> </ul>

Interviewees also heavily discussed core values that have guided their experiences with Produce Prescription Programs and similar interventions up to this point and that should guide expansion moving forward. Four specific values-based themes emerged across the interviews:

- **Addressing Structural Barriers:** Interviewees noted that structural barriers—such as access to transportation and food retailers—can impact participation in Produce Prescription Programs and must be taken into consideration to avoid deepening health inequities.
- **Community Involvement & Engagement:** Stakeholders emphasized the importance of engaging trusted, community-based organizations to improve awareness of and enrollment in Produce Prescription Programs.
- **Collaboration:** Interviewees noted the need for collaboration across sectors—including health care, social services, retail, and others—to implement successful Produce Prescription Programs. Interviewees also highlighted the challenges associated with collaboration (e.g., time, barriers to data sharing, etc.) and the need to consider these barriers when implementing or expanding Programs.
- **Standardization & Flexibility:** The interviews highlighted a tension between competing needs for standardization and flexibility across Programs. While some interviewees emphasized the importance of flexibility in eligibility, redeemable food items, and data collection, others reported a need for standardized solutions that afford ease of implementation, scaling, and maintenance.



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# Recommendations

This Policy Strategy Report seeks to leverage the experience and expertise of stakeholders across the United States to realize the vision described above. In this section, we outline a series of 20 recommendations. These recommendations reflect the core challenges and values emphasized in our expert interviews and feedback session. The recommendations are organized by the challenge to which they respond:

- **Funding:** Recommendations 1-10
- **Research:** Recommendations 11-14
- **Patient Data and Privacy:** Recommendations 15-16
- **Infrastructure:** Recommendations 17-19
- **Advancing the Field:** Recommendation 20

For an overarching summary of these recommendations, **see Appendix A.**

We also recognize that in working to expand access to produce prescriptions, it is critical to consider the role that broader societal issues, including systemic racism, have played in shaping U.S. federal health care and food assistance programs.<sup>68</sup> Produce Prescription Programs cannot, on their own, resolve these issues. Produce Prescription Programs can, however, be shaped to respond to—rather than exacerbate—the health inequities resulting from these historic biases. To advance this goal, the recommendations in this Policy Strategy Report call out specific opportunities to expand our understanding of racial disparities in the produce prescription space and promote equitable access to services.

**Health Equity:** According to the Centers for Disease Control and Prevention (CDC), “health equity is achieved when every person has the opportunity to ‘attain his or her full health potential’ and no one is ‘disadvantaged from achieving this potential because of social position or other socially determined circumstances.’”<sup>69</sup>



Our recommendations are only small steps in what must be a much larger effort. We therefore more broadly call upon state and federal policymakers to commit to implementing these recommendations, and all similar policies, with a focus on health equity. Specifically, we recommend that policymakers adopt frameworks, such as the Michigan Equity Practice Guide,<sup>70</sup> to examine all new issues and proposed responses through a framework of health equity.

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# I. Funding

## **Interviewees identified lack of sustainable funding as the single largest barrier to maintaining and expanding Produce Prescription Programs in the United States.<sup>71</sup>**

Interviewees identified three overarching funding challenges: first, funding limitations frequently limit the size and scope of Produce Prescription Programs; second, Programs often lack access to long-term funding sources, making the future of their work uncertain; and third, Programs rarely have access to sufficient funding to address core Program functions beyond the direct provision of food (e.g., costs associated with technology, evaluation, education, and administration). Finally, while most stakeholders expressed a preference for funding produce prescriptions via the health care system, many noted the need to expand and improve enrollment in federal food assistance programs, including SNAP, to address broader population health and to support individuals transitioning off of produce prescriptions.

Based upon these comments, the recommendations in this section chart a path for establishing long-term, sustainable funding for produce prescriptions within the U.S. health care system and for supporting broader population health through expanded access to produce in USDA food assistance programs. Specifically, recommendations in this section call for policy and institutional changes to:

- 1. Broaden coverage of produce prescriptions in Medicaid, Medicare, and Veterans Affairs;**
- 2. Maximize the impact of existing opportunities to fund produce prescriptions within health care and public health programs;**
- 3. Build capacity across Produce Prescription Programs; and**
- 4. Improve funding for produce within SNAP to promote broader population health.**

## **BROADEN COVERAGE OF PRODUCE PRESCRIPTIONS IN MEDICAID, MEDICARE, AND VETERANS AFFAIRS**

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### **RECOMMENDATION 1**

#### **Broaden coverage of produce prescriptions within Medicaid and Medicare.**

Medicaid and Medicare, the United States' primary public health insurance programs for low-income individuals and older adults, stand to play a critical role in scaling up access to produce prescriptions. These programs currently serve roughly 71 million<sup>72</sup> and 61 million<sup>73</sup> Americans, respectively. In July 2020, national survey data indicated that 23% of adult Medicaid participants were experiencing food insufficiency (i.e., very low food security).<sup>74</sup> These numbers were even

higher among Hispanic and Black participants (27% and 25%).<sup>75</sup> Medicaid participants are also at particular risk for diet-affected health conditions such as diabetes,<sup>76</sup> heart disease,<sup>77</sup> and obesity.<sup>78</sup> Similarly, as of 2017, roughly 9% of Medicare participants aged 65 and over were food insecure, with Hispanic and Black participants experiencing notably higher rates (23.5% and 23.2%).<sup>79</sup> Many Medicare participants are also living with diet-affected health conditions such as diabetes and hypertension (27% and 57% of Medicare fee-for-service participants).<sup>80</sup>

As described in the next section, some existing authorities can be used to create pockets of sustainable funding for produce prescriptions within Medicaid and Medicare. However, these authorities largely rely on regulatory flexibilities and waivers, leaving funding inconsistent and subject to change over time. Additionally, these options leave out large segments of the population, such as those enrolled in Original Medicare (i.e., Medicare Parts A & B), which currently covers almost two-thirds of Medicare enrollees.<sup>81</sup> Efforts to take advantage of these existing authorities **must** therefore be paired with broader policy change, including changes to embed coverage for produce prescriptions into the baseline benefits for both programs.

Pathways to establishing such coverage include: (1) clarifying coverage within existing benefit categories; (2) establishing new benefits; and (3) establishing and scaling demonstration models.

### **Clarify Coverage within Existing Benefit Categories**

Federal law and regulations establish a baseline set of mandatory and optional benefits within the Medicaid and Medicare programs. Some of these benefit categories are defined broadly and could include nutrition interventions such as produce prescriptions. While CMS has not interpreted any benefit category as explicitly providing coverage for produce prescriptions up to this point,<sup>82</sup> CMS could issue regulations or guidance to do so.

For example, federal law establishes rehabilitative services as an optional benefit category for the Medicaid program. It defines rehabilitative services as:

[A]ny medical or remedial services (provided in a facility, a home, or other setting) recommended by a physician or other licensed practitioner of the healing arts within the scope of their practice under State law, for the maximum reduction of physical or mental disability and restoration of an individual to the best possible functional level.<sup>83</sup>

On their face, produce prescriptions would fit within this definition. Participants are typically referred to the Program by a health care provider (“a physician or other licensed practitioner of the healing arts”) in order to reduce the impact of conditions such as diabetes and hypertension and to restore participants to greater health and function. A similar case could be made for coverage of produce prescriptions as Medicaid preventive services.<sup>84</sup>

This approach would have the benefits of requiring the smallest overall change to the Medicaid and Medicare frameworks—potentially improving the likelihood of success—and of being possible via administrative, rather than legislative, action.

## **Establish a New Benefit**

An alternative approach would be to amend the Social Security Act to explicitly add coverage of produce prescriptions within an existing or new benefit category for both Medicaid and Medicare. For example, to establish Medicare coverage, the U.S. Code could be amended at 42 U.S.C. § 1395x(s)(2) to add produce prescriptions to the list of services covered as “medical and other health services” under Medicare Part B. Similarly, the U.S. Code could be amended at 42 U.S.C. § 1396d(a)(13) to specifically allow coverage of produce prescriptions as Medicaid preventive or rehabilitative services.

This approach would have the advantage of allowing the greatest flexibility in defining produce prescription coverage to ensure that it is available to all Medicaid and Medicare enrollees who could benefit from the intervention. It would, however, require the passage of federal legislation, which can be challenging due to competing interests and legislative priorities.

The creation of a new, broadly available, benefit within Medicaid and/or Medicare (via administrative or legislative action) would also have the necessary disadvantage of adding new costs to the federal government for the operation of these programs. In their 2019 modeling study, Lee et al. found that providing a 30% fruit and vegetable subsidy for all Medicaid and Medicare enrollees would cost \$122.6 billion (for policy implementation) but would be highly cost-effective over time (\$18,184 per QALY) given the resulting health improvements and reductions in formal health care costs (**see Table 1**).

## **Establish and Scale a Demonstration Model**

Finally, the U.S. Department of Health and Human Services (HHS) could establish a demonstration model within the Center for Medicare and Medicaid Innovation (CMMI) to provide coverage of produce prescriptions within Medicaid and/or Medicare. CMMI, an organization within CMS created by the Affordable Care Act, has the authority to test innovative payment and delivery models in Medicaid and Medicare.<sup>85</sup> Under federal law, the Secretary of HHS then has the authority to scale up these models across Medicare or Medicaid if:

- The Secretary determines such expansion is expected to reduce spending without reducing quality of care or improve patient care without increasing spending;
- The Chief Actuary of CMS certifies that expansion would not increase spending within the relevant program (Medicaid or Medicare); and
- The Secretary determines that expansion would not deny or limit coverage or provision of benefits for enrollees of the relevant program (Medicaid or Medicare).<sup>86</sup>

This approach would have the benefit of being possible via administrative action and would allow a more gradual, pilot-based approach. It would also build upon existing CMMI models, such as the Accountable Health Communities Model, which provides support for screening and referral for health-related social needs, but not funding for responsive services.<sup>87</sup> However, as described above, expansion would be at the discretion of HHS, meaning that even if cost and quality criteria were met, establishment of produce prescriptions as a widespread, ongoing benefit would not be guaranteed.

**Key Consideration – Bias as a Barrier:** While situating Produce Prescription Programs in the health care system has many benefits, it would also have the disadvantage of potentially limiting access for populations that have historically faced barriers to care. Biases regarding race, ethnicity, and income continue to affect the provision of health care in the United States—resulting in a cycle of mistreatment, mistrust, and disengagement, especially for BIPOC patients.<sup>88</sup> To promote equitable access to produce prescription services, Program partners—including health care partners, retail partners, and Program administrators—will need to take action to acknowledge, address, and overcome racism and other biases within the systems and institutions in which they operate (e.g., via institutional policies and practices, advocacy priorities, and training). These goals should also inform the development of research (**Recommendations 11-14**) and guidance on model design for Produce Prescription Programs (**Recommendation 20**).



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## RECOMMENDATION 2

### **Authorize coverage of produce prescriptions within the Veterans Affairs medical benefits package.**

The Veterans Health Administration (VHA) within the Department of Veterans Affairs (VA) also has the potential to play an important role in expanding access to produce prescriptions in the United States. The VHA operates one of the largest integrated health systems in the nation, providing care to an estimated 6.33 million veterans in Fiscal Year (FY) 2020.<sup>89</sup> As noted in a recent article by Cohen et al., estimates regarding the rates of food insecurity among veterans range from 6% to 24%, with particularly concerning rates among veterans who served in Iraq and Afghanistan (27%); female veterans (28%); and veterans who have experienced homelessness (49%).<sup>90</sup> As with other populations, these trends result in increased risk of adverse health outcomes,<sup>91</sup> perpetuating a cycle of food insecurity, stress, and poor health.

In response to these trends, the VHA has taken a number of actions to identify and respond to veteran nutrition needs. For example, the VHA has established the national Ensuring Veteran Food Security Workgroup, integrated food insecurity screening into the VA's Electronic Medical Record (EMR) system,<sup>92</sup> and launched the Healthy Teaching Kitchen program to teach veterans and their families healthy cooking skills.<sup>93</sup> Additionally, some individual VA medical centers have partnered directly with Feeding America and/or local food banks to provide onsite food access, including the VA Repurposing Agriculture and Nutrition for Diet Awareness (VARANDA) project, a food pharmacy program operating in Massachusetts.<sup>94</sup>

While these activities show a strong interest in the role of nutrition in veteran health, the VA does not currently include nutrition interventions—other than nutrition education<sup>95</sup> and food in some residential settings<sup>96</sup>—in the benefits provided to individuals enrolled in the VHA's health care

system. We therefore recommend that produce prescriptions be built into the VHA's growing nutrition portfolio. By doing so, the VHA can provide critical long-term funding for Produce Prescription Programs and connect veterans across the country to the foods they need to improve their health. As with Medicaid and Medicare, there are multiple pathways to embed funding for produce prescriptions into the VHA, including: (1) establishing a new benefit or (2) establishing and scaling a demonstration model.


### **Establish a New Benefit**

The clearest and most flexible approach to providing access to produce prescriptions to U.S. veterans would be to alter the statutory language that lays out the medical benefit package for the VHA health care system. For example, produce prescriptions could be added to the list of “medical services” provided at 38 U.S.C. § 1701(6) or to the list of “preventive health services” provided at 38 U.S.C. § 1701(9).

In our feedback process, stakeholders noted that cost is a key concern in the development of VA policies. As with Medicaid and Medicare (**see Recommendation 1**), the primary disadvantage of creating a new produce prescription benefit within the VHA would be the added costs to the federal government for the operation of this program. While the analysis performed by Lee et al. of the Medicaid and Medicare programs is encouraging, additional analysis specific to veteran populations would further advance the case for policy change.

### **Establish and Scale a Demonstration Model**

To expand the available research and move toward broader integration, the VA could also establish a demonstration model to pilot the provision of produce prescriptions to low-income veterans living with or at risk of diet-affected health conditions. The VA MISSION Act of 2018 established the Center for Innovation for Care and Payment (VA Innovation Center) within the VA “to develop innovative approaches to testing payment and service delivery models in order to reduce expenditures while preserving or enhancing the quality of care.”<sup>97</sup> These models may run for up to five years, with the option to expand and extend models expected to reduce spending without reducing quality of care or improve quality of care without increasing spending.<sup>98</sup>



**Key Consideration – Payment Models:** In implementing **Recommendations 1-6**, policymakers and plan administrators will need to make important decisions regarding how to structure payments for produce prescription services. While payments could take many forms (fee-for-service, capitation, etc.), decision-makers will need to keep the practical realities of Produce Prescription Programs in mind. In particular, payments must be sufficient to address both the cost of the produce provided and the administrative costs associated with operating an effective Produce Prescription Program (e.g., costs associated with outreach, evaluation, and education).

## MAXIMIZE THE IMPACT OF EXISTING OPPORTUNITIES TO FUND PRODUCE PRESCRIPTIONS WITHIN HEALTH CARE AND PUBLIC HEALTH PROGRAMS

### RECOMMENDATION 3

#### **Provide guidance and technical assistance on current opportunities to fund produce prescriptions within Medicaid and Medicare.**

As outlined in *Produce Prescriptions: A U.S. Policy Scan*,<sup>99</sup> the Medicaid and Medicare programs also currently provide a range of options for states and individual health plans to begin to fund the delivery of produce prescriptions to low-income individuals living with or at risk for diet-affected health conditions. Maximizing the impact of these options can be a critical first step toward establishing sustainable funding for Produce Prescription Programs. However, few states or plans are taking advantage of these opportunities. This underutilization may be driven—at least in part—by lack of awareness of these opportunities or uncertainty about their scope. CMS and HHS should therefore provide guidance and technical assistance to address these barriers.

CMS has taken similar action in the past, creating a foundation for these efforts. In January 2021, CMS issued a letter to state health officials outlining options to address social determinants of health within both Medicaid and the Children’s Health Insurance Program (CHIP).<sup>100</sup> This document is the most comprehensive analysis to date and is therefore a critical step forward. However, while the document acknowledges that states can use an “array of services” to address social determinants of health, it limits its discussion of nutrition interventions to home-delivered meals.<sup>101</sup> In contrast, the document provides an extensive list of services that can be provided as “housing-related services and supports.”<sup>102</sup>

By limiting its discussion in this way, CMS may inadvertently lead states and health plans to focus their efforts solely on meals, when providing a spectrum of nutrition services—including meals, produce prescriptions, and other interventions—could more cost-effectively meet the needs of patients on the ground. Additionally, the document leaves open questions of whether differences between meals and other nutrition interventions alter coverage analysis in any way.

**Providing a Spectrum of Services:** Meals, especially medically tailored meals, have been shown to improve health outcomes and decrease health care costs for seriously ill individuals.<sup>103</sup> However, they may not be necessary or appropriate for all patients. Produce prescriptions can be an effective support for individuals with or at risk for diet-affected health conditions who are able to shop and cook for themselves (**see Table 1**). By providing a spectrum of services, states and plans can tailor care to individual needs and create opportunities to use nutrition interventions to prevent, as well as treat, disease progression.

Given these gaps, we recommend that CMS provide follow-up guidance and technical assistance

specifically targeting nutrition interventions, including produce prescriptions. To maximize the impact of these efforts, we recommend that the guidance address opportunities in both Medicaid and Medicare, including, but not limited to, the categories described below in **Table 3**.

**Table 3. Medicare and Medicaid Opportunities to be Addressed via CMS Guidance**

<b>Medicaid Opportunities</b>
<p><b>Medicaid State Plan Opportunities</b></p> <p>Clarify opportunities to provide coverage of produce prescriptions within:</p> <ul style="list-style-type: none"> <li>• Mandatory and optional Medicaid benefit categories<sup>104</sup></li> <li>• State Plan Amendment authorities, such as home and community-based services authorities available under Section 1915(i)<sup>105</sup> and Section 1915(k)<sup>106</sup> of the Social Security Act</li> </ul>
<p><b>Medicaid Waiver Opportunities</b></p> <p>Clarify opportunities to provide coverage of produce prescriptions within waiver authorities such as:</p> <ul style="list-style-type: none"> <li>• Section 1115 Demonstration Waivers<sup>107</sup></li> <li>• Section 1915(b) Waivers<sup>108</sup></li> <li>• Section 1915(c) Home and Community-Based Services Waivers<sup>109</sup></li> <li>• Section 1915(i) Home and Community-Based Services Waivers<sup>110</sup></li> </ul>
<p><b>Medicaid Managed Care Opportunities</b></p> <p>Clarify opportunities for Medicaid Managed Care Organizations (MCOs) to provide coverage of produce prescriptions within authorities such as:</p> <ul style="list-style-type: none"> <li>• Administrative services<sup>111</sup></li> <li>• In lieu of services<sup>112</sup></li> <li>• Value-added services<sup>113</sup></li> <li>• Activities that improve health care quality<sup>114</sup></li> </ul>
<b>Medicare Opportunities</b>
<p><b>Original Medicare (Medicare Parts A &amp; B)</b></p> <p>Clarify opportunities to provide coverage of produce prescriptions within:</p> <ul style="list-style-type: none"> <li>• Medicare Part A and B benefit categories<sup>115</sup></li> </ul>
<p><b>Medicare Advantage (Medicare Part C)</b></p> <p>Clarify opportunities for Medicare Advantage plans to provide coverage of produce prescriptions within authorities such as:</p> <ul style="list-style-type: none"> <li>• Supplemental benefits<sup>116</sup></li> </ul>

By taking these actions, CMS can provide clarity to guide state and plan decision-making and promote greater uptake of existing opportunities to sustainably fund produce prescriptions within the health care system. In doing so, CMS will also better align its efforts to address nutrition and food insecurity with its historically more extensive work on other social issues such as housing insecurity.<sup>117</sup>



## RECOMMENDATION 4

### Utilize existing opportunities to fund produce prescriptions in State Medicaid Programs.

As noted earlier, rates of diet-affected disease and food insecurity are high among Medicaid participants. Therefore, even in the absence of the guidance called for above, states should proactively identify and utilize opportunities to provide access to produce prescriptions for Medicaid enrollees. Specifically, State Medicaid Agencies should: (1) use Medicaid waivers to provide direct support for produce prescriptions and (2) incorporate provisions into their managed care contracting that incentivize Medicaid Managed Care Organizations (MCOs) to cover produce prescriptions for their enrollees.

#### Waiver Authorities

While HHS has not explicitly authorized states to cover produce prescriptions under standard Medicaid benefit categories up to this point, it has allowed coverage of nutrition interventions via a number of waiver authorities, including Section 1115 Demonstration Waivers (i.e., waivers used to test new approaches to Medicaid delivery and financing) and Section 1915 Home and Community-Based Services Waivers (i.e., waivers used to provide additional services to keep participants in their homes rather than in institutional settings).

State Medicaid Agencies should take advantage of these authorities to provide coverage of produce prescriptions for Medicaid enrollees living with or at risk for a diet-affected condition. Examples of these authorities are outlined in **Table 4** below.

**Table 4. Medicaid Waiver Authorities that Have Been Used to Cover Nutrition Interventions**

Authority	Scope	Example(s)
<b>Section 1115 Demonstration Waivers</b>	<p><b>These Waivers Allow CMS to:</b></p> <ul style="list-style-type: none"><li>Waive certain provisions of the Medicaid Statute,<sup>118</sup> and provide federal funds to pay for services and populations that would not otherwise be covered.<sup>119</sup></li></ul> <p><b>Application to Nutrition Interventions:</b></p> <ul style="list-style-type: none"><li>States have used Section 1115 Waivers to fund produce prescriptions as part of value-based models designed to address health-related social needs.</li></ul>	<p><b>Massachusetts:</b></p> <ul style="list-style-type: none"><li>\$149 million Flexible Services Program establishes funding for Medicaid Accountable Care Organizations to provide food and housing supports (including produce prescriptions) to certain enrollees.<sup>120</sup></li></ul> <p><b>North Carolina:</b></p> <ul style="list-style-type: none"><li>\$650 million Healthy Opportunities Pilots program.<sup>121</sup> Pilots may cover up to \$200 per month of produce prescriptions for certain enrollees.<sup>122</sup></li></ul>

Authority	Scope	Example(s)
<p><b>Home and Community-Based Services Waivers (Section 1915(c); 1915(i))</b></p>	<p><b>These Waivers Allow CMS to:</b></p> <ul style="list-style-type: none"> <li>Waive certain provisions of the Medicaid Statute, and provide federal funds to pay for home and community-based services to keep enrollees out of institutional care.<sup>123</sup></li> </ul> <p><b>Application to Nutrition Interventions:</b></p> <ul style="list-style-type: none"> <li>States may not provide “room and board” under these Waivers.<sup>124</sup> However, CMS has allowed states to cover meals, provided they do not constitute a “full nutritional regimen” (i.e., 3 meals a day).<sup>125</sup></li> </ul>	<p>Home and community-based services waivers are <b>often</b> used to cover meals, suggesting that states may also be able to use these waivers to cover other nutrition services, such as produce prescriptions.</p> <p><b>Illinois:</b></p> <ul style="list-style-type: none"> <li>Illinois currently has three 1915(c) waivers that include coverage of meals.<sup>126</sup> These waivers provide home and community-based services for individuals living with HIV/AIDS, brain injuries, or disabilities.<sup>127</sup></li> </ul>

### Managed Care Contracting

At least 40 states currently contract with private health plans (Medicaid MCOs) to deliver Medicaid services.<sup>128</sup> MCOs must typically provide coverage for benefits covered in the state’s Medicaid State Plan<sup>129</sup> (or a subset of these services). However, MCOs have also historically had some flexibility to cover additional items and services. Recent changes to Medicaid managed care regulations reinforced these flexibilities and expanded the options available to states to shape MCO activities through value-based payment structures.<sup>130</sup>

State Medicaid Agencies should take advantage of these regulations by building provisions into MCO contracts that encourage coverage of produce prescriptions. States can use federal regulations that require MCOs to assess the needs of new patients<sup>131</sup> and coordinate care<sup>132</sup> to require MCOs to screen for and respond to social needs among their enrollees.<sup>133</sup> As part of these efforts, states can specifically include requirements to screen for diet-affected health conditions/ food insecurity and refer patients to responsive services.

To maximize impact, states should pair these requirements with contract provisions that provide financial support and incentives for MCOs to cover produce prescriptions.

- Financial Support:** States can authorize MCOs to cover produce prescriptions as an “in lieu of service.”<sup>134</sup> While MCOs have a number of options to cover extra services, this option is particularly appealing, as it allows the MCO to include produce prescriptions as a covered benefit in its capitation rate<sup>135</sup> (i.e., the per-member per-month rate the plan receives for delivering Medicaid services) and in the numerator of the plan’s Medical Loss Ratio (MLR)<sup>136</sup> (i.e., a ratio of claims costs to premium revenues that impacts the setting of capitation rates<sup>137</sup>). Notably, at least one state—Oregon—has also authorized coverage of nutrition services as “activities that improve health care quality” via a Section 1115 Demonstration Waiver.<sup>138</sup> Under this option, Oregon allows the costs of the services to be included in capitation (in the non-benefit load) and in the numerator of the MLR.<sup>139</sup>

- **Incentive Arrangements:** Under federal regulations, states may also require MCOs to meet certain metrics, and use incentive payments or payment withholds to promote compliance.<sup>140</sup> States therefore can create metrics related to conditions targeted by Produce Prescription Programs—such as diabetes, pregnancy, and food insecurity—and emphasize produce prescriptions as an appropriate strategy to improve performance.<sup>141</sup>

These contracting options, as well as relevant examples, are described in more detail in **Table 5**.

**Table 5. Medicaid MCO Contract Options to Incentivize Coverage of Produce Prescriptions**

Approach	Specific Options	Example(s)
<b>Screening and Coordination Requirements</b>	Provisions that require MCOs to screen for, address, and report on social needs.	<p><b>According to the Kaiser Family Foundation, as of 2019:</b></p> <ul style="list-style-type: none"> <li>• 25 states required MCOs to screen for social needs.</li> <li>• 28 states required MCOs to provide referrals to social service providers.</li> <li>• 5 states required MCOs to track referral outcomes.</li> <li>• 22 states required MCOs to partner with community-based organizations or social service providers.<sup>142</sup></li> </ul>
<b>Financial Support</b>	<p><b>In Lieu of Services:</b> Optional service approved by the state as a cost-effective substitute to a service covered under the State Plan.<sup>143</sup></p> <p><b>Activities that Improve Health Care Quality:</b> Activities conducted by the MCO designed to improve health quality and outcomes.<sup>144</sup></p>	<p><b>In Lieu of Services</b></p> <ul style="list-style-type: none"> <li>• <b>New York</b> allows coverage of medically tailored meals as an in lieu of service.<sup>145</sup></li> <li>• <b>California</b> is considering coverage of medically-supportive food and nutrition services as in lieu of services.<sup>146</sup></li> </ul> <p><b>Activities that Improve Health Care Quality</b></p> <ul style="list-style-type: none"> <li>• <b>Oregon</b> allows coverage of food vouchers as an activity that improves health care quality.<sup>147</sup></li> </ul>
<b>Incentive Arrangements</b>	Incentive payment or withholds structures that encourage MCOs to meet target metrics. <sup>148</sup>	<ul style="list-style-type: none"> <li>• <b>Michigan</b> links incentive payments to submission of plans related to population health initiatives.<sup>149</sup></li> </ul>

For further guidance, plans should consult their State Medicaid Agency.

