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# Increasing Utilization of Community Supported Agriculture (CSA) Programs Among Low-Income King County Populations: Perspectives and Recommendations from Stakeholders

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## Chapter I: Introduction

Sufficient access to food is considered by the United Nations as the right to “... regular, permanent and unrestricted access... to *quantitatively and qualitatively* adequate and sufficient food... which ensures a physical and mental, individual and collective, fulfilling and dignified life free of fear.”<sup>1</sup> Without adequate access to nutritious and affordable food, an individual is considered to be food insecure. Although many entities aim to increase food access and diminish food insecurity, the prevalence remains high with 12% of families in the United States experiencing food insecurity in 2016.<sup>2</sup>

Food insecurity is prevalent in King County, Washington, with 11% and 12% of households reporting food insecurity in 2011 and 2012, respectively.<sup>3</sup> The prevalence increased in 2013, with 15% of King County households reporting food insecurity, indicating that in the previous 12 months their food did not last and they lacked sufficient resources to buy more.<sup>3</sup>

Food insecurity is associated with diets low in fruit and vegetables.<sup>4</sup> One explanation for this association is that diets rich in fruit and vegetables may be more expensive.<sup>4</sup> Additional barriers to fruit and vegetable consumption for households include perceived lack of preparation time for raw fruits and vegetables due to long working hours and increased spoilage rates in comparison to prepared or processed foods.<sup>5</sup> Food insecure households may also have lower access to fruits and vegetables due to living in neighborhoods with fewer grocery stores and/or a lack of available appropriate transportation options.<sup>5</sup> Focusing on fruit and vegetables is important because diets high in fruit and vegetables have been found to be associated with a decreased risk for certain cancers,<sup>6</sup> lower rates of overweight and obesity,<sup>7</sup> reduced risk of chronic diseases such as hypertension, coronary heart disease, and stroke,<sup>8</sup> and prevention of type 2 diabetes.<sup>9</sup> Lower-income individuals may already be at higher risk for chronic diseases due to less access to preventative healthcare in comparison to higher-income individuals.<sup>10</sup> Although access to healthcare has increased with the Affordable Care Act, 30% of lower-income Americans reported financial barriers to accessing medical services or filling a prescription.<sup>11</sup>

Public Health - Seattle & King County (PHSKC) aims to improve access to healthy and affordable food and is interested in exploring a variety of methods and programs for increasing

food access for lower-income King County residents. One such program is community supported agriculture (CSA), which creates alliances between farmers and consumers. Interested consumers typically pay upfront fees to purchase a share, known as a “membership” or “subscription”, and in return, receive a box, bag, or basket of seasonal produce each week.<sup>12</sup> The produce is often from a local farm, and the CSA model helps the consumer and farmer share agricultural risks in the event of crop failure due to adverse weather.<sup>12</sup> Participation in CSA programs is often driven by members’ “concern for a healthy environment, desire to eat in season, interest in supporting local farmers, wanting a direct connection to a farmer, and characteristics of produce in the CSA share...”.<sup>12</sup>

Across the United States, CSA members are disproportionately white, middle to higher-income, and highly educated.<sup>12</sup> The purpose of this project is to understand barriers to utilization of CSA programs by lower-income households and to use the understanding of barriers to provide recommendations to make CSA programs more accessible.

## Chapter II: Structure, Mission, and Nutrition-Related Goals of Public Health – Seattle & King County

Public Health – Seattle & King County (PHSKC) is one of ten departments under King County. The Board of Health, an 11 member board comprised of health professionals and elected officials, is the formal governance board for PHSKC.<sup>13</sup> The Board of Health work plan focuses on actions and policies that address the major causes of poor health in King County, with a focus specifically on addressing health disparities impacting the most vulnerable members of the community.<sup>14</sup>

The overarching mission of PHSKC is to identify and promote the conditions under which all people can live in healthy communities and achieve optimal health. Chronic Disease and Injury Prevention (CDIP), one of 8 divisions administered through the PHSKC, aims to foster communities where everyone has the opportunity to lead a long, healthy life, no matter who they are or where they live. To accomplish this, CDIP utilizes data to develop strategies and evaluate the impact of these strategies. Each approach is tailored to diverse communities with a focus on equity, social justice, and community engagement. The Healthy Eating and Active Living program (HEAL) is housed under CDIP and charged with addressing equitable food access and increasing the capacity for physical activity in communities.<sup>15</sup>

The HEAL program was involved in research that led to the adoption of multiple policies aimed at improving the overall food environment. Some examples include the elimination of *trans* fat in the food supply and the requirement for chain restaurants to provide nutritional information on menu items. These policies were successful at improving the nutritional quality of the food supply and providing critical information for consumers seeking to make healthier food choices. The success of these interventions lead to the passing of similar policies at the federal level.<sup>16</sup> HEAL strategies and efforts focus on preventing chronic diseases affecting King County residents. Although HEAL does not directly provide services, they collaborate with many community partners and organizations to develop and implement projects, policies, and programs. For example, one of HEAL's goals is to reduce the prevalence of unhealthy weight, a risk factor for chronic disease, in Washington by 5% by 2030. One initiative designed to address this issue, is aimed at King County youth as one in five youth in King County is at an unhealthy

weight. HEAL partners with school districts to develop strategies aimed at improving affordable and healthy food choices, increasing opportunities for physical activity in school, and building healthy eating and physical activity habits in students.<sup>17</sup>

## **Examples of King County Strategies to Improve Food Access**

### King County Local Food Initiative

To address the goals of expanding King County's local food economy and improve access to healthy, affordable food, King County's Local Food Initiative was launched in 2014 by County Executive Dow Constantine.<sup>18</sup> The key action items of this initiative include:

- Improving access to urban and rural farmland for purchase or long-term lease
- Increasing technical assistance and training for farmers to advance farm production, land management, and business development
- Improving access to healthy, affordable food by:
  - Enhancing school nutrition environments by increasing student's access to healthy foods to support positive eating behaviors.
  - Using nutrition incentive programs at farmers markets and grocery stores to increase the affordability of healthy foods.
  - Enhancing access to produce for lower-income and ethnic communities and using direct marketing strategies such as cooking demonstrations and nutrition talks to support healthy eating.
- Developing new farmers to assist in growing King County's local food economy.
- Engaging communities to support healthy eating and improve the food system.
- Improving access to irrigation on farmland to increase food production.
- Growing markets such as farmers markets, CSAs, and restaurants for local products
- Improving food system infrastructure to meet the demand for local products.
- Reducing food waste in commercial, school, and home environments.