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## RECOMMENDATION 5

### Utilize existing opportunities to fund produce prescriptions in individual health plans and health care systems.

Studies to date have indicated that produce prescriptions can promote improvements in metrics such as blood glucose levels (hemoglobin A1C), body mass index (BMI), and food security. These improvements can assist health care providers and plans in meeting quality requirements imposed by states and the federal government through processes such as Medicaid Managed Care contracting, Medicare Star Ratings, and Uniform Data System Reporting. Therefore, even in the absence of state or federal requirements, individual health plans and providers should take advantage of current options to support access to produce prescriptions for their patients.

#### Medicaid Managed Care Organizations

As noted above (see Recommendation 4), 2016 changes to federal regulations reinforced flexibilities that allow Medicaid MCOs to provide additional services beyond those included in their Medicaid State Plan. These flexibilities allow MCOs to pay for produce prescriptions as “in lieu of” services, “activities that improve health care quality,” or value-added services.<sup>150</sup> These options are outlined in Table 6 below.

**Table 6. Medicaid MCO Options to Cover Non-State Plan Benefits**

Option	Brief Description	Included in Capitation?
<b>In Lieu of Services</b>	Optional service approved by the state as a cost-effective substitute to a service covered under the State Plan. <sup>151</sup>	Yes
<b>Activities that Improve Health Care Quality</b>	Activities conducted by the MCO designed to improve health quality and outcomes. <sup>152</sup>	Potentially*
<b>Value-Added Services</b>	Services not otherwise covered in the State Plan but voluntarily provided by the MCO. <sup>153</sup>	No

\* At least one state—Oregon—currently allows this approach as part of its Section 1115 Demonstration Waiver (including these services in the non-benefit load).<sup>154</sup> For further guidance, plans should consult their State Medicaid Agency.

Medicaid MCOs should use these opportunities to expand access to produce prescriptions for their enrollees.

#### Medicare Advantage Plans

Medicare Advantage plans must typically cover all benefits covered in Original Medicare (i.e., Medicare Parts A and B),<sup>155</sup> but they have traditionally had the flexibility to expand coverage to include additional items and services as “supplemental benefits.”<sup>156</sup> These supplemental benefits must: (1) not be covered by original Medicare, (2) be “primarily health related,” and (3) involve a non-zero medical cost.<sup>157</sup> Current guidance indicates that CMS would likely not approve coverage of produce prescriptions as a general supplemental benefit as CMS does not consider produce to be “primarily health related.”<sup>158</sup> However, recent policy changes have expanded the scope of supplemental benefits in certain circumstances.

- **Special Supplemental Benefits for the Chronically Ill (SSBCI):** SSBCI allow Medicare Advantage plans to cover additional supplemental benefits for enrollees who: (1) have “one or more comorbid and medically complex chronic conditions;” (2) have “a high risk of hospitalization or other adverse health outcomes;” and (3) require “intensive care coordination.”<sup>159</sup>
- **Value-Based Insurance Design (VBID) Model:** The VBID model is a demonstration project operated by CMMI that allows Medicare Advantage plans to use plan design to encourage patients to “use the services that can benefit them the most.”<sup>160</sup> Participating plans may provide additional supplemental benefits to enrollees based on (1) chronic conditions; (2) eligibility for low-income subsidy; or (3) both.<sup>161</sup>

Under both of these options, additional supplemental benefits do not need to be primarily health related. Instead they must simply have a “reasonable expectation of improving or maintaining the health or overall function” of the targeted enrollees.<sup>162</sup> CMS has therefore indicated both options may be used to cover food and produce,<sup>163</sup> creating a valuable opportunity for Medicare Advantage plans to expand access to produce prescriptions for their enrollees.

### Health Care Providers

Some interviewees also emphasized the potential role of individual health care providers—in addition to health care payers—in funding and facilitating access to produce prescriptions. Health care providers that participate in health plans or Medicaid programs that provide coverage for produce prescriptions can play an important role in unlocking funding by referring patients to Produce Prescription Programs. Additionally, health care providers can use their own institutional funds to support Produce Prescription Programs. In doing so, they can continue to build the evidence base for broader, insurance-based coverage over time. For example, hospitals can use their operating budgets or other funding sources such as community benefit programs<sup>164</sup> to help implement or sustain Produce Prescription Programs in their communities.

**Legal Challenges to Health Care Provider Funding:** Some health care providers may be wary of directly paying for produce prescriptions due to fears that they will violate fraud and abuse laws such as (1) prohibitions against providing Medicare or Medicaid beneficiaries with free items or services that are likely to induce them to see a particular provider (i.e., beneficiary inducements), and (2) anti-kickback statutes. These laws complicate and restrict but do not preclude all health care provider-funded arrangements. In fact, HHS is increasingly open to providers furnishing tools and supports that promote patient engagement in value-based programs,<sup>165</sup> and regulators recognize that services targeting food insecurity may, depending on the program, be an appropriate tool.<sup>166</sup> For more information on these issues, see the materials provided on the website of HHS’s Office of Inspector General (OIG).<sup>167</sup>



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## RECOMMENDATION 6

### Utilize public health funding streams to support produce prescriptions.

Throughout our feedback session and interviews, expert stakeholders emphasized the importance of establishing a funding framework that creates widespread, equitable access to produce prescriptions. As part of these conversations, stakeholders highlighted the fact that certain populations may be excluded from public health insurance programs due to immigration status or other eligibility restrictions. Federal, state, and local public health funding streams offer an additional strategy to support Produce Prescription Programs. By leveraging these funding streams, public health agencies can both help to build the case for health insurance coverage in the short term and address eligibility gaps—and resulting inequities—in the long term.

#### Short-Term Funding and Building the Case


State and federal agencies should use public health grant programs to support produce prescriptions in the short term. By doing so, public health agencies can promote the development of new Programs and build the case for long-term funding for produce prescriptions within health insurance programs. CDC, in particular, operates a number of federal grant programs that are well aligned with the goals of Produce Prescription Programs and are either already supporting aspects of Produce Prescription Programs or appear able to do so.

These programs include, for example:

- Racial and Ethnic Approaches to Community Health (REACH);<sup>168</sup>
- Improving the Health of Americans Through Prevention and Management of Diabetes, Heart Disease, and Stroke;<sup>169</sup> and
- Innovative State and Local Public Health Strategies to Prevent and Manage Diabetes, Heart Disease, and Stroke.<sup>170</sup>

#### Opportunities to Establish Long-Term Funding

Broader public health-oriented funding streams offer an opportunity to sustain Produce Prescription Programs in the long term and to extend their reach to populations who may otherwise be ineligible for services. This approach could include directing general funds or revenues from specific sources, such as Tobacco Master Settlement Agreements or sugar-sweetened beverage (SSB) taxes, to support Produce Prescription Programs as part of a state's or locality's efforts to achieve public health goals.



**SSB Taxes:** The City of Seattle dedicated over \$4 million of SSB tax revenue to support the city's Fresh Bucks program that includes nutrition incentives, a weekly produce subscription service, and a Produce Prescription Program.<sup>171</sup> Similarly, in Boulder, Colorado, SSB tax revenues have supported nutrition incentive programs for both SNAP enrollees and individuals who are ineligible for federal food assistance programs.<sup>172</sup>

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## RECOMMENDATION 7

### **Expand upon WIC's ability to act as a Produce Prescription Program by increasing funds for the purchase of fruits and vegetables.**

The Special Supplemental Nutrition Program for Women, Infants, and Children (WIC)<sup>173</sup> occupies a unique space in the U.S. health care landscape. While administered by USDA, WIC is embedded in the health care system and is typically administered by a State's department of health.<sup>174</sup> Qualifying individuals may enroll in WIC once a health professional determines they are at "nutritional risk."<sup>175</sup> The participant is then prescribed one of seven federally approved "food packages."<sup>176</sup> Since 2007, packages for women and children include a "cash-value voucher" (or "cash-value benefit")<sup>177</sup> (CVB) that provides a cash amount for the purchase of fruits and vegetables.<sup>178</sup> The federal benefit is currently set at \$11 a month for women and \$9 a month for children.<sup>179</sup> By employing a clinical model and then providing participants with a cash supplement specific to fruits and vegetables, WIC operates as a federally-funded, state-administered Produce Prescription Program.

Despite this support, WIC-eligible individuals are below average in consuming the amount of fruits and vegetables recommended in the 2015 Dietary Guidelines. In 2016, the National Academy of Medicine (NAM) reported that:

- Less than 6% of WIC-eligible children consumed the recommended amount of vegetables, compared to 10-15% of children generally; and
- Less than 4% of WIC-eligible women consumed the recommended amount, compared to 10% of women, generally, in the 19-30 year age range.<sup>180</sup>


The current CVB may be insufficient to overcome this disparity. In its Final Report, NAM noted that the CVB would need to be \$23, \$41, or \$45 per month "for individuals who consumed a 1,300-, 2,300-, or 2,600-kcal diet, respectively, to meet [just] half of the recommended intakes of vegetables and fruits."<sup>181</sup>

Research shows that increasing WIC households' produce purchasing power positively impacts health outcomes. A recent study found that recipients enrolled in a Produce Prescription Program in San Francisco that provides an additional \$40 per month to pregnant women in WIC experienced increased food security and improved dietary nutrition as compared to non-recipients and a lower risk of pre-term birth as compared to the historical comparison groups.<sup>182</sup> Indeed, the CVB was created based upon the success of a pilot program that subsidized produce at a rate of approximately \$44 a month.<sup>183</sup>

Policymakers could therefore better maximize the health impacts of the prescription by significantly increasing WIC's CVB. WIC already has the infrastructure for distributing and redeeming the prescription in place, though the ability to redeem the CVB at farm-direct vendors like farmers markets varies by state.<sup>184</sup> In addition, WIC is available to individuals and children who may not qualify for insurance-based interventions, including immigrants and the uninsured.

Further, increasing the value of the WIC benefit could provide an incentive for households to enroll and stay enrolled in WIC, thus mitigating the negative participation trends seen over the past decade.<sup>185</sup>

Based upon the research described above, USDA should increase the CVB to provide a minimum \$50 benefit.<sup>186</sup> The agency, in coordination with HHS, should then continue to evaluate if this amount is sufficient to maximize health benefits<sup>187</sup> and if the amount should vary relative to regional purchasing power.<sup>188</sup> USDA should also provide states additional support for broadening CVB redemption at farmers markets, including resources to assist in onboarding farm-direct vendors, and eWIC redemption at small retailers located in underserved areas.<sup>189</sup> In the longer term, policymakers could also consider expanding WIC eligibility and scope of services to provide an avenue for connecting even more women and children to fruits and vegetables at a critical moment in the lifespan.




**Local Agriculture and Farm-Direct Vendors:** Federal food assistance programs also play an important role in supporting local agriculture and farm-direct vendors, such as farm stands, farmers markets, and community-supported agriculture (CSAs). By selling their products directly to consumers, farmers retain a greater share of the dollars spent compared to sales through indirect channels.<sup>190</sup> Some federal benefits are designed to link participants to such opportunities to buy local produce, such as the WIC FMNP and SFMNP. These coupon-based programs have been in place for several decades and provide almost \$40 million per year in sales to markets,<sup>191</sup> even though the benefit amount is relatively small (per individual or household, \$10–\$30 annually for WIC FMNP and \$20–\$50 annually for SFMNP).<sup>192</sup> Many Produce Prescription Programs have leveraged the FMNP system to partner with farmers markets and administer prescription redemptions, by mimicking the program and/or integrating into a market’s existing FMNP infrastructure.

As federal food assistance programs and Produce Prescription Programs expand, their overall community impact can be increased through connections with local agriculture and farm-direct vendors. This could be done in several ways:

- Expand the acceptance of the WIC CVB for produce purchases from farmers and farmers markets. State agencies have the authority to permit acceptance at such vendors, but many do not. USDA should further encourage states to allow acceptance at farm-direct vendors and provide resources to support farmers in implementation.
- Increase funding for the WIC FMNP and SFMNP, eliminate the requirement that states provide 30% of WIC FMNP funding,<sup>193</sup> include all states in both programs,<sup>193</sup> and allocate funding to states based on the state’s WIC participation and low-income senior population.
- Ensure that farm-direct retailers are able to provide electronic and online payment options to their SNAP, WIC, and FMNP customers at minimal cost to the vendor. These payment channels have become increasingly critical with the growth of online shopping during the COVID-19 pandemic,<sup>194</sup> yet the cost and complexity of these systems make





implementation challenging for small and farm-direct retailers that serve low-income consumers.

- Strive to include farmers markets, CSAs, and other farm-direct vendors among Produce Prescription Program retail partners and work to support participant access to these local agricultural markets.<sup>195</sup>

## BUILD CAPACITY ACROSS PRODUCE PRESCRIPTION PROGRAMS


### RECOMMENDATION 8

#### **Expand support for the GusNIP Produce Prescription Grant Program as a critical accelerator of Produce Prescription Programs.**

The initial recommendations in this section outline a range of opportunities to establish long-term funding to sustain successful Produce Prescription Programs over time. However, in this moment, when many communities still lack access to any Produce Prescription Programs, there is also an immediate need for targeted funding and technical assistance to launch new Programs, expand Programs to reach new patients, and experiment to find best practices to meet the needs of patients and health care partners. Robust federal investments in programs that provide such capacity-building assistance should therefore continue and expand.

The Gus Schumacher Nutrition Incentive Program (GusNIP) offers federal grant support from USDA for both nutrition incentive and Produce Prescription Programs that target low-income households. The Agriculture Improvement Act of 2018 (the 2018 Farm Bill) set aside up to 10% of funding available under GusNIP to support the new produce prescription grant program.<sup>196</sup> The total amount provided for GusNIP annually started at \$45 million in FY2019 and increases incrementally up to \$56 million in FY2023.<sup>197</sup>

**GusNIP Produce Prescription Grants:** In 2019 and 2020, the National Institute of Food and Agriculture (NIFA; the USDA mission area that manages GusNIP grants) awarded approximately \$4.5 million (each year) to Produce Prescription Programs.<sup>198</sup> NIFA currently caps funding at \$500,000 per project, with projects not to exceed 3 years.<sup>199</sup> The connection to GusNIP gives Produce Prescription Programs access to the newly established Nutrition Incentive Program Training, Technical Assistance, Evaluation, and Information Center (GusNIP NTAE), which provides training and technical assistance to GusNIP applicants and grantees and compiles and evaluates data sets from eligible entities.<sup>200</sup>



## **Continue Support Through GusNIP**

Dedicated farm bill funding for Produce Prescription Programs through GusNIP is an important means of supporting Programs in their nascent stages. Several grantee organizations have leveraged their experience building SNAP-based nutrition incentive projects to create or expand Produce Prescription Programs,<sup>201</sup> and others have expressed interest in doing so in the future. Linking these programs in GusNIP provides opportunities to share learnings and brings synergy to research and evaluation. Increased coordination and information sharing with HHS—already required by statute<sup>202</sup>—will advance these learnings further. While some collaboration with CDC has already transpired,<sup>203</sup> CMS should have increased involvement as well. These partnerships will set the stage for development of broader guidance on Program design (**see Recommendation 20**) and integration of Produce Prescription Programs into Medicaid and Medicare moving forward. As GusNIP funding continues, NIFA should integrate this guidance into its grant proposal parameters (i.e., Request for Applications) and consult with the task force described in **Recommendation 20** to align funding decisions with the strategic advancement of the produce prescription field.

A critique of continuing support for Produce Prescription Programs through GusNIP is that USDA may be an ill-suited home for a nutrition intervention so closely tied to the health care system. Additionally, despite their similarities, nutrition incentive programs and Produce Prescription Programs have distinct priorities and stakeholders, which raises additional challenges for their union in GusNIP. Although there may be some validity to these concerns, the advantages noted above weigh in favor of maintaining this funding stream, at least in the near term as the field continues to develop.

## **Increase GusNIP Funding for Produce Prescription Programs**

To successfully advance the field, the overall funding for GusNIP Produce Prescription Programs would likely need to increase. The \$500,000 funding cap, stretched up to three years, is not enough to support robust evaluation of these interventions. Evaluation is just one part of total administration costs, which are limited to 25% of the grant funds.<sup>204</sup> While the GusNIP NTAE supports aspects of research and evaluation across grantees, the on-the-ground demands of research (e.g., collecting and cleaning data) still place significant burdens on grantee organizations. Minimal support for research means the Programs with established university or research partnerships—and additional funding streams—may be better positioned to take advantage of GusNIP grants, reinforcing patterns of inequitable resource distribution and limiting the perspectives brought to bear on the research.

Additionally, the limited funding makes it challenging to build out Programs in areas that currently lack the infrastructure needed to easily connect participants with health care providers and food retailers carrying produce. This factor encourages Program concentration in regions where patients can more easily access these services. Some Produce Prescription Programs have overcome such challenges by providing transportation or establishing mobile clinics and markets, but these solutions can be costly. Increased funding for projects targeting patients with less access to health care and retail services could help to bridge this gap. The GusNIP NTAE has supported capacity-building projects through its Capacity Building and Innovation Fund—which,

in 2020, provided grants of up to \$50,000 to current and former GusNIP grantees—but more is needed to expand the reach and success of Produce Prescription Programs in particular.<sup>205</sup> Policymakers can address these two challenges and support the strategic growth of Produce Prescription Programs by:

- Increasing both overall funding for GusNIP and the proportion of funds dedicated to Produce Prescription Programs in the next farm bill;
- Increasing the grant award for funding recipients;
- Setting aside a portion of this funding to provide more robust support for Programs poised to contribute significant research in the field; and
- Setting aside another portion of funding to increase support for Programs expanding to target patients in harder-to-reach areas (for the purpose of developing solutions to connect patients to services).

Any increased funding will, of course, carry the disadvantage of increasing the cost of the program and be met with some resistance. Competition for funding increases can be uniquely challenging in the farm bill context, with many different stakeholders competing for resources to support their program from a relatively fixed baseline pool of funding. This competition, coupled with the challenges inherent in passing legislation and the critique regarding fit noted above, may stifle the potential of this recommendation. Still, the suggested adjustments to the program would better leverage the full potential of GusNIP for supporting Produce Prescription Programs.

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## **RECOMMENDATION 9**

### **Establish a Produce Prescription Preparation Program to expand capacity to partner with the health care sector.**

Throughout the interviews and feedback session, some non-profit organizations noted the upfront costs that Produce Prescription Programs faced when establishing the expertise and infrastructure needed to successfully partner with health care providers and payers. These costs relate to administrative functions, HIPAA compliance, contracting, and other issues. While GusNIP can help to address these barriers, the NTAE has thus far limited capacity-building grants to current and former grantees,<sup>206</sup> limiting access for Programs that are not yet ready to participate in GusNIP or that fail to secure a GusNIP grant.

To address these barriers and support the growth of new Produce Prescription Programs across the United States, federal policymakers could establish a Produce Prescription Preparation Program (Prep Program) to provide planning grants and technical assistance to increase Program capacity to partner with the health care sector. Like GusNIP, the efforts of this program should be informed by the guidance described in **Recommendation 20** to ensure that funding decisions advance promising practices and a strategic vision for the field.

This Prep Program should be administered by HHS through CMS, CDC, or another appropriate operating division and could prioritize applicants looking to establish sustainable Produce Prescription Programs in underserved areas of the country. CDC, in particular, has engaged in similar efforts to expand access to the National Diabetes Prevention Program (NDPP) that could inform the development of the Prep Program. Under its Scaling National Diabetes Prevention Program in Underserved Areas project, the CDC funds national organizations to:

1. Establish new sites to deliver the NDPP in underserved areas of the country; and
2. Engage in a range of strategies to promote patient enrollment/retention and coverage of the program among public and private health care payers.<sup>207</sup>

States can also take similar steps to address upfront costs for Programs within their borders. Examples of state approaches are summarized below in **Table 7**.

**Table 7. Examples of State Approaches to Creating Funding to Address Up-Front Costs**

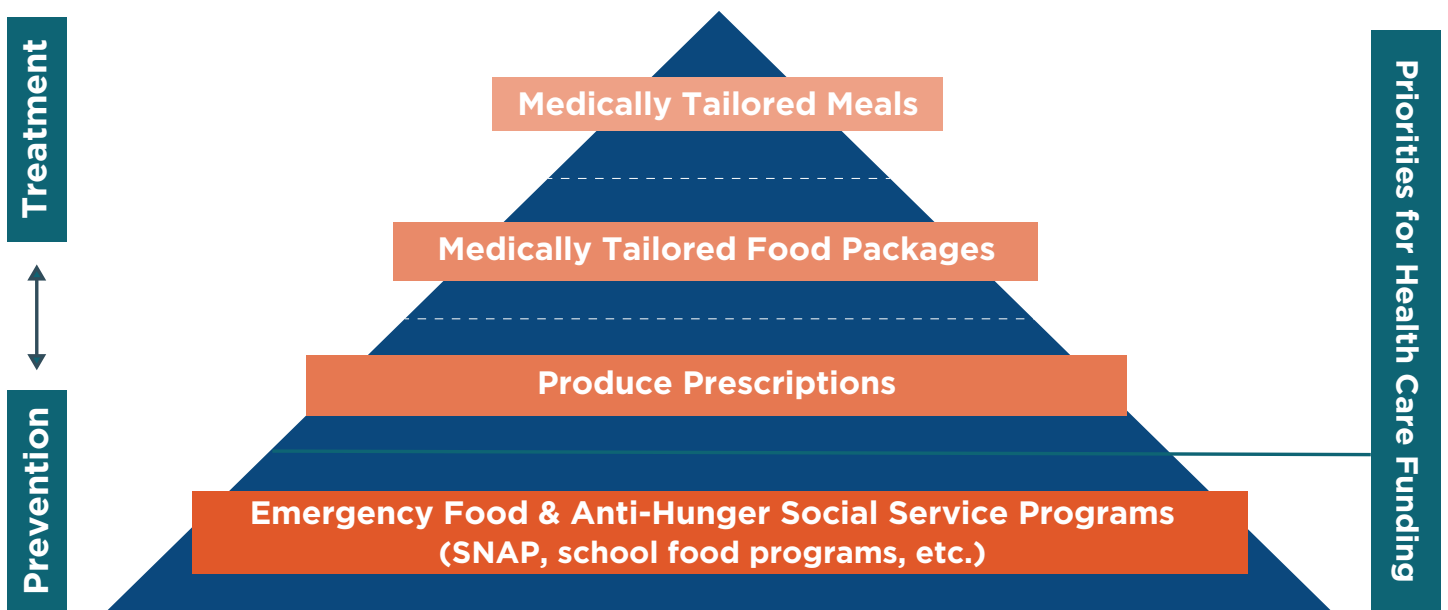
State	Source of Funding	Details of Approach
<b>Massachusetts</b>	Medicaid Section 1115 Demonstration Waiver	<ul style="list-style-type: none"> <li>• As part of its Section 1115 Waiver, MassHealth (the MA Medicaid Program) established a \$4.5 million Social Services Organization Flexible Services Preparation Fund (SSO Prep Fund).<sup>208</sup></li> <li>• Funds can be used to improve capacity to work with a MassHealth Accountable Care Organization (ACO), including capacity to:               <ul style="list-style-type: none"> <li>• Make/receive referrals;</li> <li>• Deliver nutrition or housing supports; and</li> <li>• Participate in data tracking.<sup>209</sup></li> </ul> </li> </ul>
<b>South Carolina</b>	Private Investment and Medicaid 1915(b) Waiver	<ul style="list-style-type: none"> <li>• South Carolina used a pay-for-success/social impact bond model to address upfront costs associated with its Nurse-Family Partnership initiative, providing home visits to first-time mothers.<sup>210</sup></li> <li>• South Carolina and the Nurse Family Partnership leverage:               <ul style="list-style-type: none"> <li>• \$17 million from private investors/philanthropy to cover upfront costs of hiring and training staff; and</li> <li>• \$13 million from a Medicaid 1915(b) Waiver to cover costs of individual services.<sup>211</sup></li> </ul> </li> <li>• If the project meets certain metrics, the state will reimburse the initial investors up to a specific amount.<sup>212</sup></li> </ul>

# IMPROVE FUNDING FOR PRODUCE WITHIN SNAP TO PROMOTE BROADER POPULATION HEALTH

## RECOMMENDATION 10

### Ensure that households enrolled in the Supplemental Nutrition Assistance Program (SNAP) can readily afford the produce they seek.

Limited resources to buy food is a primary barrier, among others, preventing people with low incomes from acquiring fruits and vegetables.<sup>213</sup> Produce Prescription Programs can help to overcome this barrier. However, given the connection to the health care system that is often required to access produce prescriptions, groups who are uninsured, not connected to health care, or not in a group considered eligible for these interventions based on health criteria may still struggle to access fruits and vegetables. Produce Prescription Programs are also often time-limited rather than providing a permanent produce benefit. SNAP (and WIC, discussed in **Recommendation 7**) is therefore a critical foundation for promoting broader population-level health and for providing continued financial support for produce purchases after the end of patients' produce prescription treatment.



Produce prescriptions are part of the Food is Medicine pyramid. This pyramid outlines a spectrum of interventions designed to respond to the link between nutrition and chronic illness. While the pyramid situates Food is Medicine services within the health care system, it recognizes that federal food assistance programs such as SNAP are critical to achieving the overarching goal of improving health. Improving access to produce through SNAP can improve population health, reduce the need for more targeted services, and provide an important off-ramp for individuals as they transition off of Food is Medicine interventions.

## Increase Monthly SNAP Benefits

The U.S. government primarily addresses domestic hunger through SNAP, a monthly food benefit for qualifying low-income households.<sup>214</sup> SNAP funds are automatically loaded onto an electronic benefits transfer (EBT) card that operates like a restricted debit card.<sup>215</sup> Although SNAP has been linked to improved food security and health outcomes and lower health care costs,<sup>216</sup> the benefit is not designed to provide an individual or household's total food spending and is often insufficient to ensure adequate and nutritious meals.<sup>217</sup> Importantly, SNAP benefits are insufficient to support households in procuring fruits and vegetables at a level commensurate with the Dietary Guidelines.<sup>218</sup>

For this reason, SNAP allotments should significantly increase. The formula used to determine SNAP benefit levels, reflected in the USDA's Thrifty Food Plan,<sup>219</sup> was designed 50 years ago and does not reflect the socioeconomic and cultural realities of 2021.<sup>220</sup> Revisiting and recalibrating the formula for designing the Thrifty Food Plan could lead to a significant benefit increase that would better empower SNAP households to purchase produce within their monthly grocery budgets. Congress called for reevaluation of the Food Plan's market baskets in the 2018 Farm Bill, which USDA is currently undertaking.<sup>221</sup> To meet household needs, this reevaluation must be aggressive and must not attempt to restrict benefit increases to inflation adjusted cost.

## Expand Produce-Specific Benefits

SNAP produce incentive programs are designed to encourage SNAP households to use their SNAP dollars to purchase fruits and vegetables. Examples of these programs are outlined in **Table 8**.

**Table 8. Examples of SNAP Produce Incentive Programs**

Program Title	Program Details
<b>GusNIP Nutrition Incentive Grants</b>	<ul style="list-style-type: none"><li>GusNIP funds programs that make additional dollars available to SNAP participants who spend their benefits on fruits and vegetables.<sup>222</sup></li></ul>
<b>Puerto Rico Model</b>	<ul style="list-style-type: none"><li>Puerto Rico—which, instead of SNAP, receives federal nutrition assistance funding through a block grant—adds 4% to a household's monthly allotment that may only be spent at farmers markets.<sup>223</sup></li></ul>

The success of these programs warrants their expansion with some suggested improvements. GusNIP nutrition incentive grants currently require a 50% match, meaning grantees must provide an equal amount of funding—from state, local, or private sources—for every federal dollar requested.<sup>224</sup> This requirement imposes a significant barrier to entry. Additionally, the emphasis on maximizing the dollar amounts going to incentives themselves creates a competitive advantage for organizations with administrative infrastructure already in place.<sup>225</sup> Tellingly, between 2015 and 2020, California and Michigan received over \$8 million and \$5 million more, respectively, in GusNIP funding than all of the Southern States combined.<sup>226</sup>

To better support SNAP household produce procurement in the near term, federal policymakers could take the following actions:

- The next farm bill could make permanent the temporary reduction of GusNIP’s match requirement to 10% of the requested federal funds that was included in the Consolidated Appropriations Act, 2021.<sup>227</sup> A disadvantage to this approach is that, without complementary additional funding, it could reduce the funds available to support more programs; with, instead, a funding increase, it would increase the program’s cost.
- USDA could preference projects in regions and/or states with a history of minimal prior GusNIP funding in the GusNIP application scoring criteria, set aside a share of funding for underserved communities with high need that have not received funding commensurate to their SNAP population, or allocate grant funds based on a region’s SNAP population.

In the longer term, additional produce-specific benefits could be integrated as a core component of SNAP, available to every SNAP participant for use at their local, and preferred, SNAP vendors. This additional benefit could operate as a nutrition incentive—as in GusNIP, making additional SNAP dollars available following produce purchases—or as an automatic produce-designated extra benefit on a monthly SNAP allotment—like the additional percentage for produce available in Puerto Rico. Creating a dedicated produce add-on to the monthly SNAP benefit would expand the number of people reached, reduce implementation complexity, and create the greatest potential for improving population health. This type of addition has the disadvantage of increasing program costs for SNAP and shifting administrative responsibilities in-house for the agency, which may garner resistance from USDA. It would also likely incur investment in upgrading EBT technology systems to incorporate the new benefit. However, evidence shows these benefits support economic development and job creation, thus generating a net benefit for the community and increasing SNAP’s impact.<sup>228</sup>

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## II. Research

While initial research on produce prescriptions is promising, a number of interviewees noted the need to expand the research base in order to promote integration into health care delivery and financing. In particular, stakeholders called for additional research regarding Program outcomes (e.g., health outcomes and cost-effectiveness) and design (e.g., duration and target health conditions). They also emphasized the need for common Program evaluation metrics. Some stakeholders cautioned, though, that not all Produce Prescription Programs have the same capacity to engage in research or to access health care claims and biometric data. Finally, a number of stakeholders highlighted the role that structural and systemic barriers can play in Program participation—indicating a need to better understand the relationship between Program design and health equity.

The recommendations in this section respond to these comments by identifying actions that can be taken to create a robust research base on the design and impact of Produce Prescription Programs without overburdening Program administrators and participants. As a foundational

point, we recognize the critical role that equitable design can play in achieving these goals. The recommendations in this section therefore call for government and organizational action to:

1. **Embed an equity perspective into produce prescription research; and**
2. **Expand research on metrics that drive decision-making in the health care sector.**

## **EMBED AN EQUITY PERSPECTIVE INTO PRODUCE PRESCRIPTION RESEARCH**

### **RECOMMENDATION 11**

#### **Design produce prescription research to promote health equity.**

Research in this field must recognize that nutrition is profoundly personal, and dietary patterns are shaped by a number of factors, from individual preference, age, gender, and education to early life exposures, cultural, familial and community norms, and local food environments.<sup>229</sup> Many of these factors, including local food environments, are shaped by historic and current policies that are (either explicitly or in application) discriminatory, especially with regard to race, and also gender identity, disability status, sexual orientation, and other identities and traits.

#### **Investigate Impact on Communities of Color and Implement Equitable Evaluation Practices**

One of the primary rationales for expanding access to Produce Prescription Programs is their potential to respond to health disparities that result from historical and current policies shaped in part by systemic racism. Produce Prescription Programs can be part of and build on other necessary reforms to promote more equitable and just health care and food systems. Using the framework of the Michigan Equity Practice Guide put out by the state's Department of Health & Human Services, a strategy that promotes health equity will:<sup>230</sup>

- **Recognize the relationship of race, ethnicity and racism to health.**
- Address the social, environmental, institutional and neighborhood factors that contribute to health and health status.
- Include opportunities for communities to have an equitable role within health improvement efforts and initiatives.
- Foster institutional and organizational change.
- Include health equity as a basic consideration in all public health policy.

By embedding a racial and ethnic equity perspective into produce prescription research, this research can better illuminate whether and how these interventions do, in fact, mitigate disparities and articulate a role for them within broader health equity initiatives.



Researchers should implement community-based participatory research and equitable evaluation practices for all research and purposefully seek to investigate the experience of communities of color. At a minimum, research studies should be appropriately powered to allow for data disaggregated by race (where Program and evaluation resources are limited, philanthropy can play an important role in supporting a larger study population). However, this is only a first step. In their 2019 report, *How to Embed a Racial and Ethnic Equity Perspective in Research*, research experts Andrews, Parekh, and Peckoo note that a racial and ethnic equity perspective should be deliberately incorporated across “the entire research process—in study design, data collection and analysis, and interpretation of dissemination and findings.”<sup>231</sup> They propose five guiding principles for researchers to adopt (see Table 9) and identify a number of best practices for researchers to employ (see Table 10).

**Table 9. Racial and Ethnic Equity in Research: Guiding Principles<sup>232</sup>**

Researchers Should
1. Examine their own background and biases.
2. Make a commitment to dig deeper into the data.
3. Recognize that the research process itself has an impact on communities, and researchers have a role in ensuring research benefits communities.
4. Engage communities as partners in research.
5. Guard against the implied or explicit assumption that white is the normative, standard, or default position.

**Table 10. Racial and Ethnic Equity in Research: Stages of the Research Process<sup>233</sup>**

Practices at Each Stage of Research
<b>Landscape Assessment:</b> Before the study begins, the researcher should gain a better understanding of the context in which the research will be conducted by engaging stakeholders to gather their perspectives on the issue or concern of interest. Community stakeholder engagement will shape the research process and may uncover root causes of the issue.
<b>Design and Data Collection:</b> The researcher should develop research questions and designs that aim to advance racial and ethnic equity. To this end, researchers can involve racially and ethnically diverse research teams, construct a research design that is accepted by the community, <sup>234</sup> develop research questions that target root issues, and address equity when identifying data collection methods and instruments.
<b>Data Analysis:</b> In both qualitative and quantitative analysis, the researcher should disaggregate data, explore intersectionality, discuss data trends with appropriate context, beware of implicit bias, <sup>235</sup> and involve the community, where possible, in data interpretation.
<b>Dissemination:</b> The researcher should include the community as one of the multiple primary audiences of research findings, consider various formats for reporting findings, and prioritize actionable research findings that the community can use.

Research that fully adheres to community-based participatory research principles and takes additional steps to fully engage communities of color across the process may require longer timelines and more resources—but will likely yield more meaningful results. All funders, from government to philanthropic, should design evaluation requirements, Requests for Proposals, and Requests for Application to reflect the critical importance of centering Program participant perspectives in research design, implementation, analysis, and dissemination.<sup>236</sup>

**EXPAND RESEARCH ON METRICS THAT DRIVE DECISION-MAKING IN THE HEALTH CARE SECTOR**

**RECOMMENDATION 12**

**Support high-quality research on produce prescriptions, with an emphasis on enabling evaluation of metrics related to health outcomes, health care utilization, and health care costs.**

To realize the vision of establishing long-term funding for produce prescriptions it is critical to develop a robust body of evidence to guide Program development and investment of resources. In the past decade, analysis of over 20 studies evaluating health care referrals for produce prescriptions indicates that these interventions can reduce food insecurity, increase fruit and vegetable consumption, and have an impact on clinical biomarkers such as blood pressure and HbA1c.<sup>237</sup> Given the association of food insecurity and poor diet with serious chronic health conditions across the lifespan, the available data already make a compelling case for expanding access to produce prescriptions.<sup>238</sup>

**Table 11. Health Conditions Associated with Food Insecurity<sup>239</sup>**

Children	Non-Older Adults	Older Adults
<ul style="list-style-type: none"> <li>• Risk of some birth defects</li> <li>• Risk of hospitalization</li> <li>• Anemia</li> <li>• Lower nutrient intakes</li> <li>• Cognitive problems</li> <li>• Aggression</li> <li>• Anxiety</li> <li>• Asthma</li> <li>• Poor oral health</li> <li>• Depression</li> <li>• Suicidal ideation</li> <li>• Behavioral problems</li> <li>• Being in fair or poor health</li> </ul>	<ul style="list-style-type: none"> <li>• Decreased nutrient intake</li> <li>• Depression</li> <li>• Diabetes</li> <li>• Hyperlipidemia</li> <li>• Hypertension</li> <li>• Poor sleep</li> <li>• Being in fair or poor health</li> <li>• Worse oral health</li> </ul>	<ul style="list-style-type: none"> <li>• Decreased nutrient intake</li> <li>• Being in fair or poor health</li> <li>• Depression</li> <li>• Having limitation in activities of daily living</li> </ul>

However, given that public and private health care dollars are the most likely sustainable funding source for produce prescriptions in the long term, more research is needed to guide strategic investment. For example, health care interviewees (including both health care providers and health care payers) indicated that while they recognize the long-term value in supporting overall improved diet and reducing food insecurity, decisions about what services to provide to patients or to include in a member's benefit package are driven by potential impact on health care utilization, ability to meet health care quality metrics, cost, and patient/member experience.

Beyond impact on utilization, cost, and experience metrics, health care entities also frequently must deliver a standard level of service to a broad geography. This points to the importance of demonstrating impact that is consistent across locally-deployed and administered Programs. Health care decision-makers will be most compelled by research that:

- Has a robust study design (e.g., sufficiently large Randomized Control/Cross-Over Trials, or “quasi-experimental designs with low risk of bias”);<sup>240</sup>
- Evaluates health care claims, utilization, cost, and patient/member satisfaction metrics; and
- Answers as-yet-unaddressed questions about Program design (**see Recommendation 14**).

Research that can analyze health care claims together with clinical data for a relatively large population will require significant resources that—in most cases—will require an experienced evaluation team that is spread across multiple organizations and data-sharing agreements.

### **Funding Opportunities Through National Institutes of Health (NIH)**

The type of sophisticated and resource-intensive nutrition research outlined above is best supported by the NIH. Several large, multi-site studies evaluating the impact of produce prescriptions on health outcome and claims data could go a long way toward providing definitive evidence upon which health care entities can rely to make coverage and care determinations. Inquiries into the efficacy of produce prescriptions are also within the scope of the NIH Nutrition Research Task Force's *2020-2030 Strategic Plan for NIH Nutrition Research*.<sup>241</sup> Released in May 2020, the Strategic Plan identifies several Strategic Goals that research on produce prescriptions could help to meet, including defining the importance of nutrition across the life span and reducing the burden of chronic disease in clinical settings.<sup>242</sup> Within the broader Strategic Goals, the Strategic Plan identifies several relevant objectives, such as investigating the impact of nutrition on pregnant women, in early childhood, and in older adults, populations for which produce prescriptions are increasingly deployed in practice and for which multi-site studies would therefore be more than feasible.<sup>243</sup> NIH should provide guidance and training on food and nutrition interventions, including produce prescriptions, to grant application review panels to enable the best use of research funds.

### **Funding Through Centers for Medicare and Medicaid Services (CMS)**

Beyond NIH, CMS also has an important role to play in evaluating the impact of produce prescriptions on health care outcomes, claims, and costs. CMS has the authority to conduct large-scale demonstrations through CMMI and/or approval of state Medicaid waiver programs (**see Recommendations 1 and 4**), and it holds much of the data needed to evaluate claim and cost

impacts. And while these interventions are currently in use (along with a suite of other food and nutrition interventions) in Medicaid demonstration programs in Massachusetts, North Carolina, and Oregon, there is no focused/coordinated evaluation of their specific impact underway.<sup>244</sup> Given the projected cost-effectiveness of Produce Prescription Programs,<sup>245</sup> CMS and State Medicaid Agencies should use their waiver and demonstration project authorities to develop robust evaluations of produce prescription services.

**Funding Through Philanthropy**

Philanthropy also has a critical role to play in helping to build the produce prescription evidence base. Where funding for evaluation is limited (e.g., for GusNIP produce prescription initiatives, only 25% or less of granted funds may be used for administration of the entire program and thus must include evaluation),<sup>246</sup> philanthropy can step in to support more rigorous data collection and analysis, especially to enable collection of health care claims and cost data. Philanthropic funding can also leverage government research funding by providing support for a truly comprehensive investigation that looks at participant experience outcomes and is informed by and in alignment with racial justice and equity principles (**see Recommendations 11 and 13**).

**Importance of Common Evaluation Metrics**

Finally, to build a robust evidence base and create consistent expectations, funders, researchers, and Produce Prescription Programs should commit to pursuing common evaluation metrics where feasible. There are early examples, such as the health care metrics put forth by GusNIP NTAE (**see Table 12, which builds upon this list**), but additional work remains to be done to build consensus.

**Table 12. Examples of Produce Prescription Health Care Clinical and Utilization Metrics<sup>247</sup>**

Utilization	
<ul style="list-style-type: none"> <li>• Number of participant hospitalizations</li> <li>• Number of 30-day readmissions</li> <li>• Number of no-shows to clinic appointments</li> </ul>	<ul style="list-style-type: none"> <li>• Number of non-emergent ED visits</li> <li>• Number of participant well-visits</li> </ul>
Cost	
<ul style="list-style-type: none"> <li>• Total cost (and costs associated with changes in utilization metrics described above)</li> </ul>	
Health Conditions	Example Metric
<ul style="list-style-type: none"> <li>• Diabetes</li> </ul>	<ul style="list-style-type: none"> <li>• HbA1c</li> </ul>
<ul style="list-style-type: none"> <li>• Obesity</li> </ul>	<ul style="list-style-type: none"> <li>• Height/weight</li> </ul>
<ul style="list-style-type: none"> <li>• Dyslipidemia</li> </ul>	<ul style="list-style-type: none"> <li>• LDL/TG/HDL/TC</li> </ul>
<ul style="list-style-type: none"> <li>• Depression</li> </ul>	<ul style="list-style-type: none"> <li>• PHQ9</li> </ul>
<ul style="list-style-type: none"> <li>• Anxiety</li> </ul>	<ul style="list-style-type: none"> <li>• GAD7</li> </ul>

Health Conditions	Example Metric
<ul style="list-style-type: none"> <li>Hypertension</li> </ul>	<ul style="list-style-type: none"> <li>BP (mm Hg)</li> </ul>
Health and Participant Experience	
Aspect of Experience	Measurement Tool
<ul style="list-style-type: none"> <li>Stress</li> </ul>	<ul style="list-style-type: none"> <li>PSS-4 (Perceived Stress Scale)</li> </ul>
<ul style="list-style-type: none"> <li>Self-Reported Healthy Days</li> </ul>	<ul style="list-style-type: none"> <li>CDC HRQOL-4 (CDC's Healthy Days Core Module)</li> </ul>
<ul style="list-style-type: none"> <li>Social Isolation / Loneliness</li> </ul>	<ul style="list-style-type: none"> <li>Short R-UCLA Loneliness Scale (3-item)</li> </ul>
<ul style="list-style-type: none"> <li>Medication Adherence</li> </ul>	<ul style="list-style-type: none"> <li>Pooler and Srinivasan, 2019 (3-item)<sup>248</sup></li> </ul>
<ul style="list-style-type: none"> <li>Food Insecurity</li> </ul>	<ul style="list-style-type: none"> <li>2-item Hunger Vital Sign</li> <li>6-Item Short Form USDA-FSSM (to detect longitudinal change)</li> </ul>

## RECOMMENDATION 13

### Strive to track key patient-reported and participant experience outcomes.

Stakeholders emphasize that participant experience should be a central component of how Produce Prescription Programs are assessed and that not every Program will have the capacity to engage in research that assesses impact on health care claims or biomarkers. While the ability to consistently track and report clinical health outcome and health care utilization metrics may vary according to Program size and research capacity, almost every Program can collect critically important data on participant experience. Research continues to illuminate a complex interplay between food insecurity, chronic stress, and increased risk for or exacerbated symptoms of physical and behavioral health conditions.<sup>249</sup> A demonstrated positive impact on participant stress-level and quality of life should therefore weigh heavily in favor of investing in and scaling this intervention.

Where biomarkers and health cost data are unavailable, Programs can incorporate validated questions that evaluate perceived stress into participant experience surveys without imposing undue burden on participants. See, for example, the survey questions comprising the PSS-4 (Perceived Stress Scale) and the CDC HRQOL-4 (CDC's Healthy Days Core Module) below:<sup>250</sup>

**Table 13. Perceived Stress Scale - 4 Item**

1. In the last month, how often have you felt that you were unable to control the important things in your life?
___0=never ___1=almost never ___2=sometimes ___3=fairly often ___4=very often

2. In the last month, how often have you felt confident about your ability to handle your personal problems?
___0=never ___1=almost never ___2=sometimes ___3=fairly often ___4=very often
3. In the last month, how often have you felt that things were going your way?
___0=never ___1=almost never ___2=sometimes ___3=fairly often ___4=very often
4. In the last month, how often have you felt difficulties were piling up so high that you could not overcome them?
___0=never ___1=almost never ___2=sometimes ___3=fairly often ___4=very often

**Table 14. The CDC’s Healthy Days Core Module (CDC HRQOL-4)**

1. Would you say that in general your health is: Excellent, Very good, Good, Fair or Poor?
2. Now thinking about your physical health, which includes physical illness and injury, for how many days during the past 30 days was your physical health not good?
3. Now thinking about your mental health, which includes stress, depression, and problems with emotions, for how many days during the past 30 days was your mental health not good?
4. During the past 30 days, for about how many days did poor physical or mental health keep you from doing your usual activities, such as self-care, work, or recreation?

Changes in these measures are meaningful for funders, Programs, and—not least—for participants themselves (**see Recommendation 14 for more on including and centering participant perspectives in research**). With respect to health care, patient experience and satisfaction factor into the Medicare Advantage Star Rating System,<sup>251</sup> and at least one large insurer has made major investments in health-related social need interventions after finding that costs to its Medicare Advantage plans increased at least \$15.64 per member per month with each reported unhealthy day.<sup>252</sup> Administrators of Produce Prescription Programs themselves have also identified reduction in participant stress and improvement in quality of life as some of their primary Program goals.<sup>253</sup>

Yet the impact of Produce Prescription Programs on stress and self-reported health remains underexplored in the current literature, although it is increasingly measured in studies that evaluate other nutrition interventions such as provision of medically tailored meals and food packages.<sup>254</sup> We can anticipate more data on healthy days and produce prescriptions to emerge over the next few years, given that elements of the CDC HRQOL-4 are included within the list of data points that Produce Prescription Programs supported by GusNIP (10 in 2020) must collect.<sup>255</sup> However, GusNIP grantees represent only a fraction of the active Produce Prescription Programs in the country. If all Programs collected at least some of the same key information (**see examples in Table 12**), policymakers could identify essential Program elements that yield a consistent level of impact across different Program models.

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## RECOMMENDATION 14

### Study key elements of Program design that may impact outcomes, participant experience, and implementation costs.

As noted above, health care decision-makers will be motivated not only by research that evaluates health outcomes, participant experience, and, crucially, costs, but also research that assesses how key elements of Program design influence these issues. Stakeholders highlighted a range of questions related to Program design where additional guidance would be helpful in promoting and guiding investment in Produce Prescription Programs, such as:

- Appropriate “dose” and duration (how large the subsidy/benefit must be and how long it must be delivered to see a desirable result in a particular setting and/or patient population);
- Program scope (e.g., intervention provided only to an individual vs. to the entire household);
- Impact of including nutrition education in Program services, including variation in types of education and degree of intensity; and
- Replicability of effect across Program access points (e.g., redeemable at a grocery store vs. farmers market or food pantry).

One factor worthy of particular attention is the prescription redemption mechanism. The selected mechanism impacts participants both through their experience of “spending” their prescription, including how likely they are to do so, and by determining which retail sites will be available for redemption. Stakeholders described a number of benefits and challenges associated with the various types of mechanisms in use or development; these observations are summarized in **Appendix B**. Emerging redemption method options should be studied to evaluate how well they each achieve access and efficiency, as well as their impact on health equity more broadly and on the availability of produce prescriptions in different contexts.

**Redemption Mechanism Guiding Principles:** Stakeholder interviews and research indicate that successful, equitable redemption methods are those that promote access and efficiency.

- **Access.** The redemption mechanism must be easy to use for a broad range of Program participants. It should be culturally appropriate and accessible in multiple languages and for users with disabilities. It should also be secure and limit the use or collection of personal information to only that which is necessary to administer the Program. Redemption mechanisms should also be accessible to retailers with various point-of-sale (POS) systems, including farm-direct vendors, corner stores, and small- and mid-sized grocers.
- **Efficiency.** The instrument should be easy to use at the point of sale; require minimal cashier training or intervention in the transaction; integrate with retailer recording-keeping systems to provide accurate data; and ensure full retailer reimbursement.

While some stakeholders expressed a desire to move to electronic redemption mechanisms and shared promising developments in this direction,<sup>256</sup> this approach may not be feasible or appropriate for all Programs. Research on the transition from paper-based food instruments to electronic benefits in WIC indicated that participant and retailer experience improved with the transition;<sup>257</sup> however, distinguishing factors limit the transferability of those lessons to the produce prescription context.<sup>258</sup> Importantly, some stakeholders have observed that the tangible nature of a physical voucher can enhance participant awareness of the Program and consequent benefit usage. Others have found that the simplicity of the voucher-based approach has allowed Programs to reach participants and retailers for whom electronic redemptions are impractical or misaligned with current practices and systems. Thoughtful study of these dynamics is thus warranted.

Employing the principles described in **Recommendation 11**, researchers should evaluate Program design elements through a health equity lens. Among the features examined, the impact of redemption mechanisms on Program access and participant experience and utilization should be a particular subject of focus. Research on all elements of Program design should inform broader efforts to develop guidance for Produce Prescription Programs nationwide (**see Recommendation 20**).

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### III. Patient Data and Privacy

Throughout our interviews, many stakeholders highlighted the importance of data sharing to successful and effective Produce Prescription Programs—to basic operations (e.g., for patient referrals), to building a robust evidence base to support investment, and to quality improvement. However, Program implementers also reported that issues related to data sharing can act as a barrier to partnerships with health care payers and providers. In particular, stakeholders noted tensions between the need for data; the desire to protect participant privacy; and the legal, financial, and administrative burdens associated with navigating state and federal privacy laws—especially in the absence of clear guidance from government officials.

The recommendations in this section respond to these comments by identifying actions that can be taken to address barriers to data while preserving patient privacy. Specifically, recommendations in this section call for government and organizational action to:

- 1. Clarify the application of privacy laws to social service providers; and**
- 2. Set baseline principles to protect privacy in all Produce Prescription Programs.**



# CLARIFY THE APPLICATION OF PRIVACY LAWS TO SOCIAL SERVICE PROVIDERS

## RECOMMENDATION 15

### **Clearly articulate how social service providers, including Produce Prescription Programs, fit within legal landscapes governing patient privacy.**

Over the last several decades, laws have emerged and evolved to safeguard patient privacy in the age of digitized health information and electronic transactions. The federal Health Information Portability and Accountability Act of 1996 (HIPAA) sets a floor for patient privacy protections across the country. States are permitted to build upon this floor by imposing additional protections via state law. These federal and state patient privacy laws were cited by some interviewees as barriers to establishing new partnerships and Programs. For many, difficulties are largely associated with the complex nature of these laws and uncertainty regarding how they apply to Produce Prescription Programs.

Across the years, HIPAA and state privacy laws have been clarified through thousands of pages of regulatory and sub-regulatory materials. However, HHS and states have historically been slow to address the ways in which privacy laws specifically apply to partnerships between health care and social service providers. Without clear guidance, health care organizations and their Produce Prescription Program partners often resort to default approaches to compliance with privacy laws, resulting in organizations taking on legal obligations that may not be appropriate or necessary.<sup>259</sup> Among other issues, this approach creates significant legal costs for parties including costs for compliance counseling, contracting support, and liability insurance.

#### **Providing Clarity Regarding the Current Framework**

Federal and state agency officials should directly resolve these uncertainties. By providing detailed, specific guidance and associated tools, regulators will reduce barriers to compliance, facilitate data-based activities, and support patient privacy rights. At the federal level, for example, HHS should:

- Expand on existing HIPAA guidance regarding permissible disclosures to social service providers;<sup>260</sup>
- Make clear the circumstances in which a business associate relationship between parties is actually created; and
- Aid social service providers who do step into the business associate role in navigating responsibilities and expectations.

Importantly, HHS currently offers an impressive range of resources, including implementation

FAQs, technical assistance materials, and model contract language; however, these resources rarely target—or even address—social service providers.

States can take similar steps to facilitate partnerships between the health care and social service sectors. One regulator that has undertaken this type of initiative is the California Health and Human Services Agency. The agency's Office of Health Information Integrity (CalOHII), responsible for ensuring that other California state departments are compliant with patient privacy laws, is in the process of publishing guidance to clarify federal and state law with a focus on the sharing of patient information between health care providers and providers of food and nutrition services.<sup>261</sup>

Finally, in the absence of state or federal guidance, legal experts—including individual lawyers, law firms, and legal scholars—can work to resolve uncertainties by publishing articles and tools that discuss common questions regarding the application of privacy laws to partnerships between health care and social service providers. In doing so, these experts can provide practical insights for organizations struggling with privacy issues, and bring national attention to issues that may require policy change.

### **Building on the Current Framework**

In some cases, patient privacy laws may prohibit, unnecessarily restrict, or unduly burden information sharing between health care and social service providers in a way that guidance cannot resolve. In such instances, regulators should create new, express regulatory permission and related parameters for produce prescription and other programs that meet the health-related social needs of patients. This approach is currently under consideration by HHS.<sup>262</sup>

In creating new regulations, officials have a valuable opportunity to address aspects of information sharing that do not fit neatly into pathways laid out by the current legal framework. However, it is critical that these changes be based on a nuanced and comprehensive understanding of Produce Prescription Programs and similar interventions, including the many different stakeholders, structural arrangements, and intended uses of information. Regulation or guidance that addresses, for example, disclosures for purposes of day-to-day operations but not the research objectives of Produce Prescription Programs will not meet existing need or suffice to support the vision set forth above.

## SET BASELINE PRINCIPLES TO PROTECT PRIVACY IN ALL PRODUCE PRESCRIPTION PROGRAMS

### RECOMMENDATION 16

#### **Identify best practices and principles for protecting patient privacy in Programs that do not implicate specific patient privacy laws.**

It may be possible to structure a Produce Prescription Program in a manner that does not subject entities receiving patient information from a health care provider or health plan to patient privacy laws. (Under HIPAA, for example, disclosures authorized by patients and permissible disclosures for treatment purposes provide this kind of pathway.) Even so, the integration of appropriate privacy protections is foundational to building and maintaining trust with participants, respecting participant autonomy, and ensuring high-quality data. Accordingly, Produce Prescription Programs that are exempt from privacy laws should still adopt best practices and principles for protecting privacy that are appropriate to the information they receive. At a minimum, this should involve:

- Conducting a risk assessment that reviews the information available to the Produce Prescription Program, disclosures and uses of information within the Program, and privacy/security vulnerabilities. The risk assessment should be documented.
- Developing and maintaining a written policy that responds to the risk assessment with strategies to minimize vulnerabilities.