### CSA @ Work

The worksite CSA pilot program for county employees was an offshoot of the Local Food Initiative.<sup>19</sup> This program aimed to support local farms and increase healthy food consumption

among King County employees. The pilot began in 2014 and by summer of 2017, the program included 12 worksites, four farms, and 130 employee participants. King County evaluated the program and outlined lessons learned throughout the process in a final report.

The pilot program began by gauging employee interest and providing education around the concept of a CSA. When selecting local farms to participate in the program, the county found that employees valued the ability to pay in installments versus a high up-front cost included in traditional CSA programs. Each King County workspace was matched with a different farm, resulting in different prices for memberships. Therefore, at workspaces with higher costs to join, fewer employees subscribed to the program. Evaluation results showed that employees valued choice and wanted a box that would fit their family size, eating habits and budget. The program was widely promoted to employees via email, websites and posters.

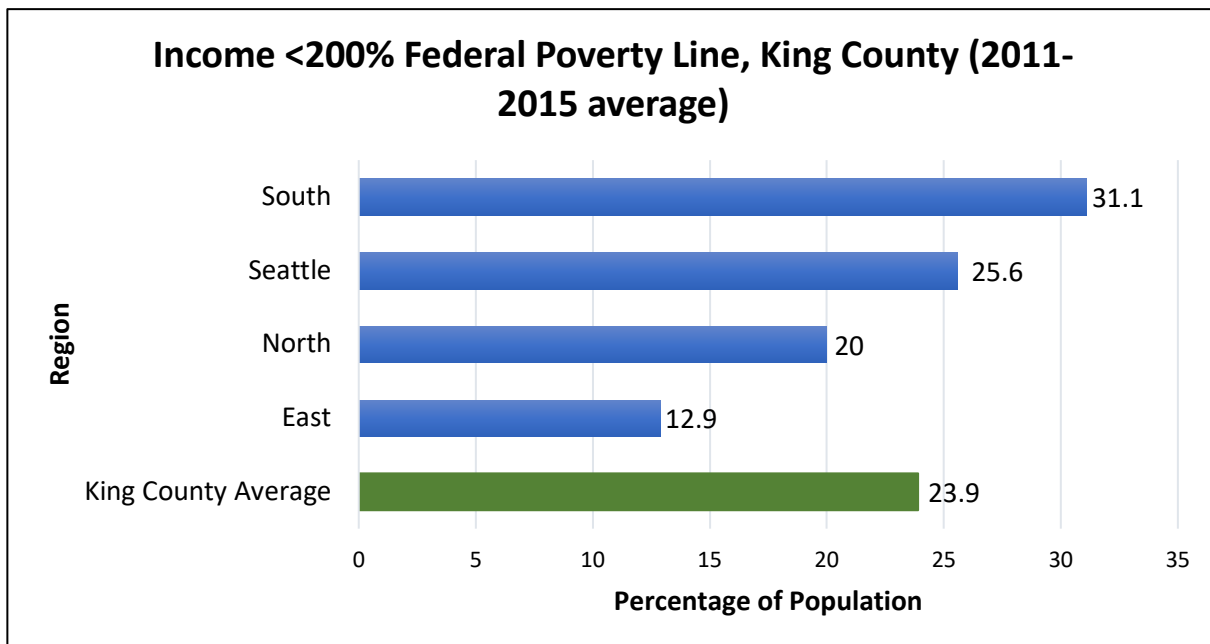
Components of this modified CSA program, such as choice of produce, payment in installments, and convenient pick up locations, led to the program's success, which has relevance for this project. Currently, in the 2018 season, CSA @ Work has ten King County buildings acting as pickup locations. Two cooperative CSAs, Pike Place Market, and Snoqualmie Valley Farmers Co-Op are providing produce for the program. The cost of joining varies depending on the size of the share and the farm but averages between \$18-\$30 per week.<sup>19</sup>

## Chapter III: Nutrition and Health Assessment of Low-Income King County Residents

The target population of this project is low-income residents of King County, defined as those having an income less than 200 percent of the national federal poverty level.<sup>20</sup> By this definition, 25.6 percent of adults and 28.7 percent of children living in King County are considered low-income.<sup>21</sup> These individuals are at increased risk of food insecurity as they may lack adequate resources to purchase food. Further, these individuals are more likely to be impacted by one or more social determinants of health. For example, economic instability and characteristics of the built environment may impact their ability to purchase healthy foods and live safe and healthy lives.<sup>22,23</sup>

### Residence

Low-income residents of King County are more likely to reside in South King County or Seattle rather than North or East King County (Figure 1).