HIPAA and analogous state laws offer several key principles to inform best practices, including an emphasis on patient consent, minimum necessary standards (the idea that organizations should take reasonable steps to limit how they use and disclose information to what is minimally necessary to accomplish an intended purpose),<sup>263</sup> and consideration of a range of types of safeguards (e.g., physical, technical, and administrative).<sup>264</sup> By adopting these approaches proactively, Produce Prescription Programs can also better prepare themselves to engage in future services or partnerships that do require active compliance with HIPAA and other patient privacy laws.

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## IV. Infrastructure

Stakeholders in our interviews and feedback session emphasized the importance of establishing the infrastructure needed to achieve widespread access to Produce Prescription Programs. In particular, stakeholders noted the need for: (1) health care providers who understand the value of referring patients to Produce Prescription Programs; (2) accessible food retailers where participants can redeem produce prescription benefits; and (3) support for different types of retailers in accessing and implementing redemption technology advancements.

The recommendations in this section respond to these comments by identifying actions that can be taken to create the infrastructure needed to support referrals to and redemption of produce prescription benefits. Specifically, recommendations in this section call for government and organizational action to:

- 1. Improve health care provider nutrition education;**
- 2. Expand access to retailers that sell produce; and**
- 3. Support access to redemption technology advancements.**

### IMPROVE HEALTH CARE PROVIDER NUTRITION EDUCATION

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#### RECOMMENDATION 17

#### **Prepare health care providers to appropriately screen patients for food insecurity, provide basic nutrition counseling, and provide referrals to nutrition interventions such as produce prescriptions.**

Health care providers recognize that screening patients for food insecurity, providing basic nutrition counseling, and referring patients to nutrition interventions such as produce prescriptions are key components of effective, patient-centered care.<sup>265</sup> However, many report feeling ill-prepared and uncertain of how to perform these tasks.<sup>266</sup> This low self-efficacy is not surprising given the lack of nutrition-related education in degree programs for medical professionals. Seventy-one percent of U.S. medical schools fail to meet the National Research Council's nutrition education recommendation of 25-hours over four years.<sup>267</sup> Studies have also shown that dental schools and physician assistant programs provide little opportunity to hone these skills.<sup>268</sup>

Groups such as the American Heart Association (AHA),<sup>269</sup> American Academy of Nutrition and Dietetics (AND),<sup>270</sup> and the American Dental Association (ADA)<sup>271</sup> have persistently advocated for

stronger nutrition education requirements across disciplines. Their reports, recommendations, guidelines, and resolutions have improved awareness of the topic and advanced the conversation, but it is time for decision-makers to spur actual change. State and federal agencies, commissions and councils, and discipline-specific boards should incentivize the integration of nutrition education—including education on screening and referral to Produce Prescription Programs<sup>272</sup>—across undergraduate and training programs, graduate education, and continuing education through accreditation criteria and funding opportunities, licensing exam content, and continuing education requirements (see Table 15).<sup>273</sup>

**Implicit Bias Training:** As noted earlier, biases related to race, ethnicity, and income, continue to create barriers to care for many individuals across the United States, and especially for BIPOC populations. The levers described in this section can also be used to promote and improve training on implicit bias<sup>274</sup> for all health care providers as one strategy to reduce discrimination in clinical decision-making and patient-provider interactions, including those focused on nutrition.

### Accreditation and Funding

Almost all health care professions require a degree from an accredited university or program. Accrediting bodies and professional standards developers should change accreditation criteria to require nutrition education content within undergraduate and graduate curricula. For example, the American Association of Colleges of Nursing (AACN) could update their baccalaureate, graduate, doctorate, and clinical curriculum standards on which accreditation is based to require nutrition-related coursework and clinical experiences for future nurses.<sup>275</sup> State and federal agencies (as well as private funders) can also incentivize nutrition education across these accredited programs by establishing financial rewards for schools who enhance their offerings.<sup>276</sup>

### Licensing Exam Content

Physicians, dentists, physician assistants, and nurses must all take board certification exams to practice legally. Accordingly, educational programs tailor their curriculums to “teach to the test.”<sup>277</sup> Evaluations of licensing content and study materials have illustrated that if nutrition-focused questions are included in these exams, they typically focus on nutrition science topics such as micronutrients rather than on the practical skills of using nutrition to address chronic disease and food insecurity.<sup>278</sup> Licensing exam bodies, such as the National Council of State Boards of Nursing, the National Board of Dental Examination, the National Board of Medical Examiners, and the National Commission on Certification of Physician Assistants should incorporate questions about nutrition knowledge and competency to prompt greater attention to these topics in curricula.

### Continuing Education Requirements

Most health care providers are required to engage in continuing education to maintain relevant knowledge and skillsets while practicing in the field. Discipline-specific state boards dictate the continuing education requirements for most health care providers residing in their state. Some states set hour requirements for particular topics such as domestic violence, basic life support, child abuse identification and reporting, opioids, HIV/AIDS, and LGBTQ health.<sup>279</sup> Adding nutrition

education as a required topic would not only enhance provider training but would most likely influence continuing education providers to expand their nutrition-related offerings.

### Professional Associations

Professional associations are strong advocates; many are directly involved with curriculum development, and most are continuing education providers. As a result, professional associations have the power to enhance nutrition education within all three of the categories listed above. Messaging from key groups like AHA and ADA advocating for enhanced nutrition education should be amplified by others, especially the American Academies of Physician Assistants, the American Nurses Association, and the National Association of Community Health Workers. While advocating for broader change, professional organizations should increase their nutrition-related continuing education offerings. Introductory topics could include strategies to have productive conversations with patients about food and nutrition, the most effective food insecurity screening and referral strategies, and how to partner with community-based nutrition services.

**Table 15. Nutrition Education Decision-Makers**

	Accreditation Criteria	Licensing Exam Contents	Continuing Education Requirements
<b>Physicians</b>	<ul style="list-style-type: none"> <li>Liaison Committee on Medical Education (LCME)</li> <li>American Council of Graduate Medical Education (ACGME)</li> </ul>	<ul style="list-style-type: none"> <li>Federation of State Medical Boards</li> <li>National Board of Medical Examiners</li> </ul>	State Boards of Medical Examination
<b>Dentists</b>	<ul style="list-style-type: none"> <li>Commission on Dental Accreditation (CODA)</li> <li>American Dental Education Association (ADEA)</li> </ul>	<ul style="list-style-type: none"> <li>National Board of Dental Examination</li> </ul>	State Dental Boards <sup>280</sup>
<b>Physician Assistants</b>	<ul style="list-style-type: none"> <li>Accreditation Review Commission on Education for the Physician Assistant (ARC-PA)</li> <li>Physician Assistant Education Association (PAEA)</li> </ul>	<ul style="list-style-type: none"> <li>National Commission on Certification of Physician Assistants (NCCPA)</li> </ul>	Most states use NCCPA certification as a proxy for satisfying CE requirements, but this can vary by state. <sup>281</sup>
<b>Nurses</b>	<ul style="list-style-type: none"> <li>Accreditation Commission for Education in Nursing (ACEN)</li> <li>Commission on Collegiate Nursing Education (CCNE)</li> <li>American Association of Colleges of Nursing (AACN)</li> </ul>	<ul style="list-style-type: none"> <li>National Council of State Boards of Nursing (NCSBN)</li> </ul>	State Boards of Nursing
<b>Community Health Workers</b>	No nationally accredited certification program. Certification/training standards vary by state. <sup>282</sup>	Only some states require an exam after training. <sup>283</sup> State health departments typically coordinate CHW policy. <sup>284</sup>	State-based associations and local boards of health may set requirements.

**RECOMMENDATION 18**

**Expand and enhance programs that support the viability of healthy food retailers, especially in low-income or historically marginalized communities.**

The success of Produce Prescription Programs depends on participants’ ability and desire to buy high quality produce from retailers that are convenient to them and where they feel comfortable shopping. The legacy of disinvestment in communities of color and tribal and rural communities means that many of the communities that could most benefit from Produce Prescription Programs do not have the robust retail infrastructure to support them.<sup>285</sup> Stakeholders we spoke with indicated that a lack of ready access to retailers selling a variety of high quality produce and/or transportation continue to be challenges in successful implementation. As Produce Prescription Programs expand and seek to reach patients across the country, additional retail infrastructure will be necessary to meet the increased demand for fruits and vegetables. Efforts to meet this need will also help to more broadly establish healthy food environments, a necessary precondition to achieving health equity within these communities.

The lack of access to healthy food retail in many communities has been well-documented and various federal, state, and local agencies have targeted funding streams that can support new or existing food retail. **Table 16** outlines some of these funding mechanisms, with a focus on federal programs.

**Table 16. Examples of Funding Mechanisms to Support Healthy Food Retail**

Program	Agency	Details of Approach
<p><b>Healthy Food Financing Initiatives</b></p>	<p>USDA Rural Development Agency; various state and local government agencies</p>	<ul style="list-style-type: none"> <li>• Initiatives provide grants, low-interest loans, and tax credits for a variety of food retail and supply chain projects.</li> <li>• USDA’s Rural Development Agency subcontracts with The Reinvestment Fund to manage the federal Healthy Food Financing Initiative (HFFI) loans and grants, and provide technical assistance, for food retail and food enterprises seeking to improve access to healthy foods in underserved areas.<sup>286</sup></li> <li>• Many states and local governments administer their own initiatives, such as those in Pennsylvania<sup>287</sup> and Baltimore.<sup>288</sup></li> </ul>

Program	Agency	Details of Approach
<b>USDA Business &amp; Industry Loan Guarantees</b>	USDA Rural Development Agency	<ul style="list-style-type: none"> <li>• Supports, through loan guarantees, financing for projects that improve, develop, or finance business, industry, and employment and improve the economic and environmental climate in rural communities, among other purposes.<sup>289</sup></li> <li>• Eligible projects include those that distribute, aggregate, store, and/or market locally or regionally produced agricultural food products to support community development and farm and ranch income, including projects that expand access to healthy food retail in rural and underserved areas.<sup>290</sup></li> </ul>
<b>Farmers Market &amp; Local Food Promotion Program</b>	USDA Agricultural Marketing Service	<ul style="list-style-type: none"> <li>• The Farmers Market Promotion Program provides grant funds to develop, coordinate, and expand direct producer-to-consumer markets (e.g., farmers markets) to increase access to and availability of locally and regionally produced agricultural products.<sup>291</sup></li> <li>• As a complementary program focused on supporting supply chains, the Local Food Promotion Program funds the development, coordination, and expansion of local and regional food business enterprises that act as intermediaries to help increase access to and availability of locally and regionally produced agricultural products.<sup>292</sup></li> </ul>
<b>Community Food Projects Competitive Grant Program</b>	USDA NIFA	<ul style="list-style-type: none"> <li>• Provides grant funding for community-based projects designed to support the food security of low-income individuals by creating systems that improve the self-reliance of communities over their food needs, particularly through projects that mutually benefit agricultural producers and low-income consumers.<sup>293</sup></li> </ul>
<b>Community Economic Development Grants</b>	HHS	<ul style="list-style-type: none"> <li>• Provides grant funding for Community Development Corporations to address the economic needs of low-income individuals and families through sustainable business development and employment opportunities.<sup>294</sup></li> <li>• Formerly a more formal part of federal HFFI, these grants have been used to support healthy food retail in underserved areas.<sup>295</sup></li> </ul>
<b>Community Development Financial Institution Fund</b>	U.S. Dept. of the Treasury	<ul style="list-style-type: none"> <li>• A Community Development Financial Institution (CDFI) is a mission-driven financial institution that serves low-income or economically distressed communities.<sup>296</sup></li> <li>• Also under the HFFI umbrella, the CDFI Fund funnels money to CDFIs to support investment in healthy food businesses in low-income neighborhoods. The Fund awarded \$22 million to such projects in 2020.<sup>297</sup></li> </ul>
<b>Community Development Block Grants (CDBG)</b>	U.S. Dept. of Housing & Urban Development	<ul style="list-style-type: none"> <li>• Provides annual formula grant funding to states, cities, and counties to develop urban communities by creating a suitable living environment and expanding economic opportunities, in addition to providing housing.<sup>298</sup></li> <li>• Funds may be used to develop and improve healthy food retail where projects align with eligible CDBG activities.<sup>299</sup></li> </ul>
<b>Small Business Loan Guarantee Programs</b>	U.S. Small Business Administration	<ul style="list-style-type: none"> <li>• Supports lending to small businesses, such a food retailers, through loan guarantee programs, including the 7(a) loan program and the 504 Certified Development Company loan guaranty program.<sup>300</sup></li> </ul>



Increased investment via these funding streams (and others like them) will be crucial to the success of Produce Prescription Programs. Produce Prescription Programs may, in turn, improve the health impacts of new retail establishments by increasing the purchasing power of individuals in the community.<sup>301</sup>

The new Administration should therefore convene the federal agencies that provide financial support for food retail with food industry researchers, representatives (both farm-direct and brick and mortar), and lenders to reinvigorate and increase their efforts to improve equitable food environments. Additionally, these actors should meet with Produce Prescription Program practitioners to collaboratively assess the impact of their Programs to date and strategize on the infrastructural improvements that will be needed for widespread rollout of these Programs.

**Equity in Healthy Food Financing:** Healthy food financing initiatives—broadly speaking and with exceptions—have faced scrutiny for failing to address the root causes of food insecurity (e.g., persistent poverty, absence of economic opportunities, structural racism) and for perpetuating disparities the programs purport to address.<sup>302</sup> As policymakers take up this recommendation, they should evaluate these financing mechanisms through an equity lens to better ensure that funding opportunities are available for community-centered healthy food retail development projects. They should consult with the food-focused enterprises and organizations that have been working to identify shortcomings with current financing opportunities and propose solutions, such as the Equitable Food Oriented Development (EFOD) Collaborative.<sup>303</sup>



## SUPPORT ACCESS TO REDEMPTION TECHNOLOGY ADVANCEMENTS

### RECOMMENDATION 19

#### **Provide funding and coordination for the implementation and maintenance of technology solutions for produce prescription transactions.**

While many of the stakeholders with whom we spoke expressed interest in electronic redemption mechanisms, the investment needed to develop, implement, and maintain such a system can be cost-prohibitive for Produce Prescription Programs and their retail partners. The current scale and structure of Produce Prescription Programs makes the return on investment for upgrading POS systems or purchasing new technology appear minimal relative to cost.<sup>304</sup> As Produce Prescription Programs expand, the largest retail chains will be poised to leverage economies of scale and in-house resources to integrate electronic redemption into their POS systems<sup>305</sup> while small and mid-sized independent grocers, corner and convenience stores, and farm-direct retailers will

struggle to implement similar upgrades and innovations. Since these are often the retailers likely to be located in low-income communities, funding must be made available to mitigate these costs, pilot systems tailored to these different retailers, and ensure the equitable involvement of the whole range of food retailers.

USDA has historically subsidized transaction equipment for retailers serving SNAP and WIC program participants,<sup>306</sup> creating a federal precedent for such funding. USDA has also issued technical requirements for each program and the POS industry, in turn, has integrated the required functions into their products.<sup>307</sup> Although produce prescription design and transaction mechanisms are not similarly standardized, the federal government can leverage its resources to co-create the ecosystem in which these instruments align with retailer technology.

The task force described below in **Recommendation 20** should take up the task of surveying and evaluating electronic prescription mechanisms currently in use or development and assess the solutions that show the most promise in addressing access and efficiency while positively impacting health equity. Ideally, this project would utilize or coordinate with research efforts undertaken in accordance with **Recommendation 14**. The Office of Science and Technology Policy could be engaged if it seems that new ideas are necessary to improve implementation. The group could then recommend that POS and record-keeping upgrades necessary to participate in Produce Prescription Programs be included as eligible uses of healthy food retail grant and loan programs. Meanwhile, philanthropic dollars would be well spent piloting technology solutions appropriate for the various types of retailers that need to be involved to make Produce Prescription Programs truly accessible, with the caveat that physical vouchers may continue to be the optimal redemption method for certain Programs.

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## V. Advancing the Field

Across our interviews and feedback session, a range of stakeholders highlighted the lack of guidance available to facilitate creation of or participation in Produce Prescription Programs. Produce Prescription Programs link two very different sectors—health care and food retail. While there is increasing acceptance that health care can be measured and improved outside of the physical health care setting, doing so effectively can be challenging. If improperly aligned to the current culture of care and food retail practice, produce prescriptions will be inadequately issued or insufficiently redeemed. Program managers can play a critically important role by connecting the health care and food retail sectors around a Program that benefits both. This requires understanding how both work, their respective operational requirements and priorities, and the knowledge to provide options that can allow their different systems to align. They can manage the tension between standardization and flexibility—offering appropriate practices to address the specific needs of the communities in which they operate.

The recommendation in this section responds to these comments by identifying actions that can be taken to develop and disseminate guidance regarding common barriers, questions, and approaches in Produce Prescription Programs while allowing for local flexibility. Specifically, the recommendation in this section calls for government and organizational action to establish a task force to advance the field of Produce Prescription Programs.

## ESTABLISH A TASK FORCE TO ADVANCE THE FIELD OF PRODUCE PRESCRIPTION PROGRAMS

### RECOMMENDATION 20

#### **Establish a task force to develop strategic guidance on Program design, research, and future directions for the field.**

Produce Prescription Programs seek to improve health and to reduce health disparities. Variations in Program design play an important role in how well Programs achieve this ambitious aim. Food choices are based on food dollars available as well as physical access to good stores, available time, knowledge, and culture. Produce Prescription Programs operating in the United States therefore use a range of approaches to support the consumption of a healthy diet among low-income households. While all Programs address cost by providing dedicated funds to buy healthy fruits and vegetables, some add social and educational components, or focus on needs of specific communities, engaging small stores or creating farm-direct relationships in an effort to improve the overall food environment.

The diversity in Produce Prescription Program design is a strength of the field. Too often the rush to standardization and scaling has left out consumers and retailers with fewer financial resources. The ability to modify certain variables in Program design offers practitioners the opportunity to evaluate and adjust to better achieve their objectives, mindful of the trade-offs or unintended consequences the changes will bring.

**Example - Impact of Program Objectives:** Individual Program objectives determine the priorities which inform subsequent design and evaluation decisions.

- **Objective – Detailed Data on Large Population:** If the Program’s objective is to reach and provide detailed data on a large population, the Program must work with partners that can reach the population efficiently and integrate large quantities of health and purchase data to evaluate the prescription’s impact. This means that the Program must be implemented with retailers that have the capacity to roll it out across many stores and can efficiently integrate a prescription into an existing system that captures individual purchase data (e.g., a loyalty card). This will exclude some retailers and some

potential participants if they do not live near a participating store but it will meet the Program's objectives and provide the larger field valuable information.

- **Objective – Ease of Use:** In contrast, another Program's objective might be to make it as easy as possible for patients to use their prescriptions by including as many retailers as possible within walking distance of a clinic with a secondary goal of improving the overall food environment in the neighborhood. Many retailers in low-income communities do not use systems that track shoppers and the items they purchase. While this Program will not be able to collect the same degree of detail on individual shoppers as the one above, a rigorous evaluation can assess success by looking at other metrics including patient participation and engagement, patient health indicators, wholesale produce purchases and sales at participating retailers, and potentially the expansion of produce options at other neighborhood retailers.

However, this does not mean that a guiding framework or standards of excellence cannot be developed for Produce Prescription Programs. While Programs can look very different, there are core decisions that all have to make. Understanding these decision points, as well as the costs and benefits associated with particular options, can help Program leaders make the decisions most appropriate for their patients and their Program objectives. As our interviewees noted, though, little such guidance currently exists.

To fill this gap, a task force could be established within HHS—potentially at CMMI—to convene experts from fields engaged in Produce Prescription Program design, implementation, and evaluation. Such experts could include but not be limited to: government agencies, including tribal government and administrators of GusNIP; representatives of associations of public and private health care payers and providers; associations representing the range of food retailers and the electronic payments industry; university researchers focused on health care, health disparities, the food industry, and community development; and practitioners. The task force should be staffed and would be charged with:

- Collecting information on existing publicly- and privately-funded Produce Prescription Programs;
- Conducting a comprehensive literature review;
- Identifying additional research that can be done with existing Program data, as available;
- Clarifying recommended methods of prescription issuance, redemption, and data tracking;
- Cataloging promising corollary services offered in conjunction with prescriptions;
- Considering and recommending ways to reduce administrative costs to maximize funds directed to produce for patients;
- Highlighting gaps in knowledge for future research; and
- Establishing criteria for future, model projects.

In developing this guidance, the task force will need to highlight considerations that influence Program design and success from the perspective of Program administrators, partners, and

participants. As noted at the outset of this section, Produce Prescription Programs link two distinct sectors—health care and food retail—each with their own processes, systems, and needs. And most fundamentally, success requires that the patient-shopper understands the Program when they receive the prescription and that they feel comfortable when they use it to buy produce and enjoy preparing and eating it. Examples of considerations for each of these stakeholder groups are summarized in **Table 17**.

**Table 17. Considerations in Program Design**

Stakeholder Group	Considerations
<p><b>Health Care / Program Administrator Considerations</b></p>	<ul style="list-style-type: none"> <li>• What are the objectives of the Program?</li> <li>• What are the criteria for participant group?</li> <li>• What dosage and duration of benefits will allow us to meet Program objectives?</li> <li>• What produce will be eligible for purchase as part of the Program?</li> <li>• How will the Program be communicated to patients?</li> <li>• What criteria will be used to select retail partners?</li> <li>• How will retailers be reimbursed for prescriptions redeemed for produce (how often and by whom)?</li> <li>• What purchase data will be required from retailers? How often will this data be collected and in what format?</li> <li>• Who will be retailer liaison for choice of instrument, trouble-shooting, and compliance assurance?</li> <li>• What will evaluation design look like?</li> <li>• What health data is required for evaluation and how will it be collected?</li> <li>• What is the capacity to align retailer data with health data for evaluation?</li> </ul>
<p><b>Patient Considerations</b></p>	<ul style="list-style-type: none"> <li>• Is it easy to enroll in the Program?</li> <li>• Is the Program easy to understand?</li> <li>• Do required clinic visits and data sharing feel acceptable?</li> <li>• Am I comfortable with ongoing communications methods?</li> <li>• Am I interested in supplementary activities offered?</li> <li>• Can produce prescriptions be redeemed at preferred retailer(s)?</li> <li>• Am I happy with eligible products, quality, and availability at retailer(s)?</li> <li>• Are Program benefits easy and comfortable to use at retailer(s)?</li> <li>• Is participation encouraged by trusted sources?</li> <li>• Do I want to eat more produce and will prescriptions allow that?</li> </ul>

Stakeholder Group	Considerations
<b>Retailer Considerations</b>	<ul style="list-style-type: none"> <li>• Does the Program align with retailer mission, vision for role in community, and needs of customers?</li> <li>• Can the Program be integrated into store systems in ways that conform with established business practices?</li> <li>• Will the Program create challenges with non-participating customers?</li> <li>• Can the Program be implemented in a way that integrates smoothly with front (POS) and back end (recordkeeping and reporting) systems?</li> <li>• Will the Program require cashier intervention? Will that create strains in front end systems?</li> <li>• Who will pay for any requested changes to existing systems and will the changes mean ongoing costs to the retailer after the Program ends?</li> <li>• Are Program-specific communications clear and can they be integrated into existing store signage, promotions, etc.?</li> <li>• Are there challenges with stocking eligible products?</li> <li>• Will the Program's time-limited funding be a customer relations problem?</li> <li>• Does the business have the staff capacity to fulfill reporting requirements?</li> <li>• Will reimbursements be timely?</li> </ul>

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## Conclusion and Next Steps

We are in a moment of both crisis and opportunity as a nation. The COVID-19 pandemic has brought renewed focus to gaps—gaps in funding, gaps in access, and gaps in infrastructure—that limit the ability of our federal health care and food assistance programs to address the issues of nutrition, food insecurity, and health. Produce Prescription Programs present a promising approach for bridging these issues while advancing the Triple Aim of health care reform.

This report has outlined a range of organizational and policy changes that could help to expand access to produce prescriptions by better integrating them into health care delivery and financing across the United States. We designed these recommendations to address the need for funding, research, data, health and food retail infrastructure, and guidance on Program design with both short- and long-term policy objectives. These recommendations are intended to support and reinforce one another to achieve our goal of expanding access to Produce Prescription Programs across the United States. And although anyone can benefit from incorporating produce into their grocery budgets, we centered equity in our analysis and particularly focused on expanding access for low-income populations and historically underserved communities.

However, the success of efforts to mainstream produce prescriptions ultimately depends upon the actions of stakeholders on the ground. Key next steps will include:

- **Building a Broad Coalition for Action:** A wide range of individuals, organizations, and professional groups have a vested interest in improving access to produce prescriptions. A number of these stakeholders are already coming together to advance produce prescriptions and broader nutrition interventions at the state and national level. These coalitions—such as the National Produce Prescription Collaborative and efforts in states such as California, Idaho, Massachusetts, Michigan, and Oregon—could expand their impact by continuing to build their membership and collaborating to achieve shared goals.
- **Identifying Opportunities and Vehicles for Change:** While some of the proposals included in this report can be directly instituted by individual organizations, many will require regulatory or legislative action. As a result of the 2020 election cycle, the Administration and Congress are newly politically aligned, creating the potential for significant political action over the next two years. Moving forward, produce prescription stakeholders will need to identify regulatory and legislative opportunities that could be vehicles for change. For example, efforts to enact health care reform and the next farm bill could both present opportunities for produce prescriptions.
- **Continuing to Explore Gaps in Knowledge:** Finally, there is a continued need to expand our knowledge about produce prescriptions and the landscape in which they operate. Throughout this report, we have highlighted the important role that research can play in refining Program design and expanding interest from key audiences such as policymakers and health care payers. While we have included recommendations across a range of programs and policies, more work remains to be done. For example, future research should consider additional opportunities to expand access to produce prescriptions through the Indian Health Service, individual marketplace plans, and the Children’s Health Insurance Program (CHIP), all of which are not explored in detail here. Given the ongoing use of produce prescriptions in tribal communities,<sup>308</sup> research regarding opportunities in the Indian Health Service is a particularly pressing next step, and should be conducted in consultation with community members and local leaders.

By taking these actions, stakeholders can build the system needed to truly mainstream produce prescriptions, making our health care, public health, and food systems better equipped to connect individuals across the United States to the foods they need to be healthy and thrive.

## Appendix A: Overview of Recommendations and Relevant Actors

Challenge	Recommendation	Recommended Actions	Potential Actor(s)
Funding	Recommendation 1	<p>Broaden coverage of produce prescriptions within Medicaid and Medicare via:</p> <ul style="list-style-type: none"> <li>· Guidance or regulations authorizing coverage within existing benefit categories;</li> <li>· Amendment to the Medicaid and Medicare statutes to establish coverage; or</li> <li>· The implementation and scaling of a demonstration project administered by the Center for Medicare and Medicaid Innovation (CMMI).</li> </ul>	<ul style="list-style-type: none"> <li>· Centers for Medicare &amp; Medicaid Services (CMS)</li> <li>· Congress</li> <li>· CMMI</li> </ul>
	Recommendation 2	<p>Authorize coverage of produce prescriptions within the Veterans Affairs medical benefits package via:</p> <ul style="list-style-type: none"> <li>· Addition of produce prescriptions to the statutory medical benefit package for the VHA health care system; or</li> <li>· The implementation and scaling of a demonstration project administered by the Center for Innovation for Care and Payment.</li> </ul>	<ul style="list-style-type: none"> <li>· Congress</li> <li>· Center for Innovation for Care and Payment</li> </ul>
	Recommendation 3	<p>Provide guidance and technical assistance on current opportunities to fund produce prescriptions within Medicaid and Medicare.</p>	<ul style="list-style-type: none"> <li>· CMS</li> </ul>
	Recommendation 4	<p>Utilize existing opportunities to fund produce prescriptions in State Medicaid Programs.</p> <ul style="list-style-type: none"> <li>· Use Medicaid Waiver authorities (e.g., Section 1115 Waivers) to fund/cover produce prescriptions.</li> <li>· Use managed care contracting to incentivize Medicaid Managed Care Organizations (MCOs) to provide coverage for produce prescriptions.</li> </ul>	<ul style="list-style-type: none"> <li>· State Medicaid Agencies</li> </ul>
	Recommendation 5	<p>Utilize existing opportunities to fund produce prescriptions in individual health plans and health care systems.</p> <ul style="list-style-type: none"> <li>· Cover produce prescriptions in Medicaid Managed Care plans (e.g., as an “in lieu of” service or value-added service).</li> <li>· Cover produce prescriptions in Medicare Advantage plans (e.g., as a Special Supplemental Benefit for the Chronically Ill or as part of a Value-Based Insurance Design (VBID) model).</li> <li>· Use institutional funding (e.g., community benefits) to support community access to produce prescriptions.</li> </ul>	<ul style="list-style-type: none"> <li>· Medicaid MCOs</li> <li>· Medicare Advantage Plans</li> <li>· Health Care Providers</li> </ul>



Challenge	Recommendation	Recommended Actions	Potential Actor(s)
Funding	<b>Recommendation 6</b>	Utilize public health funding streams to support produce prescriptions. <ul style="list-style-type: none"> <li>· Use public health grant funding to support Produce Prescription Programs in the short term.</li> <li>· Use public health-focused funding streams (e.g., sugar sweetened beverage taxes) to support Produce Prescription Programs in the long term.</li> </ul>	<ul style="list-style-type: none"> <li>· Federal, state, and local public health agencies</li> </ul>
	<b>Recommendation 7</b>	Increase the value of the WIC cash value benefit for the purchase of fruits and vegetables.	<ul style="list-style-type: none"> <li>· Food and Nutrition Service (FNS), USDA</li> <li>· Congress</li> </ul>
	<b>Recommendation 8</b>	Expand support for the GusNIP Produce Prescription Grant Program as a critical accelerator of Produce Prescription Programs. <ul style="list-style-type: none"> <li>· Increase funding for GusNIP and the proportion dedicated to Produce Prescription Programs.</li> <li>· Increase the funding cap for grant awards.</li> <li>· Set aside portions of funding for Programs that (1) advance research, and (2) expand patient reach.</li> </ul>	<ul style="list-style-type: none"> <li>· Congress</li> <li>· National Institute of Food and Agriculture, USDA</li> </ul>
	<b>Recommendation 9</b>	Establish a Produce Prescription Preparation Program to expand capacity to partner with the health care sector via: <ul style="list-style-type: none"> <li>· Planning grants; and</li> <li>· Technical assistance.</li> </ul>	<ul style="list-style-type: none"> <li>· Department of Health and Human Services (HHS)</li> <li>· Congress</li> </ul>
	<b>Recommendation 10</b>	Ensure that households enrolled in SNAP can readily afford the produce they seek by: <ul style="list-style-type: none"> <li>· Increasing monthly SNAP benefits; and</li> <li>· Expanding produce-specific benefits.</li> </ul>	<ul style="list-style-type: none"> <li>· Center for Nutrition Policy &amp; Promotion, USDA</li> <li>· FNS, USDA</li> <li>· Congress</li> </ul>
Research	<b>Recommendation 11</b>	Design produce prescription research to promote health equity by ensuring that all research: <ul style="list-style-type: none"> <li>· Includes equitable evaluation practices; and</li> <li>· Investigates the experience of communities of color.</li> </ul>	<ul style="list-style-type: none"> <li>· Researchers</li> <li>· Research funders</li> <li>· Produce Prescription Programs</li> </ul>
	<b>Recommendation 12</b>	Support high-quality research regarding the impact of produce prescriptions on health outcomes, utilization, and costs.	<ul style="list-style-type: none"> <li>· National Institutes of Health (NIH)</li> <li>· CMS</li> <li>· Philanthropic Funders</li> </ul>

Challenge	Recommendation	Recommended Actions	Potential Actor(s)
Research	<b>Recommendation 13</b>	Strive to track key patient-reported and participant experience outcomes.	<ul style="list-style-type: none"> <li>· Produce Prescription Programs</li> </ul>
	<b>Recommendation 14</b>	Study key elements of Program design that may impact outcomes, participant experience, and implementation costs such as: <ul style="list-style-type: none"> <li>· Program duration, dose, scope, and redemption mechanisms.</li> </ul>	<ul style="list-style-type: none"> <li>· Researchers</li> <li>· Research Funders</li> <li>· Produce Prescription Programs</li> </ul>
Patient Data and Privacy	<b>Recommendation 15</b>	Clearly articulate how social service providers, including Produce Prescription Programs, fit within legal landscapes governing patient privacy. <ul style="list-style-type: none"> <li>· Provide guidance regarding application of privacy laws to partnerships between health care entities and social service organizations.</li> <li>· Where guidance cannot address current barriers, create new express parameters for partnerships between health care entities and social service organizations.</li> </ul>	<ul style="list-style-type: none"> <li>· HHS</li> <li>· State Health Departments</li> <li>· Legal experts</li> </ul>
	<b>Recommendation 16</b>	Identify best practices and principles to protect patient privacy in Produce Prescription Programs that do not implicate patient privacy laws.	<ul style="list-style-type: none"> <li>· Produce Prescription Programs</li> </ul>
Infrastructure	<b>Recommendation 17</b>	Require or incentivize improved nutrition education in undergraduate, graduate, and continuing education for health care providers through: <ul style="list-style-type: none"> <li>· Accreditation and funding;</li> <li>· Licensing exam content;</li> <li>· Continuing education requirements; and</li> <li>· Advocacy from professional associations.</li> </ul>	<ul style="list-style-type: none"> <li>· Accreditation Bodies</li> <li>· Licensing Exam Bodies</li> <li>· State Boards of Licensure</li> <li>· Professional Associations</li> </ul>
	<b>Recommendation 18</b>	Expand and enhance programs that support the viability of healthy food retailers, especially in low-income or historically marginalized communities.	<ul style="list-style-type: none"> <li>· Federal executive and agencies</li> <li>· State and local governments</li> </ul>
	<b>Recommendation 19</b>	Provide funding and coordination for the implementation and maintenance of technology solutions for produce prescription transactions.	<ul style="list-style-type: none"> <li>· Federal executive</li> <li>· USDA</li> <li>· HHS</li> <li>· Congress</li> </ul>

Challenge	Recommendation	Recommended Actions	Potential Actor(s)
<p><b>Advancing the Field</b></p>	<p><b>Recommendation 20</b></p>	<p>Establish a task force to develop strategic guidance on Program design, research, and future directions for the field.</p>	<ul style="list-style-type: none"> <li>· HHS</li> <li>· USDA</li> <li>· Produce Prescription Programs</li> <li>· Health Care Providers and Payers</li> <li>· Retailers</li> <li>· Researchers</li> </ul>

## Appendix B: Redemption Mechanisms – Perceived Benefits and Challenges

The table below summarizes the feedback we heard from stakeholders concerning the various prescription redemption mechanisms in use. It is not intended to be a comprehensive list of all potential prescription instruments nor reflect all of the benefits and challenges associated with each instrument. The definition included for each instrument is primarily for purposes of organization and is not necessarily reflective of consensus in the field.

Physical Vouchers	
<b>Definition</b>	A paper or physical instrument (e.g., coupon) that a participant may use to purchase produce, only.
<b>Benefits</b>	<ul style="list-style-type: none"> <li>• <b>Participants:</b> Generally straightforward and simple to use for participants, particularly for older adults and those uncomfortable using electronic or digital systems; can be used at different retailers participating in the Program; tangible voucher can remind individuals to use and offer opportunity for education/interaction.</li> <li>• <b>Retailers:</b> Relatively easy to implement across retail settings without investing in new technology.</li> <li>• <b>Programs:</b> Low start-up costs.</li> </ul>
<b>Challenges</b>	<ul style="list-style-type: none"> <li>• <b>Participants:</b> Those used to card or electronic payment systems may be less likely to keep track of and use their vouchers; using physical vouchers may carry stigma and/or evoke self-consciousness; limits produce shopping to a Program’s retail partners.</li> <li>• <b>Retailers:</b> Processing physical vouchers can slow down transactions at the register; physical vouchers can be difficult to track and manage to ensure reimbursement for all purchases and entail longer delays in reimbursement; voucher systems require additional, and continuing, education and training for retail staff to administer.</li> <li>• <b>Programs:</b> Distributing, tracking, and reimbursing physical vouchers can be administratively taxing; monitoring challenges associated with physical vouchers may hamstring data analysis and reporting.</li> </ul>
Vouchers Plus	
<b>Definition</b>	Participants use a physical or electronic (e.g., contactless) voucher or script with a barcode or other means of electronically scanning the coupon. The retailer scans the voucher and processes it electronically through an integrated POS system or stand-beside (i.e., auxiliary) device. Some systems may also send electronic reporting data back to Programs or health care providers. Note, there are many variations on these types of systems.
<b>Benefits</b>	<ul style="list-style-type: none"> <li>• <b>Participants:</b> Generally straightforward and simple to use for participants; may be easy to use between participating retailers; tangible voucher can remind individuals to use and offer opportunity for education/interaction.</li> <li>• <b>Retailers:</b> Depending on the technology, alleviates concerns regarding accurate tracking and management; may reduce wait-times for reimbursement.</li> <li>• <b>Programs:</b> Can streamline Program monitoring through reporting and tracking redemption data.</li> </ul>
<b>Challenges</b>	<ul style="list-style-type: none"> <li>• <b>Participants:</b> Some may feel uncomfortable with the data-tracking component of the system; depending on design, may not alleviate concerns regarding stigma; limits produce shopping to a Program’s retail partners; some of these systems do not provide “change,” so the voucher must be spent all at once.</li> <li>• <b>Retailers:</b> May require increased resource investment to integrate into POS system and identify/update qualifying items; may not be compatible with all POS systems.</li> <li>• <b>Programs:</b> Higher start-up costs and resource investment for Produce Prescription Programs and their retail partners.</li> </ul>

## Loyalty Card

<b>Definition</b>	An electronic card associated with a loyalty program of a particular store or retail chain that may be used to redeem and spend the prescription's dollar amount on produce items.
<b>Benefits</b>	<ul style="list-style-type: none"> <li>• <b>Participants:</b> Relatively easy to adopt for those who already rely on cards for making purchases.</li> <li>• <b>Retailers:</b> Once implemented, the mechanism supports a relatively seamless transaction process; alleviates retailer concerns regarding accurate tracking and may reduce reimbursement delays.</li> <li>• <b>Program:</b> May streamline Program monitoring depending on data-sharing arrangement.</li> </ul>
<b>Challenges</b>	<ul style="list-style-type: none"> <li>• <b>Participants:</b> Limits participant produce shopping to one retail chain; some may feel uncomfortable with loyalty card programs and/or providing a retailer with their shopping data.</li> <li>• <b>Retailers:</b> Many retailers find the loyalty card model to be in tension with their community norms and would be resistant to deploying such a card; may not be compatible with all POS systems.</li> <li>• <b>Program:</b> May be expensive and require substantial investment to set up; limits Programs to partnerships with retailers interested and able to introduce, or build upon an existing, loyalty card program; tracked shopping and redemption data may be proprietary.</li> </ul>

## Electronic Card with Restricted Funds

<b>Definition</b>	A reloadable, electronic card, like a gift card or debit card, with restricted funds for purchasing produce. This could include adding a benefit to EBT cards. eWIC cards could potentially provide this function at WIC retailers. <sup>309</sup> A produce prescription addition to SNAP EBT cards, while technically feasible, is an impractical solution for produce prescriptions, specifically, at this time, given the costs of implementation and availability of alternatives. <sup>310</sup>
<b>Benefits</b>	<ul style="list-style-type: none"> <li>• <b>Participants:</b> Relatively easy to adopt for those who already rely on cards for making purchases; increased potential for use between different retailers, though current models are not yet universally interoperable in this manner.</li> <li>• <b>Retailers:</b> Once implemented, the card can support a relatively seamless transaction process; alleviates concerns regarding accurate tracking and may reduce reimbursement delays.</li> <li>• <b>Programs:</b> Can streamline Program monitoring through reporting and tracking redemption data.</li> </ul>
<b>Challenges</b>	<ul style="list-style-type: none"> <li>• <b>Participants:</b> Some may not be comfortable using an electronic card for purchases; limits produce shopping to retailers within the card's network.</li> <li>• <b>Retailers:</b> May require increased resource investment to integrate into POS system and identify/update qualifying items; may require retailer to join a specific network or platform; may not be compatible with all POS systems.</li> <li>• <b>Programs:</b> May be expensive and require substantial investment to set up.</li> </ul>

## Phone Application

<b>Definition</b>	Electronic prescriptions are added to a digital wallet and may be spent at participating retailers on the app.
<b>Benefits</b>	<ul style="list-style-type: none"> <li>• <b>Participants:</b> Relatively easy to adopt for those accustomed to making in-app purchases or using a digital wallet; increased potential for interoperability across retail locations that join the platform.</li> <li>• <b>Retailers:</b> Alleviates concerns regarding accurate tracking and may reduce reimbursement delays; can provide new opportunities for farm-direct vendors to connect with participants.</li> <li>• <b>Programs:</b> Can streamline Program monitoring through reporting and tracking redemption data; can provide a shared platform for Program partners; can provide Programs with an interface to interact with participants in other ways, such as through media, education materials, and additional incentive programs.</li> </ul>

## Phone Application

### Challenges

- **Participants:** Some may not be comfortable using a smart phone, a smart-phone application, or loading their personal and payment information into a phone application; some may not own a smart phone; phone applications may not be accessible for participants who have disabilities or limited proficiency in the language options available on the platform; phone applications may be difficult to use in regions with limited access to broadband; limits produce shopping to retailers and vendors on the platform.
- **Retailers:** Some may not have the capacity or desire to connect their inventory or transaction systems to a digital platform; depending on the platform and the retailer's current technology, start-up may be time and resource intensive.
- **Programs:** May reduce opportunities for in-person interactions with participants and related community-building benefits.

# Endnotes

- <sup>1</sup> Anne Cafer et al., Examining Program Context, Logistics, and Outcomes: A Scoping Review of Food Prescription Programs, at 12 (unpublished manuscript) (on file with author) (noting that fewer than half of the articles included in the authors' meta-study defined food prescription, and those that did varied in criteria).
- <sup>2</sup> E-mail from Christa Drew, DAISA, NPPC Co-convenor, to author (Mar. 16, 2021) (on file with author). NPPC defines “healthy produce” in accordance with section 10010 of the Agricultural Act of 2014, Public Law 113-79.
- <sup>3</sup> CMS describes value-based care models as ones in which “[health care] providers are rewarded—based on specific evidence of performance on quality measures—for helping patients improve their health, reduce the effects and incidence of chronic disease, and live healthier lives, as part of a larger healthcare system effort.” CTRS. FOR MEDICARE & MEDICAID SERVS., SMD# 20-004 RE: VALUE-BASED CARE OPPORTUNITIES IN MEDICAID (Sept. 15, 2020), <https://www.medicaid.gov/Federal-Policy-Guidance/Downloads/smd20004.pdf>.
- <sup>4</sup> Kaumudi J. Joshipura et al., *The Effect of Fruit and Vegetable Intake on Risk for Coronary Heart Disease*, 134 ANN. INTERNAL MED. 1106 (2001), <https://doi.org/10.7326/0003-4819-134-12-200106190-00010>; Yi Zhang & Dian-zhong Zhang, *Associations of Vegetable and Fruit Consumption with Metabolic Syndrome. A Meta-analysis of Observational Studies*, 21 PUB. HEALTH NUTR. 1693 (2018), <https://doi.org/10.1017/S1368980018000381>; Xia Wang et al., *Fruit and Vegetable Consumption and Mortality from All Causes, Cardiovascular Disease, and Cancer: Systematic Review and Dose-response Meta-analysis of Prospective Cohort Studies*, 349 BMJ g4490 (2014), <https://doi.org/10.1136/bmj.g4490>.
- <sup>5</sup> Renata Micha et al., *Association Between Dietary Factors and Mortality from Heart Disease, Stroke, and Type 2 Diabetes in the United States*, 317 JAMA 912 (2017), <https://jamanetwork.com/journals/jama/fullarticle/2608221> (doi: 10.1001/jama.2017.0947).
- <sup>6</sup> HUGH WATERS & MARLON GRAF, MILKEN INST., COSTS OF CHRONIC DISEASE IN THE U.S. (2018), <https://milkeninstitute.org/sites/default/files/reports-pdf/ChronicDiseases-HighRes-FINAL.pdf>.
- <sup>7</sup> DIETARY GUIDELINES ADVISORY COMM., U.S. DEP'T OF AGRIC., SCIENTIFIC REPORT OF THE 2015 DIETARY GUIDELINES ADVISORY COMMITTEE (2015), <https://health.gov/sites/default/files/2019-09/Scientific-Report-of-the-2015-Dietary-Guidelines-Advisory-Committee.pdf>; U.S. DEP'T OF AGRIC., 2015–2020 DIETARY GUIDELINES FOR AMERICANS (2015), [https://health.gov/sites/default/files/2019-09/2015-2020\\_Dietary\\_Guidelines.pdf](https://health.gov/sites/default/files/2019-09/2015-2020_Dietary_Guidelines.pdf).
- <sup>8</sup> Erin Cahill et al., *Qualitative Research Study on Addressing Barriers to Healthy Diet Among Low-income Individuals at an Urban, Safety-net Hospital*, 3 BMJ NUTR., PREVENTION & HEALTH 383 (2020), <http://dx.doi.org/10.1136/bmjnph-2020-000064>; Julia A. Wolfson et al., *Barriers to Healthy Food Access: Associations with Household Income and Cooking Behavior*, 13 PREVENTATIVE MED. REPS. 298 (2019), <https://doi.org/10.1016/j.pmedr.2019.01.023>; Alison Hope Alkon et al., *Foodways of the Urban Poor*, 48 GEOFORUM 126 (2014), <https://doi.org/10.1016/j.geoforum.2013.04.021>; Sarah Raffensperger, *Effect of Race and Predictors of Socioeconomic Status on Diet Quality in the HANDLS Study Sample*, 102 J. NAT'L MED. ASS'N. 923 (2010), <https://pubmed.ncbi.nlm.nih.gov/21053707/> (doi: 10.1016/s0027-9684(15)30711-2); ECON. RSCH. SERV., U.S. DEP'T OF AGRIC., ACCESS TO AFFORDABLE, NUTRITIOUS FOOD IS LIMITED IN “FOOD DESERTS” (2010). <https://www.ers.usda.gov/amber-waves/2010/march/access-to-affordable-nutritious-food-is-limited-in-food-deserts/>; Sean C. Lucan, Frances K. Barg, & Judith A. Long, *Promoters and Barriers to Fruit, Vegetable, and Fast-food Consumption Among Urban, Low-income African Americans — a Qualitative Approach*, 100 AM. J. PUB. HEALTH 631 (2010), <https://doi.org/10.2105/AJPH.2009.172692>; Richard A. Forshee & Maureen L. Storey, *Demographics, not Beverage Consumption, is Associated with Diet Quality*, 57 INT'L J. FOOD SCIS. & NUTR. 494 (2006), <https://doi.org/10.1080/09637480600991240>.
- <sup>9</sup> Nicole Darmon & Adam Drewnowski, *Contribution of Food Prices and Diet Cost to Socioeconomic Disparities in Diet Quality and Health: A Systematic Review and Analysis*, 73 NUTR. REV. 643 (2015), <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4586446/> (doi: 10.1093/nutrit/nuv027).
- <sup>10</sup> See STEVEN CARLSON, MORE ADEQUATE SNAP BENEFITS WOULD HELP MILLIONS OF PARTICIPANTS BETTER AFFORD FOOD. CENTER ON BUDGET AND POLICY PRIORITIES (2019), <https://www.cbpp.org/sites/default/files/atoms/files/7-30-19fa.pdf>. We use “federal food assistance program” to refer to SNAP and WIC, generally, to distinguish these programs from nutrition incentive and Produce Prescription Programs receiving federal support.
- <sup>11</sup> *Definitions of Food Security*, ECON. RSCH. SERV., U.S. DEP'T OF AGRIC. (last updated Sep. 9, 2020), <https://www.ers.usda.gov/topics/food-nutrition-assistance/food-security-in-the-us/definitions-of-food-security.aspx>.
- <sup>12</sup> CHRISTIAN A. GREGORY & ALISHA COLEMAN-JENSEN, U.S. DEP'T OF AGRIC., FOOD INSECURITY, CHRONIC DISEASE, AND HEALTH AMONG WORKING-AGE ADULTS (2017), [https://www.ers.usda.gov/webdocs/publications/84467/err-235\\_summary.pdf?v=2983.5](https://www.ers.usda.gov/webdocs/publications/84467/err-235_summary.pdf?v=2983.5).
- <sup>13</sup> ALISHA COLEMAN-JENSEN ET AL., U.S. DEP'T OF AGRIC., HOUSEHOLD FOOD SECURITY IN THE UNITED STATES IN 2019 (2020), <https://www.ers.usda.gov/webdocs/publications/99282/err-275.pdf?v=5203.3>.
- <sup>14</sup> KEVIN M. FITZPATRICK, CASEY HARRIS, & GRANT DRAWVE, ASSESSING U.S. FOOD INSECURITY IN THE UNITED STATES DURING COVID-19 PANDEMIC (2020). <https://fulbright.uark.edu/departments/sociology/research-centers/community-family-institute/resources/community-and-family-institute/revised-assessing-food-insecurity-brief.pdf>.
- <sup>15</sup> FEEDING AMERICA, THE IMPACT OF THE CORONAVIRUS ON FOOD INSECURITY IN 2020 (2020), [https://www.feedingamerica.org/sites/default/files/2020-10/Brief\\_Local%20Impact\\_10.2020\\_0.pdf](https://www.feedingamerica.org/sites/default/files/2020-10/Brief_Local%20Impact_10.2020_0.pdf).

- <sup>16</sup> Before COVID-19, the highest recorded rate of food insecurity in the United States was 14.9% in 2011. Household food insecurity ranged between 10.2%-11.8% between 1995 and 2000. See *Interactive Charts and Highlights*, ECON. RSCH. SERV., U.S. DEP'T OF AGRIC. (last updated Sep. 9, 2020) (Trends in U.S. Food Security), <https://www.ers.usda.gov/topics/food-nutrition-assistance/food-security-in-the-us/interactive-charts-and-highlights/>; FOOD & NUTRITION SERV., U.S. DEP'T OF AGRIC., HOUSEHOLD FOOD SECURITY IN THE UNITED STATES 1995-1998 (ADVANCED REPORT) (1999), <https://fns-prod.azureedge.net/sites/default/files/foodsec98.PDF>; BARBARA COHEN, JAMES PARRY, & KENNETH YANG, HOUSEHOLD FOOD SECURITY IN THE UNITED STATES, 1998 and 1999: DETAILED STATISTICAL REPORT (2002), [https://www.ers.usda.gov/webdocs/publications/43142/35937\\_efan02011.pdf?v=3247.9](https://www.ers.usda.gov/webdocs/publications/43142/35937_efan02011.pdf?v=3247.9); MARK NORD ET AL., U.S. DEP'T OF AGRIC., HOUSEHOLD FOOD INSECURITY IN THE UNITED STATES, 2000 (2002), [https://www.ers.usda.gov/webdocs/publications/46595/31565\\_fanrr21\\_002.pdf?v=8750.9](https://www.ers.usda.gov/webdocs/publications/46595/31565_fanrr21_002.pdf?v=8750.9).
- <sup>17</sup> *Food Insufficiency in Mid-June 2020 Higher in Some States than Others*, ECON. RSCH. SERV., U.S. DEP'T OF AGRIC. (July 10, 2020), <https://www.ers.usda.gov/data-products/chart-gallery/gallery/chart-detail/?chartId=98778>.
- <sup>18</sup> See, e.g., CTR. ON BUDGET & POL'Y PRIORITIES, TRACKING THE COVID-19 RECESSION'S EFFECTS ON FOOD, HOUSING, AND EMPLOYMENT HARDSHIPS (2021), <https://www.cbpp.org/sites/default/files/atoms/files/8-13-20pov.pdf>.
- <sup>19</sup> COLEMAN-JENSEN ET AL., *supra* note 13.
- <sup>20</sup> CTR. ON BUDGET & POL'Y PRIORITIES, *supra* note 18.
- <sup>21</sup> Courtney A. Parks et al., *Healthy Food Incentive Programs: Findings from Food Insecurity Nutrition Incentive Programs Across the United States*, 21 HEALTH PROMOTION PRACTICE 421 (2020), <https://doi.org/10.1177/1524839919898207>.
- <sup>22</sup> Denise Grady, *H. Jack Geiger, Doctor Who Fought Social Ills, Dies at 95*, N.Y. Times, (Dec. 28, 2020), <https://www.nytimes.com/2020/12/28/health/h-jack-geiger-dead.html>.
- <sup>23</sup> August Schumacher & Emily Nink, *Incentive Programs to Address the Challenges of Hunger, Undernutrition, and Obesity in the United States*, in THE OXFORD HANDBOOK OF FOOD, WATER AND SOCIETY (Tony Allan et al., eds., 2018) (doi: 10.1093/oxfordhb/9780190669799.013.12).
- <sup>24</sup> *Farmers Market Nutrition Program Overview*, FOOD & NUTRITION SERV., (last updated Jan. 23, 2014), <https://www.fns.usda.gov/fmnp/overview>; 42 U.S.C. § 1786(m).
- <sup>25</sup> 7 U.S.C. § 3007.
- <sup>26</sup> See *About Double Up Food Bucks*, FAIR FOOD NETWORK, <https://doubleupfoodbucks.org/about-us/> (last visited Jan. 23, 2021); *What We Do: Fresh Checks*, CROSSROADS CMTY. FOOD NETWORK, <https://www.crossroadscommunityfoodnetwork.org/what-we-do/fresh-checks/> (last visited Jan. 23, 2021); CMTY. SCI., SNAP HEALTHY FOOD INCENTIVES CLUSTER EVALUATION 2013 FINAL REPORT (2013), [https://ecologycenter.org/wp-content/uploads/2013/11/2013-Cluster-Evaluation-Final-Report\\_-\\_final\\_10.4.13.pdf](https://ecologycenter.org/wp-content/uploads/2013/11/2013-Cluster-Evaluation-Final-Report_-_final_10.4.13.pdf).
- <sup>27</sup> MICH. FARMERS MKT. ASS'N & MICH. DEP'T OF HEALTH & HUM. SERVS., PRESCRIPTION FOR HEALTH PROGRAMS IN MICHIGAN: AN OVERVIEW AND SUMMARY OF BEST PRACTICES, 4 (2017), <https://mifma.org/wp-content/uploads/2020/09/Prescription-for-Health-Overview-of-Programs-and-Best-Practices.pdf>.
- <sup>28</sup> Ronit A. Ridberg et al., *Effect of a Fruit and Vegetable Prescription Program on Children's Fruit and Vegetable Consumption*, 16 PREV. CHRONIC DIS. E73 (2019), <http://dx.doi.org/10.5888/pcd16.180555>.
- <sup>29</sup> *FINI Grant Program*, FOOD & NUTRITION SERV., U.S. DEP'T OF AGRIC., <https://www.fns.usda.gov/snap/FINI-Grant-Program> (last visited Jan. 23, 2021).
- <sup>30</sup> TRACY VERICKER ET AL., THE EVALUATION OF FOOD INSECURITY NUTRITION INCENTIVES (FINI) INTERIM REPORT (2019), [https://fns-prod.azureedge.net/sites/default/files/resource-files/FINI-InterimReport\\_1.pdf](https://fns-prod.azureedge.net/sites/default/files/resource-files/FINI-InterimReport_1.pdf).
- <sup>31</sup> CTRS. FOR MEDICARE & MEDICAID SERVS., MASSHEALTH SECTION 1115 DEMONSTRATION SPECIAL TERMS AND CONDITIONS 57, 61-62 (Nov. 4, 2016), <https://www.medicaid.gov/Medicaid-CHIP-Program-Information/By-Topics/Waivers/1115/downloads/ma/MassHealth/ma-masshealth-stcs-11042016.pdf>.
- <sup>32</sup> N.C. MEDICAID, HEALTHY OPPORTUNITIES PILOT FACT SHEET 1 (2018), <https://files.nc.gov/ncdhhs/SDOH-HealthyOpptys-FactSheet-FINAL-20181114.pdf>.
- <sup>33</sup> MASS. EXEC. OFF. OF HEALTH & HUM. SERVS., PERFORMANCE YEAR 3-5 (PY3-PY5) DELIVERY SYSTEM REFORM INCENTIVE PAYMENT (DSRIP) FLEXIBLE SERVICES (FS) PROGRAM GUIDANCE DOCUMENT FOR MASSHEALTH ACCOUNTABLE CARE ORGANIZATIONS AND MASSHEALTH COMMUNITY PARTNERS, 23 (Aug. 11, 2020), <https://www.mass.gov/doc/flexible-services-guidance-document/download>; MANATT, FIRST REVISED AND RESTATED ATTACHMENT M: HEALTHY OPPORTUNITIES PILOT SERVICE FEE SCHEDULE 3, 27 (2020), [https://www.manatt.com/Manatt/media/Documents/Articles/NC-Pilot-Service-Fee-Schedule\\_Final-for-Webpage.pdf](https://www.manatt.com/Manatt/media/Documents/Articles/NC-Pilot-Service-Fee-Schedule_Final-for-Webpage.pdf).
- <sup>34</sup> Agriculture Improvement Act of 2018, Pub. L. 115-334, § 4205, 132 Stat. 4490, 4659-60, <https://www.congress.gov/115/plaws/publ334/PLAW-115publ334.pdf>.
- <sup>35</sup> Jessica Marcinkevage, Alyssa Auvinen, & Susmitha Nambuthiri, *Washington State's Fruit and Vegetable Prescription Program: Improving Affordability of Healthy Foods for Low-Income Patients*, 16 PREV. CHRONIC DIS. E91 (2019), <http://dx.doi.org/10.5888/pcd16.180617>; Ashley Chrisinger & A. Wetter, *Fruit and Vegetable Prescription Program: Design and Evaluation of a Program for Families of Varying Socioeconomic Status*, 48 J. NUTR. EDUC. & BEHAV. 557 (2016), <https://doi.org/10.1016/j.jneb.2016.04.153>; Alicia J. Cohen et al., *Increasing Use of a Healthy Food Incentive: A Waiting Room Intervention Among Low-Income Patients*, 52 AM. J. PREVENTATIVE MED. 154 (2017), <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5444808/> (doi: 10.1016/j.amepre.2016.11.008).
- <sup>36</sup> Christine M. Burrington et al., *A Pilot Study of an Online Produce Market Combined with a Fruit and Vegetable Prescription Program for Rural Families*, 17 PREVENTIVE MED. REP. 101035 (2020), <https://doi.org/10.1016/j.pmedr.2019.101035>.