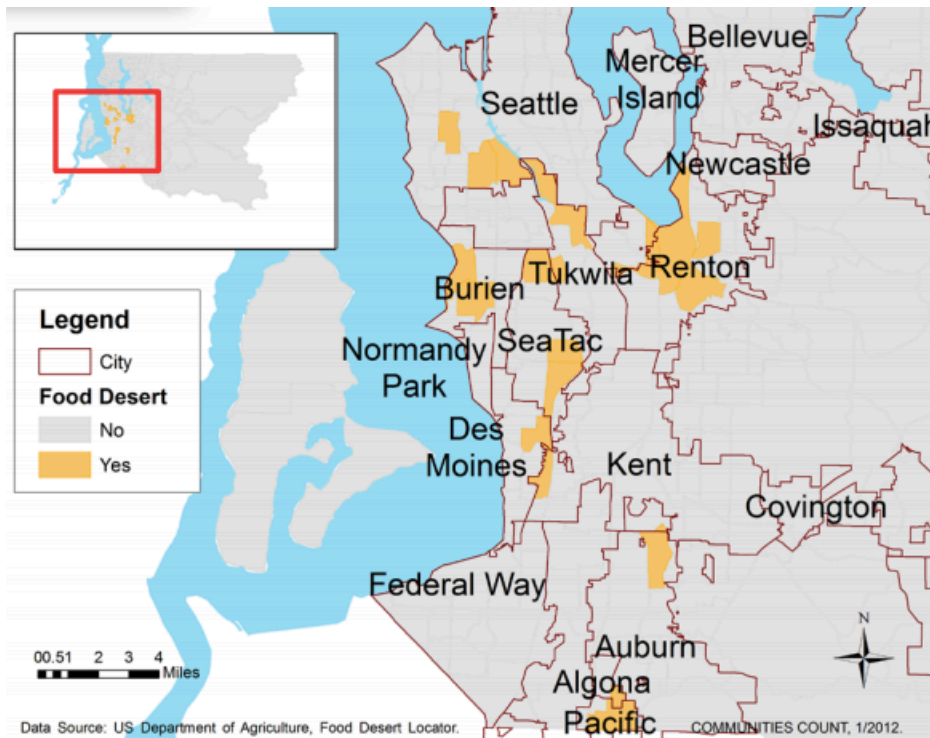


**Figure 1:** Percentage of Low-Income King County Residents by Region<sup>24</sup>



## Access to Healthy Food

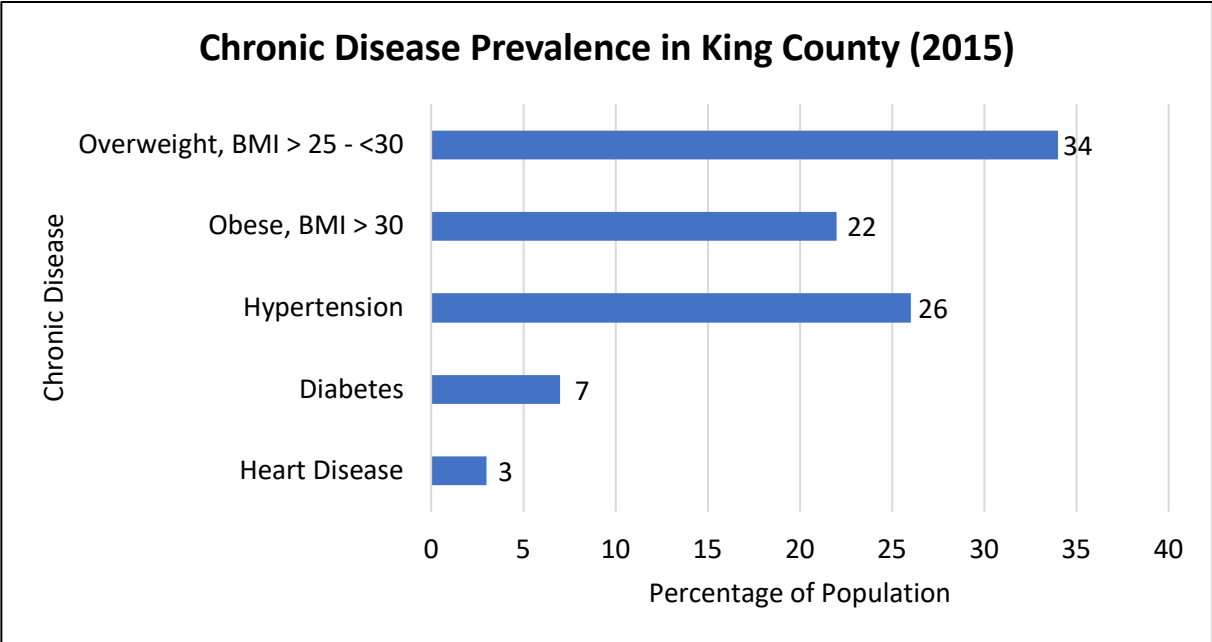
The USDA defines food deserts as areas lacking grocery stores, farmers' markets, and healthy food providers.<sup>25</sup> Urban areas are considered food deserts if there is no access to a supermarket within one mile.<sup>25</sup> In King County, food deserts are found in South Seattle and South King County, areas with high proportions of low-income residents (Figure 2).



**Figure 2:** Food Deserts in King County<sup>26</sup>

## Chronic Disease Prevalence

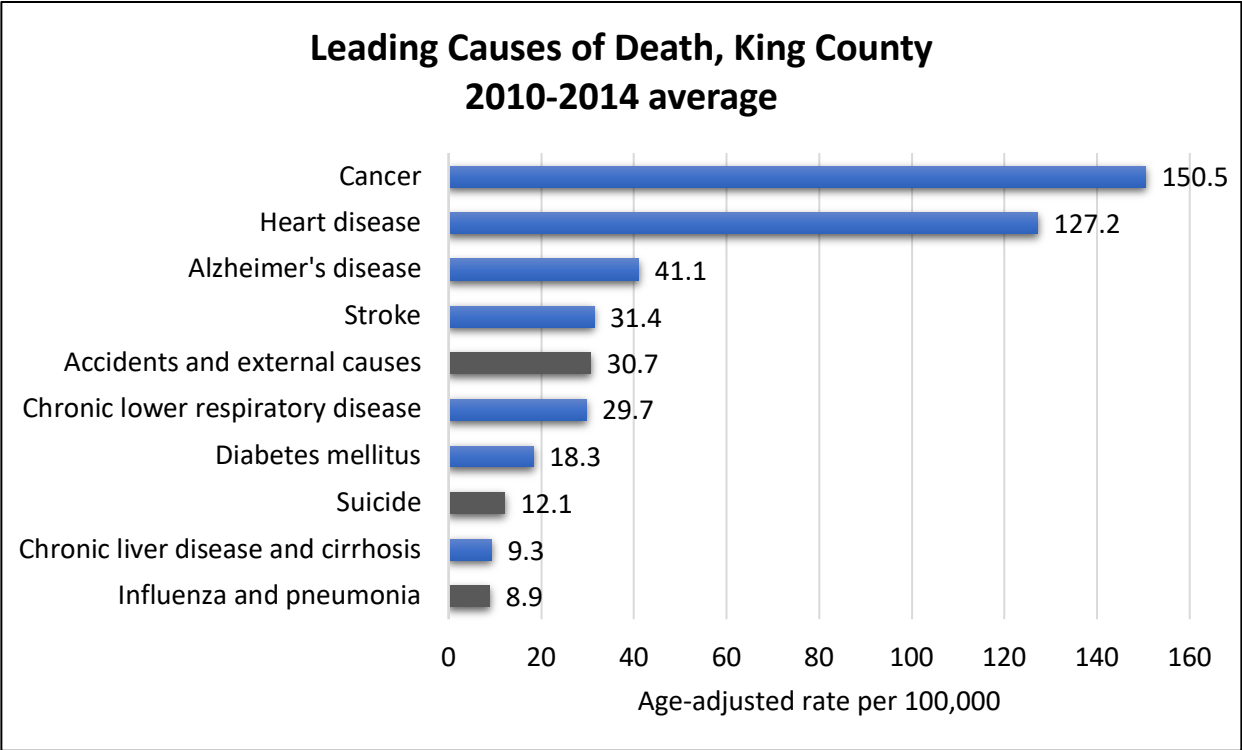
Nutritional intake and physical activity contribute to the risk of chronic disease development.<sup>7</sup> Lower-income populations experience higher rates of chronic diseases than higher-income populations due to limited access to healthcare, nutritious food, and built environments supporting physical activity.<sup>27</sup> The most prevalent chronic diseases in King County are displayed in Figure 3. Dietary patterns higher in fruits and vegetables are known to decrease the risk for certain chronic diseases.<sup>8</sup>