37 Seth A. Berkowitz et al., *Health Center–Based Community-Supported Agriculture: An RCT*, 57 AM. J. PREVENTIVE MED. S55 (2019), <https://doi.org/10.1016/j.amepre.2019.07.015>.

38 Ridberg et al., *Effect of Fruit and Vegetable Prescription Program (FVRx) on Children’s Fruit and Vegetable Consumption*, *supra* note 28.

39 Benjamin Emmert-Aronson et al., *Group Medical Visits 2.0: The Open Source Wellness Behavioral Pharmacy Model*, 25 J. ALTERNATIVE & COMPLEMENTARY MED. 1026 (2019), <https://pubmed.ncbi.nlm.nih.gov/31460769/> (doi: 10.1089/acm.2019.0079).

40 Michelle Cavanagh et al., *Veggie Rx: An Outcome Evaluation of a Healthy Food Incentive Program*, 20 PUB. HEALTH NUTR. 2636 (2017), <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5743436/pdf/nihms866976.pdf> (doi:10.1017/S1368980016002081).

41 Richard Bryce 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*, 7 PREVENTIVE MED. REP.176 (2017), [https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5496208/#\\_ffn\\_sectitle](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5496208/#_ffn_sectitle) (doi: 10.1016/j.pmedr.2017.06.006).

42 Jennifer N. Aiyer et al., *A Pilot Food Prescription Program Promotes Produce Intake and Decreases Food Insecurity*, 9 TRANSLATIONAL BEHAV. MED. 922 (2019), <https://doi.org/10.1093/tbm/ibz112>; Seth A. Berkowitz et al., *Health Center–Based Community-Supported Agriculture: An RCT*, *supra* note 37.

43 Toni Terling Watt et al., *A Primary Care-Based Early Childhood Nutrition Intervention: Evaluation of a Pilot Program Serving Low-Income Hispanic Women*, 2 J. RACIAL & ETHNIC HEALTH DISPARITIES 537 (2015) <https://doi.org/10.1007/s40615-015-0102-2>; Marcinkevage, Auvinen, & Nambuthiri, *supra* note 35.

44 Marcinkevage, Auvinen, & Nambuthiri, *supra* note 35; Allison V. Schlosser et al., “*The coupons and stuff just made it possible*”: economic constraints and patient experiences of a produce prescription program, 9 TRANSLATIONAL BEHAV. MED. 875 (2019), <https://doi.org/10.1093/tbm/ibz086>.

45 Yujin Lee et al., *Cost-effectiveness of Financial Incentives for Improving Diet and Health through Medicare and Medicaid: A Microsimulation Study*, 16 PLOS MED. e1002761 (2019), <https://doi.org/10.1371/journal.pmed.1002761>.

46 Seth A. Berkowitz et al., *Health Center–Based Community-Supported Agriculture: An RCT*, *supra* note 37.

47 Emmert-Aronson et al., *supra* note 39.

48 Lee et al., *supra* note 45.

49 Ridberg et al., *Effect of a Fruit and Vegetable Prescription Program on Children’s Fruit and Vegetable Consumption*, *supra* note 28.

50 Erika S. Trapl et al., *Dietary Impact of Produce Prescriptions for Patients with Hypertension*, 15 PREV. CHRONIC DIS. E138 (2018), <http://dx.doi.org/10.5888/pcd15.180301>.

51 Bryce et al., *supra* note 41.

52 Cavanagh et al., *supra* note 40.

53 Jasmine-Yasmine A. Omar et al., *Fresh Prescription Program: A Program to Improve Access to Fresh Products Among Underserved Patients in Downtown Detroit*, 31 J. GEN. INTERNAL MED. S879 (2016).

54 Darcy A. Freedman et al., *A Farmers’ Market at a Federally Qualified Health Center Improves Fruit and Vegetable Intake Among Low-income Diabetics*, 56 PREVENTIVE MED. 288 (2013).

55 Sarah Downer et al., *Food is Medicine: Actions to Integrate Food and Nutrition into Healthcare*, 369 BMJ m2482 (2020), <https://doi.org/10.1136/bmj.m2482>; Dariush Mozaffarian, *Food is Medicine: why healthier eating should be a priority for health care providers, insurers, and government*, in RISING HEALTH CARE COSTS: DRIVERS, CHALLENGES AND SOLUTIONS (2018), [https://www.naic.org/documents/cipr\\_study\\_1812\\_health\\_care\\_costs.pdf](https://www.naic.org/documents/cipr_study_1812_health_care_costs.pdf).

56 *Who We Are*, FOOD IS MED. COAL., <http://www.fimcoalition.org/> (last visited Jan. 23, 2021); FOOD IS MEDICINE MASS., <https://foodismedicinema.org/> (last visited Jan. 23, 2021); OR. CMTY. FOOD SYSTEMS NETWORK, <http://ocfsn.net/> (last visited Jan. 23, 2021); SOC. INTERVENTIONS RSCH. & EVALUATION NETWORK, <https://sirenetwork.ucsf.edu/> (last visited Jan. 23, 2021).

57 NAT’L INSTS. OF HEALTH, 2020-2030 STRATEGIC PLAN FOR NIH NUTRITION RESEARCH (2020), [https://dpcpsi.nih.gov/sites/default/files/2020NutritionStrategicPlan\\_508.pdf](https://dpcpsi.nih.gov/sites/default/files/2020NutritionStrategicPlan_508.pdf)

58 S.B. 97, 2017–2018 Leg., Reg. Sess. (Cal. 2017); S750B, 2019–2020 Leg. Sess. (N.Y. 2019).

59 7 U.S.C. § 7517(c), (f).

60 Medically Tailored Home-Delivered Meals Demonstration Pilot Act of 2020, H.R. 6774, 116th Cong. (2020).

61 See Allison D. Yoder, Gabriela V. Proaño, & Deepa Handu, *Retail Nutrition Programs & Outcomes: An Evidence Analysis Center Scoping Review*, J. ACAD. OF NUTR. & DIETETICS 1 (2020) (Article in Press), <https://doi.org/10.1016/j.jand.2020.08.080>; DAWN THILMANY ET AL., THE ECONOMIC CONTRIBUTIONS OF HEALTHY FOOD INCENTIVES (2021), [https://www.spur.org/sites/default/files/publications\\_pdfs/economic\\_contributions\\_incentives\\_2\\_2\\_21.pdf](https://www.spur.org/sites/default/files/publications_pdfs/economic_contributions_incentives_2_2_21.pdf).

62 See *OHCHR and the Right to Food*, U.N. HUMAN RIGHTS, <https://www.ohchr.org/En/Issues/ESCR/Pages/food.aspx> (last visited Feb. 1, 2021).

63 See Ellen K. Barnidge et al., *The Right to Food: Building Upon “Food Is Medicine”*, 59 AM. J. PREVENTIVE MED. 611 (2020), <https://doi.org/10.1016/j.amepre.2020.04.011>.

64 See THILMANY ET AL., *supra* note 61.

65 COVID-19: *People with Certain Medical Conditions*, CTRS. FOR DISEASE CONTROL AND PREVENTION (Dec. 29, 2020), <https://www.cdc.gov/coronavirus/2019-ncov/need-extra-precautions/people-with-medical-conditions.html>.

66 In order to encourage candor, CHLPI told all interviewees that they would remain anonymous in this final report.

67 See, e.g., *Mixed Methods Produce Prescription Research Proposal*, DUKE UNIVERSITY, <https://scholars.duke.edu/>

[display/gra262003](#) (last visited Jan. 29, 2021).

- 68 See, e.g., Joe Feagin & Zinobia Bennefield, *Systemic Racism and U.S. Health Care*, 103 Soc. Sci. & Med. 7 (2014), <https://doi.org/10.1016/j.socscimed.2013.09.006>; Caryn N. Bell, Jordan Kerr & Jessica L. Young, *Associations between Obesity, Obesogenic Environments, and Structural Racism Vary by County-Level Racial Composition*, 16(5) INT. J. ENVIRON. RES. PUBLIC HEALTH 861 (2019), <https://doi.org/10.3390/ijerph16050861>; RICH PIROG ET AL., MICHIGAN STATE UNIVERSITY CTR. FOR REG. FOOD SYSTEMS, AN ANNOTATED BIBLIOGRAPHY ON STRUCTURAL RACISM PRESENT IN THE U.S. FOOD SYSTEM (8<sup>TH</sup> ED.) (2021), <https://www.canr.msu.edu/foodsystems/uploads/files/Annotated-Bibliography-on-Structural-Racism-Present-in-the-US-Food-System-Eighth-Edition.pdf>.
- 69 *Health Equity*, CTRS. FOR DISEASE CONTROL & PREVENTION, <https://www.cdc.gov/chronicdisease/healthequity/index.htm> (last visited Jan. 30, 2021).
- 70 MICH. DEP'T OF HEALTH & HUMAN SERVS., MICHIGAN EQUITY PRACTICE GUIDE FOR STATE-LEVEL PUBLIC HEALTH PRACTITIONERS (2016), [https://www.michigan.gov/documents/mdhhs/Michigan\\_Equity\\_Practice\\_Guide\\_523407\\_7.pdf](https://www.michigan.gov/documents/mdhhs/Michigan_Equity_Practice_Guide_523407_7.pdf). While this framework was developed by the Michigan Department of Health and Human Services, Michigan is exploring opportunities to introduce the approach across multiple state agencies. Accordingly, we recognize and recommend using an equity framework in designing and implementing all policies designed to improve U.S. health care and food systems.
- 71 See also Cafer et al., *supra* note 1, at 12–13 (noting reliance on outside dollars, e.g., grants, as main barrier to sustainability for food Rx programs).
- 72 *September 2020 Medicaid & CHIP Enrollment Data Highlights*, CTRS. FOR MEDICARE & MEDICAID SERVS., <https://www.medicaid.gov/medicaid/program-information/medicaid-and-chip-enrollment-data/report-highlights/index.html> (last visited Jan. 30, 2021).
- 73 *Total Number of Medicare Beneficiaries: Timeframe 2020*, KAISER FAMILY FOUND., <https://www.kff.org/medicare/state-indicator/total-medicare-beneficiaries/?currentTimeframe=0&sortModel=%7B%22colId%22:%22Location%22,%22sort%22:%22asc%22%7D> (last visited Dec. 21, 2020).
- 74 Cornelia Hall et al., *Food Insecurity and Health: Addressing Food Needs for Medicaid Enrollees as Part of COVID-19 Response Efforts*, KAISER FAMILY FOUND. (Aug. 14, 2020), <https://www.kff.org/report-section/food-insecurity-and-health-addressing-food-needs-for-medicaid-enrollees-as-part-of-covid-19-response-efforts-issue-brief/>.
- 75 *Id.*
- 76 *Crude percentages of diabetes for adults aged 18-64, United States, 2015-2018, National Health Interview Survey*, NAT'L CTR. FOR HEALTH STATISTICS, <https://www.cdc.gov/nchs/nhis/ADULTS/www/index.htm> (last visited Dec. 20, 2020).
- 77 *Id.*
- 78 *Id.*
- 79 Olivia Dean, Lynda Flowers & Claire Noel-Miller, *Food Insecurity Among Medicare's 65+: Stark Racial and Ethnic Disparities*, AARP (Mar. 11, 2020), <https://blog.aarp.org/thinking-policy/food-insecurity-among-medicare-65-stark-racial-and-ethnic-disparities>.
- 80 CTRS. FOR MEDICARE & MEDICAID SERVS., CHRONIC CONDITIONS CHARTS: 2018, 1 (2018), [https://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/Chronic-Conditions/Chartbook\\_Charts](https://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/Chronic-Conditions/Chartbook_Charts).
- 81 *Total Number of Medicare Beneficiaries: Timeframe 2020*, *supra* note 73.
- 82 See, e.g., CTRS. FOR MEDICARE & MEDICAID SERVS., SHO# 21-001 RE: OPPORTUNITIES IN MEDICAID AND CHIP TO ADDRESS SOCIAL DETERMINANTS OF HEALTH (SDOH) (Jan. 7, 2021), <https://www.medicaid.gov/federal-policy-guidance/downloads/sho21001.pdf>.
- 83 42 U.S.C. § 1396d(a)(13) (defining rehabilitative services as “any medical or remedial services (provided in a facility, a home, or other setting) recommended by a physician or other licensed practitioner of the healing arts within the scope of their practice under State law, for the maximum reduction of physical or mental disability and restoration of an individual to the best possible functional level”).
- 84 42 C.F.R. § 440.130(c) (defining preventive services as “services recommended by a physician or other licensed practitioner of the healing arts acting within the scope of authorized practice under State law to – (1) prevent disease, disability, and other health conditions or their progression; (2) prolong life; and (3) promote physical and mental health and efficiency”).
- 85 42 U.S.C. § 1315a (creating CMMI).
- 86 42 U.S.C. § 1315a(c).
- 87 *Accountable Health Communities Model*, CTRS. FOR MEDICARE & MEDICAID SERVS., <https://innovation.cms.gov/innovation-models/ahcm> (last visited November 19, 2020).
- 88 See, e.g., Feagin & Bennefield, *supra* note 68.
- 89 CONG. RSCH. SERV., HEALTH CARE FOR VETERANS: ANSWERS TO FREQUENTLY ASKED QUESTIONS 1 (2020), <https://fas.org/sgp/crs/misc/R42747.pdf>.
- 90 Alicia J. Cohen et al., *Food Insecurity Among Veterans: Resources to Screen and Intervene*, 37 FED. PRACTITIONER 16, 17 (2020), <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7010340/>.
- 91 *Id.*
- 92 *Id.* at 19.
- 93 *Nutrition and Food Services – Healthy Teaching Kitchen*, U.S. DEP'T OF VETERANS AFFAIRS, [https://www.nutrition.va.gov/Healthy\\_Teaching\\_Kitchen.asp](https://www.nutrition.va.gov/Healthy_Teaching_Kitchen.asp) (last visited Jan. 5, 2021).
- 94 Cohen et al., *supra* note 90, at 19 ; Food Prescription, VARANDA, <https://alexaeffie.wixsite.com/varanda/food-prescription> (last visited Mar. 24, 2021).

95 38 C.F.R. § 17.38(a)(2)(ii).  
96 See e.g., 38 C.F.R. § 17.63(f).  
97 38 U.S.C. § 1703E(a)(2).  
98 38 U.S.C. § 1703E(j); 38 C.F.R. § 17.450(h). Notably, these extensions appear limited to an additional five years, indicating that further action may be needed by the VA or Congress to make piloted services a permanent feature of the VHA health care system. See 38 C.F.R. § 17.450(h)(3).  
99 KATIE GARFIELD ET AL., CTR. FOR HEALTH L. & POL'Y INNOVATION, PRODUCE PRESCRIPTIONS: A U.S. POLICY SCAN (2020), <https://www.chlpi.org/wp-content/uploads/2013/12/Produce-RX-US-Policy-Scan-FINAL.pdf>.  
100 CTRS. FOR MEDICARE & MEDICAID SERVS., SHO# 21-001 RE: OPPORTUNITIES IN MEDICAID AND CHIP TO ADDRESS SOCIAL DETERMINANTS OF HEALTH (SDOH), *supra* note 82.  
101 See, e.g., *id.* at 4.  
102 *Id.* at 5–7.  
103 See, e.g., Seth A. Berkowitz et al., *Association Between Receipt of a Medically Tailored Meal Program and Health Care Use*, 179 JAMA INTERN. MED. 786-793 (2019), <https://jamanetwork.com/journals/jamainternalmedicine/fullarticle/2730768> (doi:10.1001/jamainternmed.2019.0198).  
104 42 U.S.C. §§ 1396d (covered benefits), 1396a (mandatory services); 42 C.F.R. §§ 440.1–185 (service definitions), 440.210–225 (mandatory and optional services).  
105 42 U.S.C. § 1396n(i); 42 C.F.R. §§ 440.182(c) (benefits), 441.700–745.  
106 42 U.S.C. § 1396n(k); 42 C.F.R. §§ 441.500–590.  
107 42 U.S.C. § 1315(a)(2)(A).  
108 42 U.S.C. § 1396n(b)(3).  
109 42 U.S.C. § 1396n(c).  
110 42 U.S.C. § 1396n(i).  
111 42 C.F.R. § 438.5(b)(3), (e).  
112 42 C.F.R. § 438.3(e)(2).  
113 42 C.F.R. § 438.3(e)(1)(i).  
114 42 C.F.R. § 438.8(e)(1), (3).  
115 42 U.S.C. §§ 1395c–1395i-5, 1395x; 42 C.F.R. § 409 (Part A); 42 U.S.C. §§ 1395j–1395w-6, 1395x; 42 C.F.R. § 410 (Part B).  
116 42 U.S.C. § 1395w–22(a)(3).  
117 See, e.g., VIKKI WACHINO, CTRS. FOR MEDICARE & MEDICAID SERVS., CMCS INFORMATIONAL BULLETIN: COVERAGE OF HOUSING-RELATED ACTIVITIES AND SERVICES FOR INDIVIDUALS WITH DISABILITIES (2015), <https://www.medicaid.gov/federal-policy-guidance/downloads/cib-06-26-2015.pdf>; *Promoting Community Integration through Long-Term Services and Supports*, CTRS. FOR MEDICARE & MEDICAID SERVS., <https://www.medicaid.gov/resources-for-states/innovation-accelerator-program/program-areas/promoting-community-integration-through-long-term-services-and-supports/index.html> (last visited Dec. 23, 2020); U.S. DEP'T OF HEALTH & HUMAN SERVS., U.S. DEP'T OF AGRIC., U.S. DEP'T OF HOUSING & URBAN DEV., JOINT HHS, USDA, AND HUD INFORMATIONAL BULLETIN: LIVING AT HOME IN RURAL AMERICA: IMPROVING ACCESSIBILITY FOR OLDER ADULTS AND PEOPLE WITH A DISABILITY 4–9 (2020), <https://www.medicaid.gov/federal-policy-guidance/downloads/cib081920.pdf>.  
118 42 U.S.C. § 1315(a)(1).  
119 42 U.S.C. § 1315(a)(2)(A).  
120 See, e.g., MASS. EXEC. OFF. OF HEALTH & HUM. SERVS., *supra* note 33.  
121 See, e.g., N.C. MEDICAID, *supra* note 32.  
122 MANATT, *supra* note 33, at 3, 27.  
123 42 U.S.C. § 1396n(c) (1915(c) Waivers); 42 U.S.C. § 1396n(i)(6)(A) (Waiver component of 1915(i)).  
124 42 U.S.C. § 1396n(c)(1) (outlining restriction for 1915(c) Waivers); 42 C.F.R. § 441.310(a)(2); 42 U.S.C. § 1396n(i)(1), (6)(C) (outlining restriction for 1915(i) Waivers and Amendments); 42 C.F.R. § 440.182(d).  
125 See, e.g., CTRS. FOR MEDICARE & MEDICAID SERVS., APPLICATION FOR A 1915(C) HOME AND COMMUNITY-BASED WAIVER, INSTRUCTIONS, TECHNICAL GUIDE AND REVIEW CRITERIA 45 (2019), <https://www.dhhs.nh.gov/dcbcs/bds/documents/technicalguide05312019.pdf>.  
126 *Illinois Waiver Factsheet*, <https://www.medicaid.gov/medicaid/section-1115-demo/demonstration-and-waiver-list/Waiver-Descript-Factsheet/IL#0202> (last visited Jan. 21, 2021).  
127 *Id.*  
128 See, e.g., KATHLEEN GIFFORD ET AL., STATE MEDICAID PROGRAMS RESPOND TO MEET COVID-19 CHALLENGES: RESULTS FROM A 50-STATE MEDICAID BUDGET SURVEY FOR STATE FISCAL YEARS 2020 AND 2021 1, 18 (2020), <http://files.kff.org/attachment/Report-State-Medicaid-Programs-Respond-to-Meet-COVID-19-Challenges.pdf> (stating that 40 states contracted with MCOs as of July 2019).  
129 42 C.F.R. § 438.206(a).  
130 Medicaid and Children's Health Insurance Program (CHIP) Programs; Medicaid Managed Care, CHIP Delivered in Managed Care, and Revisions Related to Third Party Liability, 81 Fed. Reg. 27498 (May 6, 2016).  
131 42 C.F.R. § 438.208(b)(3).  
132 42 C.F.R. § 438.208(b)(2)(iv).  
133 See CTR. FOR HEALTH CARE STRATEGIES, ADDRESSING SOCIAL DETERMINANTS OF HEALTH VIA MEDICAID MANAGED CARE CONTRACTS AND SECTION 1115 DEMONSTRATIONS 15 (2018), <https://www.chcs.org/media/Addressing-SDOH-Medicaid-Contracts-1115-Demonstrations-121118.pdf>.

134 42 C.F.R. § 438.3(e)(2).  
135 42 C.F.R. § 438.3(e)(2).  
136 42 C.F.R. § 438.8(e)(1), (2)(i)(A).  
137 See 42 C.F.R. § 438.4(b)(9).  
138 See OR. HEALTH AUTH., HEALTH-RELATED SERVICES BRIEF 6 (2020), <https://www.oregon.gov/oha/HPA/dsi-tc/Documents/OHA-Health-Related-Services-Brief.pdf>; OR. HEALTH AUTH., CMS EVALUATION DESIGN APPROVAL 6 (Feb. 14, 2018), <https://www.medicaid.gov/Medicaid-CHIP-Program-Information/By-Topics/Waivers/1115/downloads/or/Health-Plan/or-health-plan2-eval-dsgn-appvl-02142018.pdf>.  
139 See OR. HEALTH AUTH., HEALTH-RELATED SERVICES BRIEF, *supra* note 138, at 6; see also 42 C.F.R. §§ 438.8(e)(1), (3) (describing the inclusion of activities that improve health care quality in the numerator of the MLR), 438.5(b)(3), (e) (describing incorporation of administration/non-benefit services into capitation).  
140 42 C.F.R. § 438.6(b).  
141 See, e.g., CTR. FOR HEALTH CARE STRATEGIES, *supra* note 133, at 20 (providing examples of states that have used withholds and incentives to address social determinants of health).  
142 States Reporting Social Determinant of Health Related Policies Required in Medicaid Managed Care Contracts, KAISER FAMILY FOUND., <https://www.kff.org/other/state-indicator/states-reporting-social-determinant-of-health-related-policies-required-in-medicaid-managed-care-contracts/?currentTimeframe=0&sortModel=%7B%22colId%22:%22Location%22,%22sort%22:%22asc%22%7D> (last visited Jan. 23, 2021).  
143 42 C.F.R. § 438.3(e)(2).  
144 42 C.F.R. § 438.8(e)(1), (3).  
145 New York State Medicaid Managed Care Alternative Services and Settings – In Lieu of Services (ILS), N.Y. STATE DEP'T OF HEALTH, [https://health.ny.gov/health\\_care/managed\\_care/app\\_in\\_lieu\\_of\\_svs\\_mmc.htm](https://health.ny.gov/health_care/managed_care/app_in_lieu_of_svs_mmc.htm) (last visited November 19, 2020).  
146 DEP'T OF HEALTH CARE SERVS., CAL. HEALTH & HUMAN SERVS. AGENCY, CALIFORNIA ADVANCING & INNOVATING MEDICAL (CALAIM) PROPOSAL 217-218 (2021), <https://www.dhcs.ca.gov/provgovpart/Documents/CalAIM-Proposal-Updated-1-8-21.pdf>.  
147 See OR. HEALTH AUTH., *supra* note 138, at 6.  
148 42 C.F.R. § 438.6(b).  
149 See, e.g., CTR. FOR HEALTH CARE STRATEGIES, *supra* note 133, at 20 (providing examples of states that have used withholds and incentives to address social determinants of health).  
150 Medicaid and Children's Health Insurance Program (CHIP) Programs; Medicaid Managed Care, CHIP Delivered in Managed Care, and Revisions Related to Third Party Liability, 81 Fed. Reg. 27498 (May 6, 2016).  
151 42 C.F.R. § 438.3(e)(2).  
152 42 C.F.R. § 438.8(e)(1), (3).  
153 42 C.F.R. § 438.3(e)(1)(i).  
154 See OR. HEALTH AUTH., HEALTH-RELATED SERVICES BRIEF, *supra* note 138, at 6; OR. HEALTH AUTH., CMS EVALUATION DESIGN APPROVAL, *supra* note 138, at 6.  
155 42 U.S.C. § 1395w-22(a)(1)(A), (B); 42 C.F.R. § 422.100(a), (c)(1).  
156 42 U.S.C. § 1395w-22(a)(3).  
157 See CTRS. FOR MEDICARE & MEDICAID SERVS., MEDICARE MANAGED CARE MANUAL Ch. 4 § 30.1 (2016), <https://www.cms.gov/Regulations-and-Guidance/Guidance/Manuals/Downloads/mc86c04.pdf>.  
158 See Ctrs. for Medicare & Medicaid Servs., Letter to Medicare Advantage Organizations: Implementing Supplemental Benefits for Chronically Ill Enrollees, 2–3 (Apr. 24, 2019), [https://www.cms.gov/Medicare/Health-Plans/HealthPlansGenInfo/Downloads/Supplemental\\_Benefits\\_Chronically\\_Ill\\_HPMS\\_042419.pdf](https://www.cms.gov/Medicare/Health-Plans/HealthPlansGenInfo/Downloads/Supplemental_Benefits_Chronically_Ill_HPMS_042419.pdf).  
159 42 U.S.C. § 1395w-22(a)(3)(D)(i).  
160 See Medicare Advantage Value-Based Insurance Design Model, CTRS. FOR MEDICARE & MEDICAID SERVS., <https://innovation.cms.gov/innovation-models/vbid> (last visited Apr. 7, 2020).  
161 CTR. FOR MEDICARE & MEDICAID INNOVATION, CTRS. FOR MEDICARE & MEDICAID SRVCS., VALUE BASED INSURANCE DESIGN MODEL, REQUEST FOR APPLICATIONS FOR CY 2021 11–13 (2020), <https://innovation.cms.gov/files/x/vbid-rfa2021.pdf>.  
162 42 U.S.C. § 1395w-22(a)(3)(D)(ii) (SSBCI); CTR. FOR MEDICARE & MEDICAID INNOVATION, VALUE BASED INSURANCE DESIGN MODEL, REQUEST FOR APPLICATIONS FOR CY 2021, *supra* note 161, at 13 (VBID).  
163 See Ctrs. for Medicare & Medicaid Servs., Letter to Medicare Advantage Organizations: Implementing Supplemental Benefits for Chronically Ill Enrollees, 2–3 (Apr. 24, 2019), [https://www.cms.gov/Medicare/Health-Plans/HealthPlansGenInfo/Downloads/Supplemental\\_Benefits\\_Chronically\\_Ill\\_HPMS\\_042419.pdf](https://www.cms.gov/Medicare/Health-Plans/HealthPlansGenInfo/Downloads/Supplemental_Benefits_Chronically_Ill_HPMS_042419.pdf); CTR. FOR MEDICARE & MEDICAID INNOVATION, VALUE BASED INSURANCE DESIGN MODEL, REQUEST FOR APPLICATIONS FOR CY 2021, *supra* note 161, at 13.  
164 26 U.S.C. § 501(r); 26 C.F.R. § 1.501(r)-3.  
165 In 2020, HHS issued a new safe harbor that protects certain tools and supports provided to patients to improve quality, health outcomes, and efficiency. 42 C.F.R. § 1001.952(hh).  
166 See, e.g., Medicare and State Health Care Programs: Fraud and Abuse; Revisions to Safe Harbors Under the Anti-Kickback Statute, and Civil Monetary Penalty Rules Regarding Beneficiary Inducements, 85 Fed. Reg. 77794 (Dec. 2, 2020), <https://www.federalregister.gov/documents/2020/12/02/2020-26072/medicare-and-state-health-care-programs-fraud-and-abuse-revisions-to-safe-harbors-under-the>.  
167 See, e.g., OFF. OF THE INSPECTOR GEN., HHS OFFICE OF INSPECTOR GENERAL FACT SHEET: FINAL RULE: REVISIONS TO

THE SAFE HARBORS UNDER THE ANTI-KICKBACK STATUTE AND CIVIL MONETARY PENALTY RULES REGARDING BENEFICIARY INDUCEMENTS (Nov. 2020), <https://oig.hhs.gov/reports-and-publications/federal-register-notices/factsheet-rule-beneficiary-inducements.pdf>.

<sup>168</sup> *Racial and Ethnic Approaches to Community Health*, CTRS. FOR DISEASE CONTROL & PREVENTION, <https://www.cdc.gov/nccdphp/dnpao/state-local-programs/reach/index.htm> (last visited Dec. 22, 2020). The goal of this program is to “reduce health disparities among racial and ethnic populations with the highest burden of chronic disease such as hypertension, heart disease, type 2 diabetes, and obesity.”

<sup>169</sup> *DP18-1815: Improving the Health of Americans Through Prevention and Management of Diabetes, Heart Disease, and Stroke*, CTRS. FOR DISEASE CONTROL & PREVENTION, <https://www.cdc.gov/diabetes/programs/stateandlocal/funded-programs/dp18-1815.html> (last visited Dec. 22, 2020). The goal of this program is “implementing and evaluating evidence-based strategies to manage diabetes and prevent or delay onset of type 2 diabetes in high-burden populations and communities.”

<sup>170</sup> *DP18-1817: Innovative State and Local Public Health Strategies to Prevent and Manage Diabetes, Heart Disease, and Stroke*, CTRS. FOR DISEASE CONTROL & PREVENTION, <https://www.cdc.gov/diabetes/programs/stateandlocal/funded-programs/dp18-1817.html> (last visited Dec. 22, 2020). The goal of this program is to “develop new and innovative approaches to increase the reach and effectiveness of evidence-based public health strategies in populations and communities with a high burden of diabetes, heart disease, and stroke.”

<sup>171</sup> SEATTLE SWEETENED BEVERAGE TAX CMTY. ADVISORY BD., SWEETENED BEVERAGE TAX COMMUNITY ADVISORY BOARD 2019 ANNUAL REPORT (2020), [https://www.seattle.gov/Documents/Departments/SweetenedBeverageTaxCommAdvisoryBoard/FactSheets/2019\\_SBT\\_Report\\_FINAL\\_11.3.2020.pdf](https://www.seattle.gov/Documents/Departments/SweetenedBeverageTaxCommAdvisoryBoard/FactSheets/2019_SBT_Report_FINAL_11.3.2020.pdf).

<sup>172</sup> *Public Health Uses Boulder Soda Tax Funds to Provide Healthy Food During COVID-19*, BOULDER COUNTY (Sept. 10, 2020), <https://www.bouldercounty.org/news/public-health-uses-boulder-soda-tax-funds-to-provide-healthy-food-during-covid-19/>.

<sup>173</sup> See 42 U.S.C. § 1786; *About WIC-WIC at a Glance*, FOOD & NUTRITION SERV., <https://www.fns.usda.gov/wic/about-wic-wic-glance> (last visited Dec. 19, 2020).

<sup>174</sup> *State Contacts*, FOOD & NUTRITION SERV., <https://www.fns.usda.gov/contacts?f%5B0%5D=program%3A32> (filter “By Program” for “Special Supplemental Nutrition Program for Women, Infants, and Children (WIC)”). Tribal Governments generally administer their own WIC programs as well.

<sup>175</sup> 42 U.S.C. § 1786, 7 C.F.R. §§ 246.1–246.29, 7 C.F.R. §§ 248.1–248.26. Nutritional risk is determined through an assessment by a “competent professional authority,” which may be a physician, nutritionist, registered nurse, dietitian, or other trained health official. CONG. RSCH. SERV., R44115, A PRIMER ON WIC: THE SPECIAL SUPPLEMENTAL NUTRITION PROGRAM FOR WOMEN, INFANTS, AND CHILDREN 8–9 (2017), <https://crsreports.congress.gov/product/pdf/R/R44115>.

<sup>176</sup> CONG. RSCH. SERV., R44115, *supra* note 175, at 12–13.

<sup>177</sup> A cash-value voucher is called a cash-value benefit in an EBT environment. See 7 C.F.R. § 246.2. Congress directed all states to transition to EBT systems for WIC (eWIC) by October 2020. As of December 2020, most states, territories, and Tribal Organizations had at least started rolling out eWIC in their jurisdictions. Mississippi and Georgia were still entering the pilot phase. See FOOD & NUTRITION SERV., WIC EBT DETAIL STATUS REPORT (Dec. 2020), <https://fns-prod.azureedge.net/sites/default/files/resource-files/December2020WICEBTDetailStatusReport.pdf>.

<sup>178</sup> 7 C.F.R. § 246.10 (the CVB must cover, at a minimum, fresh fruits and vegetables, and can include canned, frozen, or dried fruits and vegetables at the implementing state’s option). Some WIC households receive an additional coupon to purchase produce from farm-direct vendors through the Farmers Market Nutrition Program, though this coupon is limited to \$10 to \$30 per participant (individual or household) annually. 7 C.F.R. § 248.8; FOOD & NUTRITION SERV., WIC FARMERS’ MARKET NUTRITION PROGRAM (2018), <https://fns-prod.azureedge.net/sites/default/files/fmnp/WICFMNPFactSheet.pdf>.

<sup>179</sup> FOOD & NUTRITION SERV., WIC POLICY MEMORANDUM #2015-4: INCREASE IN THE CASH VALUE VOUCHER FOR PREGNANT, POSTPARTUM, AND BREASTFEEDING WOMEN (2015), <https://fns-prod.azureedge.net/sites/default/files/wic/WPM-2015-4-Increase-in-the-CVV-for-Preg-Postpartum-and-Breastfeeding-Women-w-att.pdf>. Food packages for infants include a quantity-specific portion of infant fruits and vegetables instead of a cash-value benefit, with some flexibility for states to permit issuance cash-value benefits on an individualized basis for infants 9 months through 11 months.

<sup>180</sup> KATHLEEN M. RASMUSSEN ET AL., NAT’L ACAD. OF MED., REVIEW OF WIC FOOD PACKAGES: PROPOSED FRAMEWORK FOR REVISIONS: INTERIM REPORT 287 (2016), [https://www.ncbi.nlm.nih.gov/books/NBK379057/pdf/Bookshelf\\_NBK379057.pdf](https://www.ncbi.nlm.nih.gov/books/NBK379057/pdf/Bookshelf_NBK379057.pdf). This disparity does not seem to be due to lack of use; NAM also found that EBT data supports high redemption rates for the CVV. *Id.* at 335.

<sup>181</sup> KATHLEEN M. RASMUSSEN ET AL., NAT’L ACAD. OF MED., REVIEW OF WIC FOOD PACKAGES: IMPROVING BALANCE & CHOICE: FINAL REPORT 271 (2017), [https://www.ncbi.nlm.nih.gov/books/NBK435902/pdf/Bookshelf\\_NBK435902.pdf](https://www.ncbi.nlm.nih.gov/books/NBK435902/pdf/Bookshelf_NBK435902.pdf).

<sup>182</sup> Ronit A. Ridberg et al., *Fruit and Vegetable Vouchers in Pregnancy: Preliminary Impact on Diet & Food Security*, J. OF HUNGER & ENV’T NUTR. (2020), <https://doi.org/10.1080/19320248.2020.1778593>.

<sup>183</sup> See INST. OF MED., WIC FOOD PACKAGES 101–03 (2006), <https://fns-prod.azureedge.net/sites/default/files/Time4AChange%28mainrpt%29.pdf>; Dena R. Herman et al., *Effect of a Targeted Subsidy on Intake of Fruits & Vegetables Among Low Income Women in the Special Supplemental Nutrition Program for Women, Infants, and Children*, 98 AM. J. OF PUB. HEALTH 98 (2008), <https://ajph.aphapublications.org/doi/10.2105/AJPH.2005.079418>. IOM’s mandate required that its recommendations be cost-neutral, thus circumscribing the amount of the recommended CVB.

<sup>184</sup> 7 C.F.R. § 246.12.

185 Victor Oliveira, *WIC Participation Continues to Decline*, ECON. RSCH. SERV. (June 5, 2017), <https://www.ers.usda.gov/amber-waves/2017/june/wic-participation-continues-to-decline/#:~:text=The%20number%20of%20women%20and,in%20the%20decline%20in%20participation> (noting that since 2010, the number of participants in WIC has decreased by 16 percent).

186 At the time of writing, Congress is considering increasing the CVB to \$35 per month for women and children, for a limited period, due to the pandemic. See HOUSE COMM. ON EDUC. & LAB., FY21 BUDGET RECONCILIATION SECTION BY SECTION (2021), <https://edlabor.house.gov/imo/media/doc/2021-02-08%20FY21%20Budget%20Reconciliation%20Section%20by%20Section.pdf>.

187 While NAM has recommended increasing the CVB to \$12 for children and \$15–\$35 for women (higher amounts for Breastfeeding Women), these recommendations reflect the “cost-neutral restrictions” imposed on NAM’s analysis. RASMUSSEN ET AL., REVIEW OF WIC FOOD PACKAGES: IMPROVING BALANCE & CHOICE: FINAL REPORT, *supra* note 181, at 271.

188 See ECON. RSCH. SERV., THE WIC FRUIT & VEGETABLE CASH VOUCHER: DOES REGIONAL PRICE VARIATION AFFECT BUYING POWER (2011), [https://www.ers.usda.gov/webdocs/publications/44542/7452\\_eib75.pdf?v=41055#:~:text=We%20find%20that%20average%20prices,%2D%20or%20regional%2Dlevel%20variation](https://www.ers.usda.gov/webdocs/publications/44542/7452_eib75.pdf?v=41055#:~:text=We%20find%20that%20average%20prices,%2D%20or%20regional%2Dlevel%20variation).

189 See FOOD RSCH. & ACTION CTR., MAKING WIC WORK BETTER: STRATEGIES TO REACH MORE WOMEN & CHILDREN & STRENGTHEN BENEFITS USE 65–66 (2019), <https://frac.org/wp-content/uploads/Making-WIC-Work-Better-Full-Report.pdf>.

190 See ECON. RSCH. SERV., LOCAL FOOD SYSTEMS: CONCEPTS, IMPACTS, & ISSUES 43 (2010).

191 See FARMERS MKT. COAL, MARKETS ARE UP! (2013), [https://wafarmersmarkets.org/resource-file/NFMW\\_TalkingPoints\\_2013\\_FMC.pdf](https://wafarmersmarkets.org/resource-file/NFMW_TalkingPoints_2013_FMC.pdf).

192 7 C.F.R. § 248.6 (WIC FMNP); 7 C.F.R. § 249.8 (SFMNP).

193 See 42 U.S.C. § 1786(m)(3).

194 Reflecting this challenge, Congress may provide “[a]dditional assistance for SNAP online purchasing and technology improvements” in the next pandemic stimulus package. STAFF OF H. COMM. ON AGRIC., 117TH CONG., S. CON. RES. 5, THE CONCURRENT RESOLUTION ON THE BUDGET FOR FISCAL YEAR 2021 15 (Comm. Print 2021), <https://docs.house.gov/meetings/AG/AG00/20210210/111183/BILLS-117SConRes5ih.pdf>.

195 See Cafer et al., *supra* note 1, at 12 (stating that “well-constructed programs can increase access to and consumption of fruits and vegetables through farmers markets,” while noting critique of farmers markets’ ability to sufficiently serve rural and African American communities).

196 7 U.S.C. § 7517(c), (f).

197 7 U.S.C. § 7517(f)(2).

198 See *NIFA Announces \$41.4 Million in Grants to Encourage Healthy Food Purchases for SNAP Participants*, NAT’L INST. OF FOOD & AGRIC. (Nov. 6, 2019), <https://nifa.usda.gov/announcement/nifa-announces-grants-snap-participants>; *Recent Awards*, NAT’L INST. OF FOOD & AGRIC., [https://portal.nifa.usda.gov/lmd4/recent\\_awards?report\\_title=Recent%20Awards&from\\_site=NIFA&search\\_label=Awards%20Listing](https://portal.nifa.usda.gov/lmd4/recent_awards?report_title=Recent%20Awards&from_site=NIFA&search_label=Awards%20Listing) (filter by “Food Insecurity Nutrition Incentive Grant Program” for “Program Area Name” and “Product Prescription” for “Program Name”).

199 NAT’L INST. OF FOOD & AGRIC., REQUEST FOR APPLICATION: THE GUS SCHUMACHER NUTRITION INCENTIVE PROGRAM (2020), <https://nifa.usda.gov/sites/default/files/rfa/GusNIP-RFA-FY-2020.pdf>.

200 7 U.S.C. § 7517(e); see *USDA selects Gretchen Swanson Center for Nutrition & Fair Food Network as leads for new national evaluation and technical assistance center*, FAIR FOOD NETWORK (Nov. 6, 2019), <https://fairfoodnetwork.org/press-release/usda-selects-gretchen-swanson-center-for-nutrition-fair-food-network-as-leads-for-new-national-evaluation-and-technical-assistance-center/>; NUTRITION INCENTIVE HUB, <https://www.nutritionincentivehub.org/>.

201 See *Produce Prescriptions*, REINVESTMENT PARTNERS, <https://reinvestmentpartners.org/what-we-do/produce-prescriptions/> (last visited Dec. 19, 2020); *What We Do*, THE FOOD TRUST, <http://thefoodtrust.org/what-we-do> (last visited Dec. 19, 2020).

202 7 U.S.C. § 7517(c)(4) (requiring coordination with HHS to carry out the GusNIP Produce Prescription Grant Program)

203 MEMORANDUM OF UNDERSTANDING BETWEEN CTR. FOR DISEASE CONTROL & PREV. & U.S. DEP’T OF AGRIC. (July 2019).

204 NAT’L INST. OF FOOD & AGRIC., REQUEST FOR APPLICATION: THE GUS SCHUMACHER NUTRITION INCENTIVE PROGRAM (GusNIP), *supra* note 199, at 37.

205 See *GusNIP NTAE Center Awards \$500K in Capacity Building Grants*, NUTRITION INCENTIVE HUB (Nov. 18, 2020), <https://mailchi.mp/centerfornutrition/gusnip-ntae-center-awards-capacity-building-grants?e=588ebdb8ec>.

206 See *id.*

207 *DP17-1705: Scaling the National Diabetes Prevention Program in Underserved Areas*, CTRS. FOR DISEASE CONTROL & PREVENTION, <https://www.cdc.gov/diabetes/programs/stateandlocal/funded-programs/dp17-1705.html> (last visited Dec. 23, 2020).

208 Mass. Dep’t of Pub. Health, *RFR 200521 SSO Prep Fund \_reopen 1-27-20*, 1 (Jan. 27, 2020), <https://www.commbuys.com/bs0/external/bidDetail.sdo?bidId=BD-20-1031-BCHAP-BCH01-47714>.

209 *Id.*

210 NURSE-FAMILY PARTNERSHIP, SOUTH CAROLINA NURSE-FAMILY PARTNERSHIP PAY FOR SUCCESS PROJECT - FEBRUARY 2016 1 (2016), <https://www.nursefamilypartnership.org/wp-content/uploads/2017/02/SC-PFS-2-Pager.pdf>.

211 S.C. DEP’T OF HEALTH & HUMAN SERVS., FACT SHEET: SOUTH CAROLINA NURSE-FAMILY PARTNERSHIP PAY FOR SUCCESS PROJECT 2 (2016), [https://www.scdhhs.gov/sites/default/files/2-16-16-SC-NFP-PFS-Fact-Sheet\\_3.pdf](https://www.scdhhs.gov/sites/default/files/2-16-16-SC-NFP-PFS-Fact-Sheet_3.pdf).

212 Note, though, that funders have agreed to reinvest the success payments in the NFP to expand access to the program. See *id.*; ASS’N OF STATE AND TERRITORIAL HEALTH OFFICIALS, FINANCING PUBLIC HEALTH INTERVENTIONS

THROUGH PAY FOR SUCCESS: SOUTH CAROLINA AND THE NURSE-FAMILY PARTNERSHIP SEEK TO IMPROVE MATERNAL AND CHILD HEALTH THROUGH PAY FOR SUCCESS (2017), <https://www.astho.org/Health-Systems-Transformation/Pay-for-Success-South-Carolina-Issue-Brief/>.

213 See Lindsey Haynes-Maslow et al., *A Qualitative Study of Perceived Barriers to Fruit & Vegetable Consumption Among Low-Income Populations, North Carolina, 2011*, 10 *PREV. CHRONIC DIS.* 120206 (2013), [https://www.cdc.gov/pcd/issues/2013/pdf/12\\_0206.pdf](https://www.cdc.gov/pcd/issues/2013/pdf/12_0206.pdf); Lindsey Haynes-Maslow et al., *Low-Income Individuals' Perceptions About Fruit & Vegetable Access Programs: A Qualitative Study*, 47 *J. OF NUTRITION EDUC. & BEHAVIOR* 317 (Apr. 22, 2015).

214 CONG. RSCH. SERV., R42505, *THE SUPPLEMENTAL NUTRITION ASSISTANCE PROGRAM: A PRIMER ON ELIGIBILITY AND BENEFITS* 1 (2018), <https://crsreports.congress.gov/product/pdf/R/R42505/21>.

215 *Id.*

216 STEVEN CARLSON & BRYNNE KEITH-JENNINGS, *SNAP IS LINKED WITH IMPROVED NUTRITIONAL OUTCOMES AND LOWER HEALTH CARE COSTS* (2018), <https://www.cbpp.org/sites/default/files/atoms/files/1-17-18fa.pdf>; cf. Alyssa J. Moran et al., *Associations Between Governmental Policies to Improve the Nutritional Quality of Supermarket Purchases and Individual, Retailer, and Community Health Outcomes: An Integrative Review*, 17 *INT'L J. ENV'T RSCH. & PUB. HEALTH* 7493 (2020), <https://doi.org/10.3390/ijerph17207493>.

217 CARLSON, *supra* note 10.

218 See Kranti Mulik & Lindsey Haynes-Maslow, *The affordability of MyPlate: an analysis of SNAP benefits and the actual cost of eating according to the dietary guidelines*, 49 *J. OF NUTRITION EDUC. & BEHAVIOR* 623 (2017).

219 CTR. FOR NUTRITION POL'Y & PROMOTION, *THRIFTY FOOD PLAN, 2006* (2007), [https://fns-prod.azureedge.net/sites/default/files/usda\\_food\\_plans\\_cost\\_of\\_food/TFP2006Report.pdf](https://fns-prod.azureedge.net/sites/default/files/usda_food_plans_cost_of_food/TFP2006Report.pdf).

220 See CARLSON, *supra* note 10.

221 See Agriculture Improvement Act of 2018, Pub. L. 115-334, § 4002, 132 Stat. 4490, 4624, <https://www.congress.gov/115/plaws/publ334/PLAW-115publ334.pdf>; *Biden Administration Expands P-EBT to Benefit Millions of Low-Income and Food Insecure Children During Pandemic*, U.S. DEP'T OF AGRIC. (Jan. 22, 2021), <https://www.usda.gov/media/press-releases/2021/01/22/biden-administration-expands-p-ebt-benefit-millions-low-income-and> (announcing that USDA will begin the process of revising the Thrifty Food Plan).

222 NAT'L INST. OF FOOD & AGRIC., *REQUEST FOR APPLICATION: THE GUS SCHUMACHER NUTRITION INCENTIVE PROGRAM*, *supra* note 199, at 10; see Agriculture Improvement Act of 2018, Pub. L. 115-334, § 4205, 132 Stat. 4490, 4656–63 (codified at 7 U.S.C. § 7517); *Gus Schumacher Nutrition Incentives Program (formerly FINI)*, NAT'L INST. OF FOOD AND AGRIC., <https://nifa.usda.gov/program/gus-schumacher-nutrition-incentive-grant-program> (last visited Jan. 23, 2021).

223 See KATE FITZGERALD & GUS SCHUMACHER, *PUERTO RICO'S EXPLODING LOCAL FRESH FRUIT AND VEGETABLE DEMAND: INNOVATIVE PROGRAMS BY THE ISLAND'S AGRICULTURE AND NUTRITION LEADERS* (2016), <https://farmersmarketcoalition.org/wp-content/uploads/2016/10/NASDA-Final-3.pdf>.

224 Under the statute, the federal share of program costs cannot exceed 50% of the total cost of the activity. 7 U.S.C. § 7517(b). This requirement means that the grantee must fund—through state, local, or private sources—half of the program's costs. See NAT'L INST. OF FOOD & AGRIC., *REQUEST FOR APPLICATION: THE GUS SCHUMACHER NUTRITION INCENTIVE PROGRAM*, *supra* note 199, at 23. This match requirement was reduced for the duration of the public health emergency in the Consolidated Appropriations Act, 2021, Pub. L. 116-260, § 755 (2020).

225 See NAT'L INST. OF FOOD & AGRIC., *REQUEST FOR APPLICATION: THE GUS SCHUMACHER NUTRITION INCENTIVE PROGRAM*, *supra* note 199, at 36.

226 Southern States defined here to include Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia, and West Virginia. See *Recent Awards*, NAT'L INST. OF FOOD & AGRIC., [https://portal.nifa.usda.gov/lmd4/recent\\_awards?report\\_title=Recent%20Awards&from\\_site=NIFA&search\\_label=Awards%20Listing](https://portal.nifa.usda.gov/lmd4/recent_awards?report_title=Recent%20Awards&from_site=NIFA&search_label=Awards%20Listing) (filter by “Food Insecurity Nutrition Incentive Grant Program” for “Program Area Name”); for a similar analysis, see Mark Winne & Andy Fisher, *Op-ed: With Food Insecurity on the Rise, Nutrition Incentives Should Be More Equitable*, *CIV. EATS* (May 14, 2020), <https://civileats.com/2020/05/14/op-ed-with-food-insecurity-on-the-rise-nutrition-incentives-should-be-more-equitable/>.

227 Consolidated Appropriations Act, 2021, Pub. L. 116-260, § 755 (2020).

228 THILMANY ET AL., *supra* note 61.

229 Dariush Mozaffarian et al., *Role of government policy in nutrition—barriers to and opportunities for healthier eating*, 361 *BMJ* k2426 (2018), <https://doi.org/10.1136/bmj.k2426>.

230 MICH. DEP'T OF HEALTH & HUMAN SERVS., *supra* note 70.

231 KRISTINE ANDREWS ET AL., *HOW TO EMBED A RACIAL AND ETHNIC EQUITY PERSPECTIVE IN RESEARCH: PRACTICAL GUIDANCE FOR THE RESEARCH PROCESS* (2019), [https://www.childtrends.org/wp-content/uploads/2019/09/RacialEthnicEquityPerspective\\_ChildTrends\\_October2019.pdf](https://www.childtrends.org/wp-content/uploads/2019/09/RacialEthnicEquityPerspective_ChildTrends_October2019.pdf).

232 Parekh, J., Andrews, K., & S. Peckoo. CT5: Five Guiding Principles for Integrating Racial and Ethnic Equity into Research (2019). Bethesda, MD: Child Trends.