**Figure 3:** Chronic Disease Prevalence in King County (2015)<sup>28</sup>

**Morbidity and Mortality**

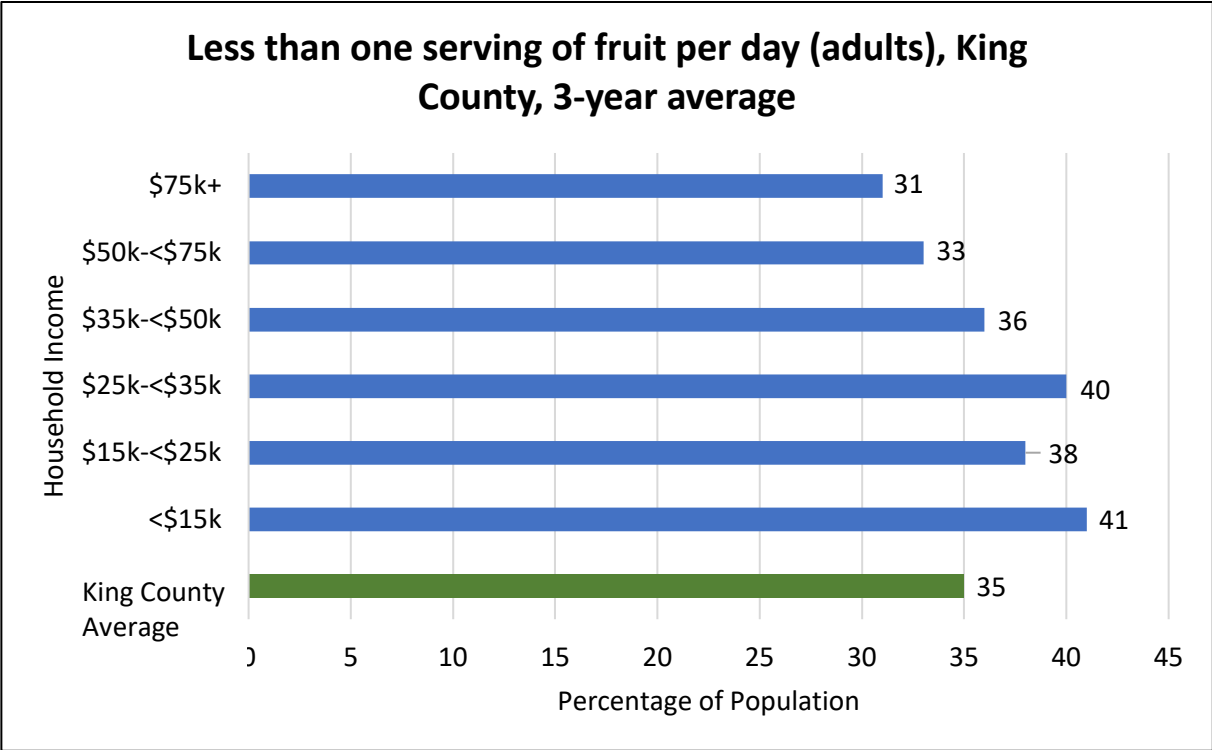
Dietary patterns high in fruits and vegetables are associated with lower risk of all-cause mortality.<sup>29</sup> Of the leading causes of mortality in King County, seven out of ten are related to chronic disease. As evidenced in Figure 4, these include cancer, heart disease, Alzheimer’s disease, stroke, chronic lower respiratory disease, diabetes mellitus, and chronic liver disease and cirrhosis.<sup>28</sup>