233 Andrews, K\*, Parekh, J\*, & S. Peckoo\*. \* denotes equal first authorship. *How to Apply a Racial and Ethnic Equity Perspective in Research: Practical Guidance for the Research Process* (2019). Bethesda, MD: Child Trends.

234 In developing the research design and questions, Andrews, Parekh, and Peckoo particularly recommend that researchers seek to “give back” to the community, ensuring that gaining answers to the chosen research questions can benefit the community providing data for the study. *Id.* at 8, 17.

235 In particular, Andrews, Parekh, and Peckoo state that before beginning data collection researchers should engage in self-reflection, asking themselves specific questions (e.g., “Who or what makes them uncomfortable, and why?”)

and using tools such as the Implicit Association Test to identify potential biases that could inform how they conduct, interpret, or present data. *Id.* at 22.

- 236 Some efforts are also underway to specifically provide support to funders and evaluators who are interested in incorporating an equity lens into their evaluation practices, including the Equitable Evaluation Initiative. See *Equitable Evaluation Initiative*, EQUITABLE EVALUATION INITIATIVE, <https://www.equitableeval.org/> (last visited Jan. 30, 2021).
- 237 CTR. FOR HEALTH L. & POL'Y INNOVATION, *FOOD IS MEDICINE: PEER-REVIEWED RESEARCH IN THE U.S.* (2020), [https://www.chipi.org/wp-content/uploads/2013/12/Food-is-Medicine\\_Peer-Reviewed-Research-in-the-U.S.1.pdf?fbclid=IwAR3HfO5ZZRlR7ortrUn9\\_OUOXrTJc5MGAakdlQmB0dcTzb\\_k8jachSLTuo](https://www.chipi.org/wp-content/uploads/2013/12/Food-is-Medicine_Peer-Reviewed-Research-in-the-U.S.1.pdf?fbclid=IwAR3HfO5ZZRlR7ortrUn9_OUOXrTJc5MGAakdlQmB0dcTzb_k8jachSLTuo).
- 238 Craig Gundersen & James P. Ziliak, *Food Insecurity and Health Outcomes*, 34 HEALTH AFFAIRS 1830 (2015), <https://www.healthaffairs.org/doi/pdf/10.1377/hlthaff.2015.0645>; *Health Effects of Dietary Risks in 195 Countries, 1990–2017: A Systematic Analysis for the Global Burden of Disease Study 2017*, 393 LANCET 1958 (2019), [https://doi.org/10.1016/S0140-6736\(19\)30041-8](https://doi.org/10.1016/S0140-6736(19)30041-8).
- 239 Craig Gundersen & James P. Ziliak, *Food Insecurity and Health Outcomes*, 34 HEALTH AFFAIRS 1830 (2015), <https://www.healthaffairs.org/doi/pdf/10.1377/hlthaff.2015.0645>.
- 240 See, e.g., Carol Boushey et al., *Publishing Nutrition Research: A Review of Study Design, Statistical Analyses, and Other Key Elements of Manuscript Preparation, Part 1*, 106 J. OF THE AMER. DIETETIC ASSOC. 89 (2006), <https://doi.org/10.1016/j.jada.2005.11.007>. As noted in *Food is Medicine: Actions to Integrate Food and Nutrition Interventions into Healthcare*, “[t]hese could include analyses of natural experiments, instrumental variable analyses, regression discontinuity studies, interrupted time series approaches, and difference-in-difference designs.” Sarah Downer et al., *supra* note 55.
- 241 NAT'L INSTS. OF HEALTH, *supra* note 57.
- 242 See *id.* at 15–19 (Strategic Goals 3 and 4).
- 243 See *id.* at 15–17 (Objectives 3-1, 3-3, and 3-5).
- 244 MASS. EXEC. OFF. OF HEALTH & HUM. SERVS., *supra* note 33; N.C. DEP'T OF HEALTH & HUMAN SERVS., HEALTHY OPPORTUNITIES LEAD PILOT ENTITY REQUEST FOR PROPOSAL, SERVICE FEE SCHEDULE, ADDENDUM 7, 26 (2019), <https://files.nc.gov/ncdohhs/medicaid/20191223-HO-LPE-RFP-Addendum-7-Revisions-to-the-RFP-TO-POST.pdf>; OR. HEALTH AUTH., HEALTH-RELATED SERVICES BRIEF, *supra* note 138, at 6.
- 245 Lee et al., *supra* note 45 (modeling a 30% fruit and vegetable subsidy for Medicare and Medicaid enrollees at risk for cardiometabolic syndrome and projecting a cost of \$18,184/QALY over a lifetime).
- 246 NAT'L INST. OF FOOD & AGRIC., REQUEST FOR APPLICATIONS: THE GUS SCHUMACHER NUTRITION INCENTIVE PROGRAM (GUSNIP) 37 (2020), <https://nifa.usda.gov/sites/default/files/rfa/GusNIP-RFA-FY-2020.pdf>.
- 247 Some of these metrics appear in the *Produce Prescription Program, Health Care Outcomes of Interest*, from the GusNIP NTAE, which is available at [https://static1.squarespace.com/static/5e4ac640e8cf6318cddb64a6/t/5ea6eb9be5463d4c28d3e46e/1587997595436/Healthcare\\_Outcomes\\_FINAL+%285%29.pdf](https://static1.squarespace.com/static/5e4ac640e8cf6318cddb64a6/t/5ea6eb9be5463d4c28d3e46e/1587997595436/Healthcare_Outcomes_FINAL+%285%29.pdf) (last visited Dec. 19, 2020).
- 248 Jennifer A. Pooler & Mithuna Srinivasan, *Association Between Supplemental Nutrition Assistance Program Participation and Cost-Related Medication Nonadherence Among Older Adults with Diabetes*, 179(1) JAMA INTERN. MED. 63 (2019), <https://jamanetwork.com/journals/jamainternalmedicine/fullarticle/2715159>.
- 249 Hilary K. Seligman et al., *Food Insecurity Is Associated with Chronic Disease among Low-Income NHANES Participants*, 140 J. NUTR. 304 (2010), <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2806885/>; Henry J. Whittle et al., *Food insecurity is associated with anxiety, stress, and symptoms of post-traumatic stress disorder in a cohort of women with or at risk of HIV in the United States*, 149 J. NUTR. 1393 (2019), <https://doi.org/10.1093/jn/nxz093>; Cindy W. Leung et al., *Understanding the Psychological Distress of Food Insecurity: A Qualitative Study of Children's Experiences and Related Coping Strategies*, 120 J. ACAD. OF NUTR. & DIETETICS 395 (2020), <https://doi.org/10.1016/j.jand.2019.10.012>.
- 250 See PERCEIVED STRESS SCALE 4 (PSS-4), <https://ohnurses.org/wp-content/uploads/2015/05/Perceived-Stress-Scale-4.pdf>; HEALTHY DAYS CORE MODULE (CDC HRQOL-4), [https://www.cdc.gov/hrqol/hrqol14\\_measure.htm#1](https://www.cdc.gov/hrqol/hrqol14_measure.htm#1).
- 251 See CTRS. FOR MEDICARE & MEDICAID SERVS., ANNOUNCEMENT OF CALENDAR YEAR (CY) 2022 MEDICARE ADVANTAGE (MA) CAPITATION RATES AND PART C AND PART D PAYMENT POLICIES, 85-86 (Jan. 15, 2021), <https://www.cms.gov/files/document/2022-announcement.pdf>. A recent study also found that improved Medicare Advantage Star Ratings are associated with improved patient health. David J. Meyers et al., *Higher Medicare Advantage Star Ratings Are Associated with Improvements in Patient Outcomes*, 40 HEALTH AFFAIRS 243-250 (2021), <https://www.healthaffairs.org/doi/pdf/10.1377/hlthaff.2020.00845>.
- 252 Tristan Cordier et al., *A Health Plan's Investigation of Healthy Days and Chronic Conditions*, 23 AM. J. MANAGED CARE e323 (2017), <https://www.ajmc.com/view/a-health-plans-investigation-of-healthy-days-and-chronic-conditions>.
- 253 Interviews conducted between April–Dec 2020, notes on file with author.
- 254 Of 23 studies on Nutritious Food Referrals identified by the Center for Health Law & Policy Innovation of Harvard Law school, only one reported on a change in status among participants who lived with depression. See Emmert-Aronson et al., *supra* note 39; CTR. FOR HEALTH L. & POL'Y INNOVATION, *supra* note 237.
- 255 GUSNIP NUTRITION INCENTIVE HUB, LIST OF PARTICIPANT-LEVEL CORE METRICS, PRODUCE PRESCRIPTION PROGRAMS (2020), <https://static1.squarespace.com/static/5e4ac640e8cf6318cddb64a6/t/5ea70fce2e5b2115d327bf9f/1588006864195/List-of+Participant-Level+Core+Metrics+-+Produce+Prescription+-+FINAL.pdf>.
- 256 In our research for this report, we found a number of Programs using innovative technology solutions that offer exciting opportunities for Programs seeking to move beyond paper-based vouchers. See, e.g., *Fresh Connect*, ABOUT



FRESH, <https://www.aboutfresh.org/fresh-connect/> (last visited Jan. 11, 2021) (providing patients with a restricted debit card to purchase produce); *Healthy Incentives Programs*, SNAP2SAVE, <https://www.snap2save.com/healthy-incentive-programs/> (last visited Jan. 11, 2021) (providing a bridge between retailer POS systems and healthcare providers); *How Our Funding Works*, TANGELO, <https://jointangelo.com/how-funding-works/> (last visited Jan. 31, 2021) (providing a phone application-based platform in which a patient's prescription is loaded to a digital wallet and where the patient can then purchase produce from participating retailers).

257 DIANE PHILLIPS, ET AL, TRANSITION TO EBT IN WIC: REVIEW OF IMPACT & EXAMINATION OF PARTICIPANT REDEMPTION PATTERNS VI, VIII-IX (2014); Andrew S. Hanks, et al, *From Paper to Plastic: Understanding the Impact of eWIC on WIC Recipient Behavior*, 83 FOOD POL'Y 83 (2019), <https://doi.org/10.1016/j.foodpol.2018.12.002>.

258 Factors include the nature of WIC as a federal program with accompanying mandates, stigma associated with federal benefits that may not apply to produce prescriptions, and the technical assistant and support States have offered WIC retailers in transitioning to the EBT system.

259 The preamble to a recent proposed rule regarding HIPAA is illustrative of this point, highlighting the ways in which uncertainty affects data sharing between HIPAA-covered entities and social service organizations in negative ways. Proposed Modifications to the HIPAA Privacy Rule to Support, and Remove Barriers to, Coordinated Care and Individual Engagement, 86 Fed. Reg.6446 (Jan. 21, 2021).

260 See e.g., 45 C.F.R. § 164.506; FAQ 3008: Does HIPAA permit health care providers to share protected health information (PHI) about an individual with mental illness with a third party that is not a health care provider for continuity of care purposes?, U.S. DEP'T OF HEALTH & HUMAN SERVS., <https://www.hhs.gov/hipaa/for-professionals/faq/3008/does-hipaa-permit-health-care-providers-share-phi-individual-mental-illness-third-party-not-health-care-provider-continuity-care-purposes/index.html> (last visited Feb. 1, 2021).

261 See *State Health Information Guidance*, CAL. OFF. OF HEALTH INFO. INTEGRITY, <https://www.chhs.ca.gov/ohii/shig/> (last visited Jan. 23, 2021).

262 Proposed Modifications to the HIPAA Privacy Rule to Support, and Remove Barriers to, Coordinated Care and Individual Engagement, 86 Fed. Reg.6446 (Jan. 21, 2021).

263 See, e.g., 45 C.F.R. § 164.502(b); 45 C.F.R. § 164.514.

264 See, e.g., 45 C.F.R. § 164.304 (defining these types of safeguards).

265 Riva Touger-Decker, Jane M. Benefict Barracato, & Julie O'Sullivan-Maillet, *Nutrition Education in Health Professions Programs: A Survey of Dental, Physician Assistant, Nurse Practitioner, and Nurse Midwifery Programs*, 101 J. AM. DIETETIC ASS'N. 63 (2001), [https://doi.org/10.1016/S0002-8223\(01\)00017-7](https://doi.org/10.1016/S0002-8223(01)00017-7); but see Kara Beth Coward et al., *An Exploration of Key Barriers to Healthcare Providers' Use of Food Prescription (FRx) Interventions in the Rural South*, Jan 11 PUB. HEALTH NUTR. 1 (2021), <https://doi.org/10.1017/s1368980020005376> (online ahead of print) (health care providers in the rural South reported a lack of awareness of produce prescription-type interventions).

266 J. Franki, MJ Hayes, & JA Taylor, *The Provision of Dietary Advice by Dental Practitioners: A Review of the Literature*, 31 CMTY. DENTAL HEALTH 9 (2014), <https://pubmed.ncbi.nlm.nih.gov/24741887/> (doi:10.1922/CDH\_3297Hayes06); Marion L. Vetter et al., *What Do Resident Physicians Know About Nutrition? An Evaluation of Attitude, Self-Perceived Proficiency, and Knowledge*, 27 J. AM. COLL. NUTR. 287 (2008), <https://doi.org/10.1080/07315724.2008.1071970>; Stephen Devries et al., *A Deficiency of Nutrition Education and Practice in Cardiology*, 130 AM. J. MED. 1298, 1299, 1304 (2017), <https://doi.org/10.1016/j.amjmed.2017.04.043>; Coward et al., *supra* note 265.

267 Kelly M. Adams, W. Scott Butsch, & Martin Kohlmeier, *The State of Nutrition Education in US Medical Schools*, J. BIOMEDICAL EDUC. (2015), <https://doi.org/10.1155/2015/357627>.

268 Rose Ann DiMaria-Ghalili et al., *Challenges and Opportunities for Nutrition Education and Training in the Health Care Professions: Intraprofessional and Interprofessional Call to Action*, 99 AM. J. CLINICAL NUTR. 21184S (2014), <https://doi.org/10.3945/ajcn.113.073536>; Sandra Young Sullivan, *Nutrition Education in Physician Assistant Programs: A National Survey*, J. PHYSICIAN ASSISTANT EDUC. (2020), <https://www.researchgate.net/deref/http%3A%2F%2Fdx.doi.org%2F10.1097%2F01367895-200011010-00002>.

269 Karen E Aspry et al., *Medical Nutrition Education, Training, and Competencies to Advance Guideline-Based Diet Counseling by Physicians: A Science Advisory from the American Heart Association*, 137 CIRCULATION e821 (2018), <https://doi.org/10.1161/cir.0000000000000563>.

270 Lisa A. Hark & Darwin Deen, *Position of the Academy of Nutrition and Dietetics: Interprofessional Education in Nutrition as an Essential Component of Medical Education*, 117 J. ACAD. NUTR. & DIETETICS 1104 (2017), <https://doi.org/10.1016/j.jand.2017.04.019>.

271 DiMaria-Ghalili et al., *supra* note 268.

272 Coward et al., *supra* note 265 (calling for training that includes the role of produce prescriptions in improving patient outcomes, screening tools, and intervention logistics).

273 See EMILY M. BROAD LEIB ET AL., DOCTORING OUR DIET: POLICY TOOLS TO INCLUDE NUTRITION IN U.S. MEDICAL TRAINING (2019), [https://www.chlpi.org/wp-content/uploads/2013/12/Doctoring-Our-Diet\\_-September-2019-V2.pdf](https://www.chlpi.org/wp-content/uploads/2013/12/Doctoring-Our-Diet_-September-2019-V2.pdf).

274 Notably, while implicit bias is a recognized issue within the U.S. health care system, studies indicate that existing approaches to training health care providers on implicit bias have limited effect. Therefore, efforts must be made not only to incorporate training on implicit bias into curricula, but also to improve these trainings and ensure that lessons from these trainings are reinforced throughout both clinical and classroom training. See, e.g., Michelle van Ryn et al., *Medical School Experiences Associated with Change in Implicit Racial Bias Among 3547 Students: A Medical Student CHANGES Study Report*, 30 J. GEN. INTERN. MED. 1748 (2015), <https://doi.org/10.1007/s11606-015-3447-7>.

275 COMM'N OF COLLEGIATE NURSING EDUC., STANDARDS FOR ACCREDITATION OF BACCALAUREATE AND GRADUATE NURSING PROGRAMS (2018), <https://www.aacnnursing.org/Portals/42/CCNE/PDF/Standards-Final-2018.pdf>; AACN Essentials, AM. ASS'N OF COLLS. OF NURSING, <https://www.aacnnursing.org/Education-Resources/AACN-Essentials> (last visited Jan. 23, 2021).

276 BROAD LEIB ET AL., *supra* note 273.

277 BIPARTISAN POL'Y CTR. ET AL., TEACHING NUTRITION AND PHYSICAL ACTIVITY IN MEDICAL SCHOOL: TRAINING DOCTORS FOR PREVENTION-ORIENTED CARE 16 (2014), [https://bipartisanpolicy.org/wp-content/uploads/2019/03/Med\\_Ed\\_Report.pdf](https://bipartisanpolicy.org/wp-content/uploads/2019/03/Med_Ed_Report.pdf).

278 Shaily Patel et al., *Nutrition Education in U.S. Medical Schools: An Assessment of Nutrition Content in USMLE STEP Preparation Materials*, 4 J. CURRICULUM & TEACHING 108, 111 (2015), <https://doi.org/10.5430/jct.v4n1p108>; Robert F. Kushner et al., Obesity Coverage on Medical Licensing Examinations in the United States. What is Being Tested?, 29 TEACHING & LEARNING MED. 123, 123–24 (2017), <https://doi.org/10.1080/10401334.2016.1250641>.

279 AM. DENTAL ASS'N, STATE CE STATUES AND REGULATIONS: DENTIST CONTINUING EDUCATION (2020), [http://www.ada.org/~media/ADA/Advocacy/Files/continuing\\_ed.pdf](http://www.ada.org/~media/ADA/Advocacy/Files/continuing_ed.pdf); *Nursing Continuing Education Requirements by State*, AAACEUS, [https://www.aaaceus.com/state\\_nursing\\_requirements.asp](https://www.aaaceus.com/state_nursing_requirements.asp) (last visited Jan. 23, 2021).

280 AM. DENTAL ASS'N, *supra* note 279.

281 *CME Requirements for Certification Maintenance*, AM. ACAD. OF PHYSICIAN ASSISTANTS, <https://www.aapa.org/cme-central/cme-fags/> (last visited Jan. 23, 2021).

282 *State Certification Programs*, RURAL HEALTH INFO. HUB, <https://www.ruralhealthinfo.org/toolkits/community-health-workers/4/training/certification> (last visited Jan. 23, 2021); *State Community Health Worker Models*, NAT'L ACAD. FOR STATE HEALTH POL'Y, <https://www.nashp.org/state-community-health-worker-models/> (last visited Jan. 23, 2021).

283 KATHERINE LONDON, MARGARET CAREY, & KATE RUSSEL, COMMUNITY HEALTH WORKER CERTIFICATION REQUIREMENTS BY STATE (2016), <https://www.cthealth.org/wp-content/uploads/2016/02/CHW-Certification-by-State-Final-Final.pdf>.

284 *State Community Health Worker Models*, *supra* note 282.

285 See Anna Brones, *Food Apartheid: The Root of the Problem with America's groceries*, THE GUARDIAN (May 15, 2018), <https://www.theguardian.com/society/2018/may/15/food-apartheid-food-deserts-racism-inequality-america-karen-washington-interview>; Cafer et al., *supra* note 1, at 12 (unpublished manuscript) (on file with author) (calling for interdisciplinary approaches to support “sustainable food prescription programs that move beyond a sanitized model of behavior modification and conceptualize these programs as mechanisms for addressing access, transportation, and racial and income inequalities”).

286 7 U.S.C. § 6953; *Financial Assistance*, AM. HEALTH FOOD FINANCING INITIATIVE, <https://www.investinginfood.com/financial-assistance/> (last visited Dec. 19, 2020).

287 *Pennsylvania Fresh Food Financing Initiative*, THE FOOD TRUST, <http://thefoodtrust.org/pafffi#:~:text=The%20FFF%20provides%20one%2Dtime,suburban%20areas%20across%20the%20state> (last visited Jan. 11, 2021) (grants and loans).

288 *Grocery Store Personal Property Tax Credit*, BALT. DEV. CORP., <http://baltimoredevelopment.com/incentives/tax-credits/grocery-store-tax-credit> (tax credit).

289 7 C.F.R. § 5001.105(a).

290 7 C.F.R. § 5001.105 (2020) (formerly at 7 C.F.R. § 4279.113(y)).

291 7 U.S.C. § 1627c; AGRIC. MKTG. SERV., FARMERS MARKET PROMOTION PROGRAM: FISCAL YEAR 2020 REQUEST FOR APPLICATIONS, VERSION 2 (2020), [https://www.ams.usda.gov/sites/default/files/media/2020\\_FMPP\\_RFA.pdf](https://www.ams.usda.gov/sites/default/files/media/2020_FMPP_RFA.pdf).

292 See AGRIC. MKTG. SERV., LOCAL FOOD PROMOTION PROGRAM: FISCAL YEAR 2020 REQUEST FOR APPLICATIONS, VERSION 2 (2020), [https://www.ams.usda.gov/sites/default/files/media/2020\\_LFPP\\_RFA.pdf](https://www.ams.usda.gov/sites/default/files/media/2020_LFPP_RFA.pdf).

293 7 U.S.C. § 2034; U.S. DEP'T OF AGRIC., REQUEST FOR APPLICATION: COMMUNITY FOOD PROJECTS COMPETITIVE GRANT PROGRAM (2020), <https://nifa.usda.gov/sites/default/files/rfa/FY2020-FY2021-Community-Food-Project-RFA-20200403.pdf>.

294 *Community Economic Development*, ADMIN. FOR CHILDREN & FAMILIES, <https://www.acf.hhs.gov/ocs/programs/ced>; see also *CED Fact Sheet FY 2019*, U.S. DEP'T OF HEALTH & HUM. SERV., <https://www.acf.hhs.gov/ocs/fact-sheet/ced-fact-sheet-fy-2019> (last visited Jan. 11, 2021).

295 See *CED Map Current Grantee Locations FY 2020*, ADMIN. FOR CHILDREN & FAMILIES, <https://www.acf.hhs.gov/ocs/map/ced-map-current-grantee-locations-fy-2020> (last visited Jan. 11, 2021).

296 See SEAN LOWRY, CONG. RSCH. SERV., COMMUNITY DEVELOPMENT FINANCIAL INSTITUTION (CDFI) FUND: PROGRAMS & POLICY ISSUES (2018), <https://fas.org/sgp/crs/misc/R42770.pdf>.

297 *U.S. Treasury Awards \$204.1 Million to Support Economic Growth in Low-Income, Distressed, and Native Communities*, CMTY. DEV. FIN. INST. FUND (Sep. 24, 2020), <https://www.cdfifund.gov/programs-training/Programs/cdfi-program/Pages/award-announcement-step.aspx>.

298 *CDBG: Community Development Block Grant Programs*, HUD EXCHANGE, <https://www.hudexchange.info/programs/cdbg/> (last visited Jan. 11, 2021).

299 See CHANGELAB SOLUTIONS, COMMUNITY DEVELOPMENT BLOCK GRANTS LINKING HEALTH & ECONOMIC DEVELOPMENT THROUGH FOOD RETAIL (2015), [https://www.changelabsolutions.org/sites/default/files/CDBG\\_FINAL\\_20150504\\_0.pdf](https://www.changelabsolutions.org/sites/default/files/CDBG_FINAL_20150504_0.pdf).

300 *Loans*, U.S. SMALL BUS. ADMIN., <https://www.sba.gov/funding-programs/loans>; CONG. RSCH. SERV., SMALL BUSINESS ADMINISTRATION: A PRIMARY ON PROGRAMS & FUNDING (2020), <https://fas.org/sgp/crs/misc/RL33243.pdf>.

301 A recent review found that “providing financial incentives to supermarkets to open in underserved areas . . . [was] not associated with changes in food purchasing or diet quality but may improve food security.” The same review did find, however, that “revisions to the WIC food package[] and financial incentives for fruits and vegetables were

associated with improvements in dietary behaviors[.]” We are hopeful, then, that as Produce Prescription Programs work with communities to broaden retail opportunities, healthy food retail can have a greater impact on nutrition beyond food security. See Alyssa J. Moran et al., *supra* note 216; see also THILMANY ET AL., *supra* note 61.

<sup>302</sup> See, e.g., EFOD COLLABORATIVE, *EQUITABLE FOOD-ORIENTED DEVELOPMENT: BUILDING COMMUNITY POWER* (2019), [https://www.efod.org/uploads/1/2/6/1/126113221/efod\\_brown\\_paper\\_updated\\_11\\_2019\\_.pdf](https://www.efod.org/uploads/1/2/6/1/126113221/efod_brown_paper_updated_11_2019_.pdf) (critiquing programs that focus on introducing new retail development without community input or centering community priorities; also noting that healthy food financing initiatives “maintain conventional underwriting standards that often prevent [organizations committed to equitable food oriented development] and the communities they work with from accessing needed funds”).

<sup>303</sup> See *id.*

<sup>304</sup> For example, one farm-direct stakeholder interviewed for this report estimated that a new POS system would cost more than half of a farm-direct vendor’s annual revenue.

<sup>305</sup> In interviews conducted for this report, one nationwide retailer indicated that an in-house team designs and upgrades their chain’s POS system.

<sup>306</sup> See 7 U.S.C. § 2016(f)(2) (2010) (subsidizing SNAP EBT equipment for retailers until 2014); *State EBT Equipment Program*, FOOD & NUTRITION SERV. (last updated June 23, 2020), <https://www.fns.usda.gov/snap/state-ebt-equipment> (grants for farm direct and farmers market EBT equipment); see also Special Supplemental Nutrition Program for Women Infants and Children (WIC): Implementation of Electronic Benefit Transfer-Related Provisions, 81 Fed. Reg. 10433, 10437–38 (Mar. 1, 2016) (codified at 7 C.F.R. Pt. 246); *USDA Announces \$34 Million for Technology Improvements in WIC*, FOOD & NUTRITION SERV. (Jul. 9, 2014), <https://www.fns.usda.gov/pressrelease/2014/fns-000314>.

<sup>307</sup> See *SNAP EBT Document Library*, FOOD & NUTRITION SERV., <https://www.fns.usda.gov/sso/snap-ebt-document-library> (last visited Jan. 11, 2021) (featuring guidance and specifications for EBT transactions).

<sup>308</sup> See, e.g., *Food Access: Fruit & Vegetable Prescription Program*, COMMUNITY OUTREACH & PATIENT ENGAGEMENT (COPE), <https://www.copeprogram.org/whatwedo> (last visited Feb. 20, 2021).

<sup>309</sup> In the course of our stakeholder interviews, we discussed the possibility of adding produce prescriptions to SNAP and WIC EBT cards. WIC provides an easier entry point because the fruit and vegetable CVB already exists and could be expanded, as indicated in Recommendation 7. It also appears possible for a Program to leverage the eWIC system to administer produce prescriptions by distributing eWIC cards programmed with just a CVB and setting up a separate fund to resolve transactions on the back end, giving participants access to WIC-approved retailers within their state. We leave this open as an opportunity for further exploration.

<sup>310</sup> While it appears technically possible to add a produce-specific benefit to SNAP, it will take considerable political will and resource investment to make this addition, which is not clearly the most effective option for Produce Prescription Programs. Further, it raises the question of whether produce prescriptions would be made available only to SNAP participants or if states would issue EBT cards to individuals not enrolled in SNAP. These administrative complexities contribute to the impracticality of this option.

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