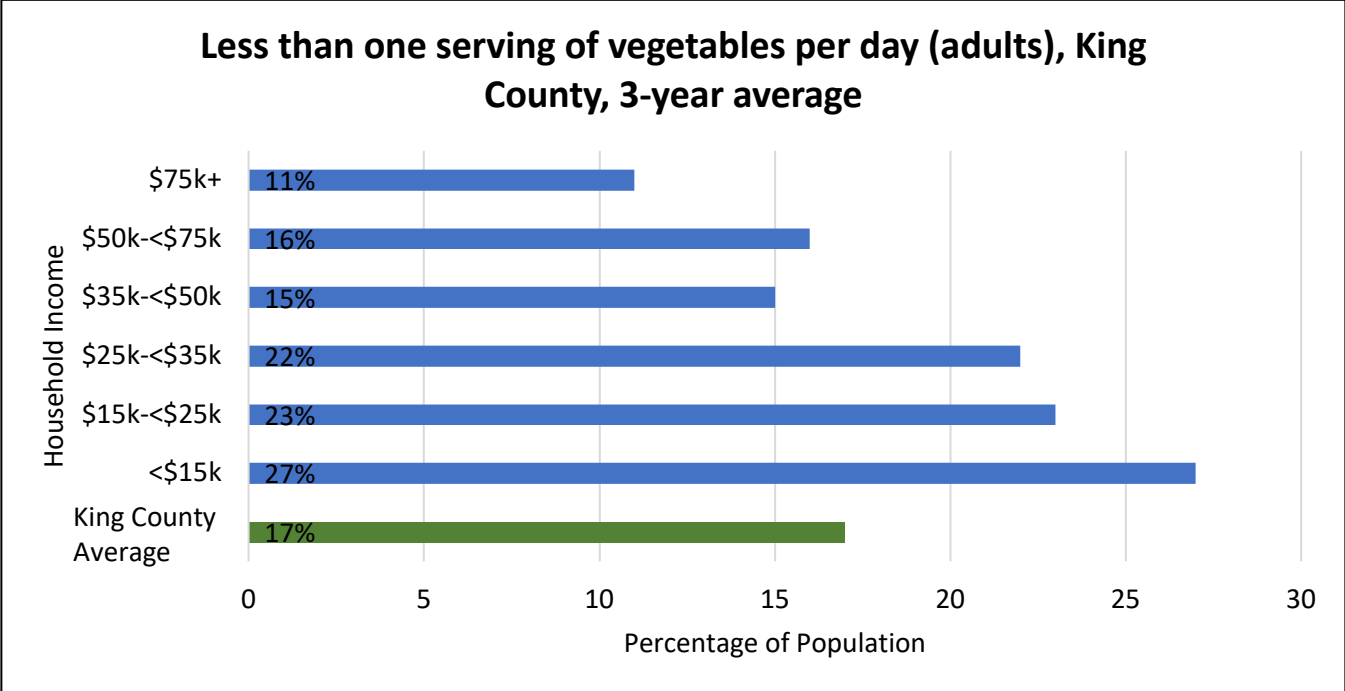
**Figure 4:** Leading causes of death, King County average 2010-2014<sup>28</sup>

**Diet Quality: Fruit and Vegetable Consumption**

On average, only 12.2% of Americans meet the recommendation for fruit consumption, and 9.3% meet the recommendation for vegetable consumption.<sup>30</sup> Disparities in produce intake can be seen across income levels, with lower-income households reporting lower rates of fruit and vegetable consumption.<sup>30</sup> In the years 2011, 2013, and 2015, an average of 35% of King County adult residents consumed at least one serving of fruit per day.<sup>31</sup> The percentage of adults consuming less than one serving of fruit per day decreases with increased household income (Figure 5).



**Figure 5:** Less than one serving of fruit per day, King County, 3-year average  
 Similar trends can be seen with vegetable consumption in King County adults in 2011, 2013, and 2015. As household income decreased, the percentage of adults consuming less than one serving of vegetables per day increased (Figure 6).



**Figure 6:** Less than one serving of vegetables per day, King County, 3-year average<sup>32</sup>

# Chapter IV: Food Insecurity

## Definition

Food insecurity is the state of experiencing difficulty consistently obtaining sufficient quantities of adequate, nutritious food.<sup>33</sup> Four categories are used to define different levels of household food security (Table 1).

**Table 1:** Categories of Food Security<sup>33</sup>

	Category	Definition
Food Secure	High Food Security	The household is able to consistently access adequate food.
	Marginal Food Security	The quality, variety, and quantity of food is not substantially reduced, but a household has problems at times, acquiring food.
Food Insecure	Low Food Security	The quality, variety, and desirability of food is reduced due to lack of resources, but the quantity of food and eating patterns has not been substantially disrupted.
	Very Low Food Security	The eating patterns are disrupted, and food intake is reduced due to a lack of resources.

## Measuring Food Security

The Household Food Security Survey Module (HFSSM), an 18-question survey, is used by the USDA to measure food insecurity.<sup>34</sup> Questions inquire about subjective experiences of food insecurity, separated into four domains: anxiety about household food supplies, perceptions that the quality or quantity of accessible food is not adequate, reduced adult food intake, and reduce food intake by children.<sup>34</sup> Respondents are classified as experiencing food security, low food security, or very low food security depending on the number of food insecure behaviors reported.<sup>34</sup>

## Prevalence

The prevalence of food insecurity in King County is measured using data from the Behavioral Risk Factor Surveillance System (BRFSS), an annual random telephone survey.<sup>35</sup> BRFSS uses one question to assess food insecurity, “how often in the past 12 months would you say you were worried or stressed about having enough money to buy nutritious meals?”<sup>36</sup> The latest BRFSS data available are from 2013.<sup>35</sup> “Food insecure” is used to describe respondents experiencing low food security or very low food security.<sup>35</sup> Although the prevalence of food insecurity is similar between King County and the United States, the national food insecurity data are more recent (Table 2).

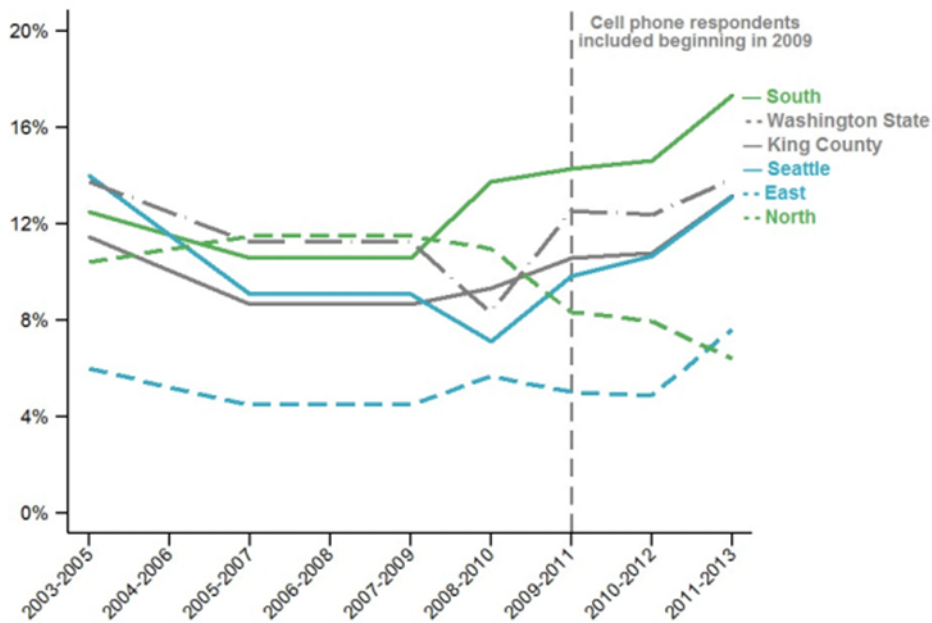
**Table 2:** Prevalence of Food Insecurity in the United States, Washington State, and King County

Location	Prevalence	Year	Source
United States	12.3%	2016	USDA Economic Research Center <sup>33</sup>
Washington state	12.0%	2014-2016	Washington State Department of Health <sup>37</sup>
King County	12.0%	2010-2013	Public Health – Seattle & King County <sup>35</sup>

## King County Food Insecurity Trends

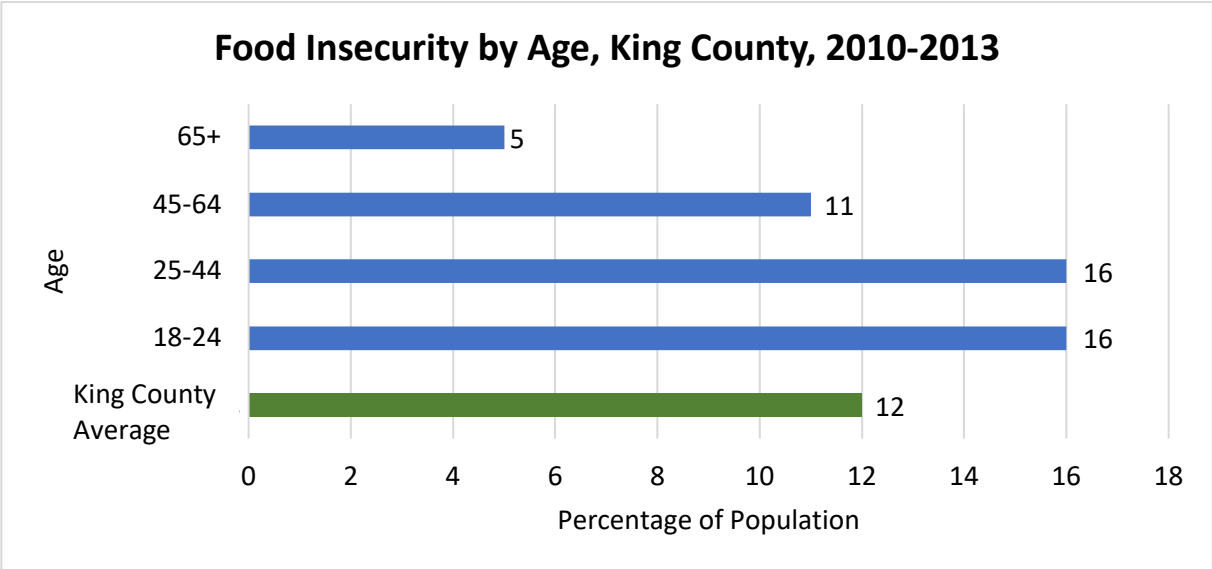
Although most regions of King County experienced a decrease in food insecurity between 2005-2009, the prevalence of food insecurity has been increasing since 2010 with 12% of households reporting food insecurity in 2012, and 15% of households reporting food insecurity in 2013. On average, 12% of King County households reported running out of food and not having enough money to buy more between 2010 and 2013 (Figure 7). Food insecurity is more prevalent in South King County and Seattle.<sup>35</sup>

**Food insecurity**  
**King County, 2003-2013, three-year rolling averages**

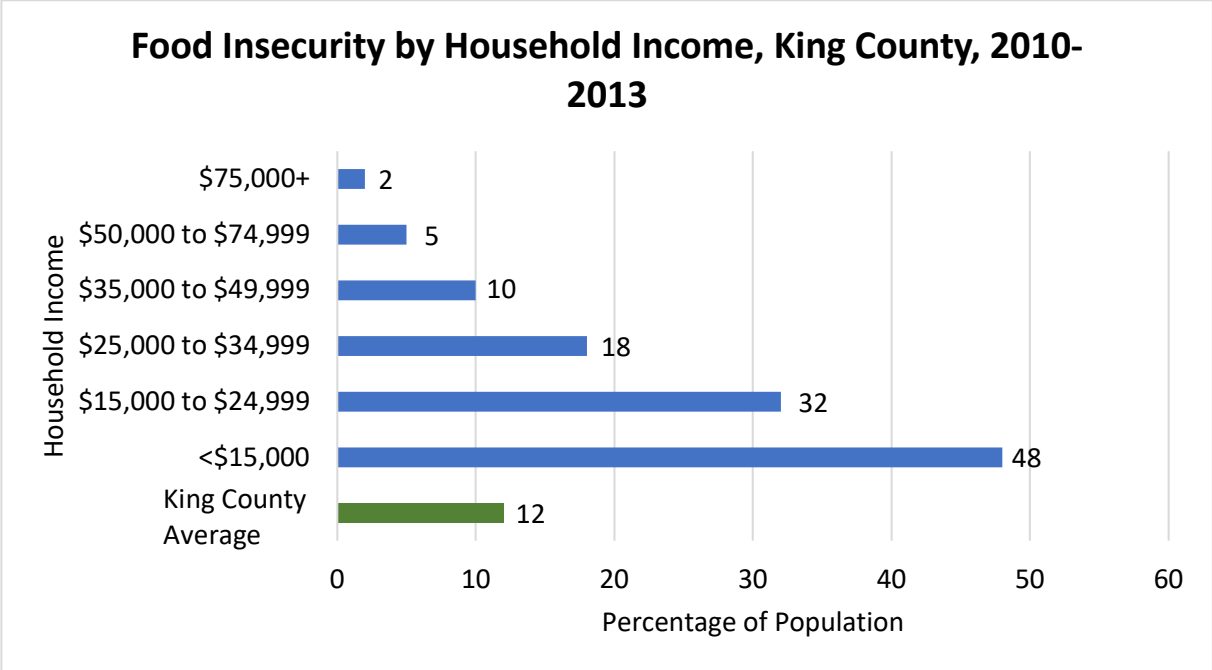


**Figure 7:** Food Insecurity, King County, 2003-2013<sup>35</sup>

Prevalence of food insecurity in King County varies by age, income, race, and ethnicity.<sup>35</sup> Adults age 18-44 experience the highest levels of food insecurity (Figure 8). The prevalence of food insecurity decreases as household income increases (Figure 9). Various racial/ethnic households report different rates of food insecurity, with Hispanic households reporting the highest levels (Figure 10).

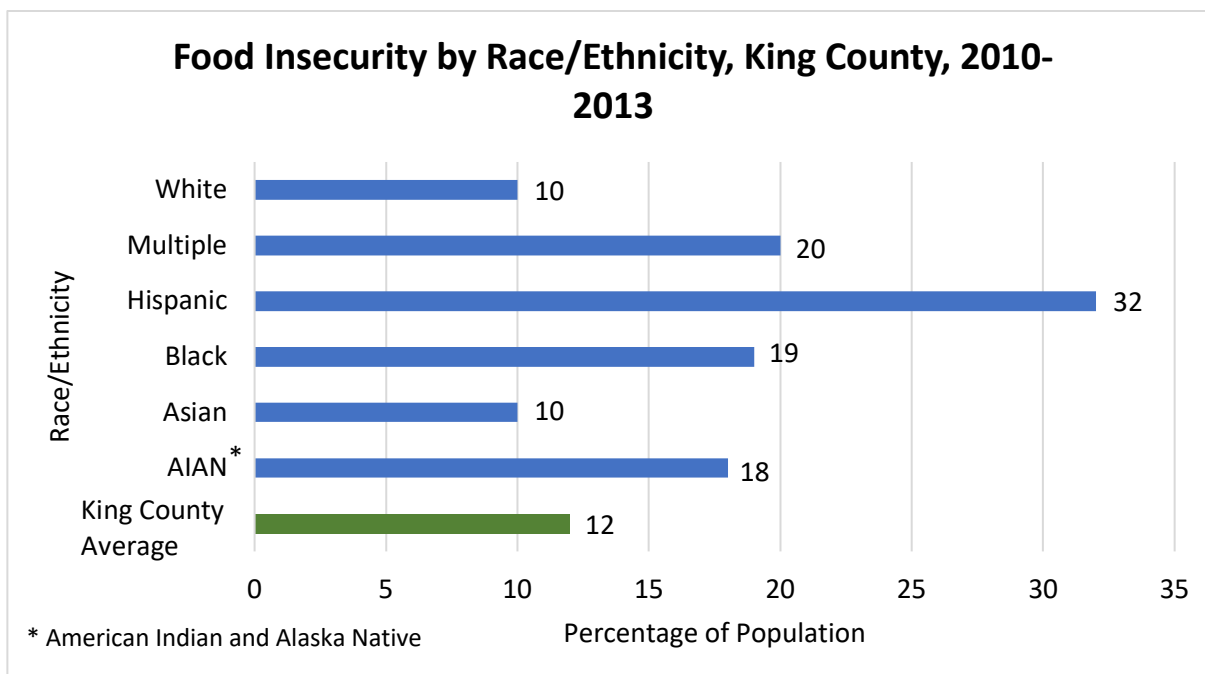


**Figure 8:** Food insecurity by age, King County average 2010-2013<sup>35</sup>



**Figure 9:** Food insecurity by household income, King County average 2010-2013<sup>35</sup>





**Figure 10:** Food insecurity by race/ethnicity, King County average 2010-2013<sup>35</sup>

## Health Impacts of Food Insecurity

### Children

Food insecurity in children is associated with poor overall health, psychosocial issues, frequent stomachaches and headaches, increased hospital admissions, poor learning readiness, and higher rates of iron deficiency.<sup>38</sup> The prevalence of various chronic health conditions such as anemia, asthma, dental caries, and reduced physical activity has been found to be higher in food insecure children.<sup>39</sup> Behavior concerns, including aggression and hyperactivity, and mental health concerns, such as anxiety and depression, are also associated with food insecurity in children.<sup>39</sup> Children and adolescents living in food insecure households consume more calories from fat, consume fewer family meals, have less food available at home, and perceive more barriers to consuming a healthful diet when compared to food secure children and youth.<sup>39</sup>

### Adults

Food insecurity in adults is associated with chronic diseases including hypertension, coronary heart disease, hepatitis, stroke, cancer, asthma, diabetes, arthritis, chronic obstructive pulmonary disease, and kidney disease.<sup>40</sup> In fact, food insecurity is a greater predictor of chronic disease than other factors including income.<sup>40</sup> Adults experiencing food insecurity have

been found to have inadequate intakes of vitamins A and B6, vegetables, fruits, and dairy.<sup>39</sup>

### **Common Coping Strategies for Food Insecure Households**

Food insecure households may engage in unhealthy coping strategies across multiple domains to ensure money can be stretched as far as possible. For example, low-income individuals may save money on medication by skipping doses or taking less medication than prescribed.<sup>41</sup> Due to the cost of health care, individuals may postpone or forgo preventive medical care, possibly exacerbating chronic conditions.<sup>41</sup> Individuals may also make trade-offs between necessities such as rent and utilities, and other expenses, such as food or health care. Low-income individuals may rely on foods that are energy-dense or may be unable to purchase foods that are recommended for a medically necessary diet.<sup>41</sup> These situations often faced by low-income households may lead to, or worsen, chronic diseases.<sup>41</sup>

## Chapter V: Existing Resources to Address Food Insecurity in King County

In King County, multiple federal and state programs provide resources for food insecure households. These programs provide economic assistance or food items to those in need. Some of the most commonly utilized programs are described below.

### **Supplemental Nutrition Assistance Program**

The Supplemental Nutrition Assistance Program (SNAP), a federal program administered through the United States Department of Agriculture (USDA), offers nutrition assistance to eligible, low-income individuals and families. Participants receive their SNAP benefits on an Electronic Benefit Transfer (EBT) card, which works like a debit card. Benefits may be used for eligible food products purchased at SNAP authorized retail locations which include many supermarkets, convenience stores, specialty stores, and farmers markets.<sup>42</sup> The amount of monthly SNAP funding received is dependent upon on the number of household members and monthly net income.

In 2014, 16% (314,000) of King County residents received an average of \$1,118.97 per year in SNAP benefits (known as Basic Food in Washington State).<sup>43</sup> Among households eligible for SNAP nationwide, Washington consistently ranks among the top states for participation.<sup>44</sup>

### **Fresh Bucks**

Fresh Bucks provides a dollar-for-dollar match on SNAP purchases up to \$10 per day for participants to spend on fresh fruits and vegetables at participating farmers markets, farm stands and grocery stores in Seattle and King County. Since 2012, revenue from the program exceeded \$785,000 to local farmers and over \$1.3 million to the local economy.<sup>45</sup> Fresh Bucks participants report benefits of the program including making a difference in their families' diets, eating more fruits and vegetables, and shopping more frequently at farmers markets.<sup>45</sup> Fresh Bucks is funded by the City of Seattle, USDA, King Conservation District, Public Health-Seattle & King County, the Pike Place Market Foundation and Seattle Children's.<sup>45</sup>

## **Fresh Bucks Rx**

Building on the success of Fresh Bucks, the fresh produce prescription program Fresh Bucks Rx, funded through a Food Insecurity Nutrition Incentive (FINI) grant from the National Institute of Food and Agriculture, USDA, was launched in 2016. This program allows health care providers at Harborview Medical Center, Kaiser Permanente, Neighborcare Health, PHSKC, and Seattle Children's Odessa Brown Children's Clinic to write prescriptions for produce for their low-income patients with diet-related disease. Vouchers can be redeemed at certain ethnic grocery stores, farmers markets, and farm stands in King County. During the first year of implementation, prescriptions were redeemed at 103 grocery stores and 34 farmers markets statewide.<sup>45</sup> This resulted in \$59,630 spent at grocery stores and \$37,480 spent at farmers markets.<sup>45</sup>

## **Women, Infants and Children and Farmers' Market Nutrition Programs**

The Special Supplemental Nutrition Program for Women, Infants and Children (WIC) provides supplemental food, health care referrals, and nutrition education to low-income pregnant women and infants and children up to five years old. In 1992, the Farmers' Market Nutrition Program (FMNP) was established to provide locally grown produce from farmers' markets and farm stands to WIC participants. The amount received by each family varies between \$10 and \$30 per household, and state agencies may supplement the federal benefit. Additionally, some farmers markets throughout King County match WIC FMNP funds, similar to the Fresh Bucks program, although the amount varies between locations.<sup>46</sup>

A similar program is available for low-income seniors in the United States to purchase eligible produce at a farmers' market, farm stands, and through community supported agriculture programs.<sup>47</sup> The Senior Farmers' Market Nutrition Program (SFMNP) is administered through the Department of Social and Health Services in Washington and is available to eligible low-income seniors age 60 or older.<sup>47</sup>

## **Food Pantries and Food Banks**

Food pantries and food banks are important programs for providing food for food insecure residents of King County. Food banks typically collect and distribute food to hunger relief organizations, such as food pantries. Food pantries are able to directly provide food to those in need. Currently, there are over 150 food pantries in King County, with the majority located in greater Seattle.<sup>48</sup> Websites such as Food Lifeline are available to help individuals find the closest food pantry.<sup>48</sup>

## **Good Food Bag Program**

The Good Food Bag program of the Tilth Alliance aims to improve access to fresh produce for households with limited financial resources in Seattle and South King County. The program encourages eating seasonal produce, makes local and organic food accessible, supports local farmers, and fosters community empowerment. Tilth Alliance partners with local agencies to act as pickup locations for produce bags, such as childcare centers in the community. The bags cost \$5 for \$10 worth of produce, which can be paid with SNAP benefits, cash, or credit card.<sup>49</sup>

## Chapter VI: Assessment of Barriers to Use of CSA by Low-Income Populations

One mission of the King County’s Local Food Initiative is to improve access to healthy, affordable foods and to increase access to local products. HEAL has identified CSA programs as a potential method for achieving this goal.

To provide recommendations to HEAL on how to improve access of CSAs by low-income King County populations, a detailed literature review was conducted. The review identifies barriers to CSA participation and identifies programs intended for low-income populations. Findings from the literature review informed semi-structured interviews with food access stakeholders. Findings are summarized in Tables 3 and 4.

**Table 3:** Individual Barriers and Motivators for Participation in CSA Programs by Income Level

Low-Income Individuals		High-Income Individuals	
Barriers	Motivators	Barriers	Motivators
Navigating a predominantly “white space” deters people of color from participating, especially when people of color are also low-income <sup>12</sup>	Meeting like-minded people and wanting to participate in farm events <sup>50</sup>	Preference for attending farmers markets <sup>51</sup>	Obtaining local, fresh, and nutritious produce <sup>12</sup>
Perceived affordability of produce <sup>52</sup>	Increased food access <sup>53</sup>	Desires more variety or different quantity of produce than is offered from CSA <sup>51</sup>	Supporting organic agriculture <sup>12</sup>
Lack of transportation to CSA pick up location <sup>52</sup>	Sharing financial risk with the farmer <sup>50</sup>		
Work schedules that do not align with pick up times <sup>52</sup>	Obtaining local, fresh, and nutritious produce <sup>12</sup>		

**Table 4: CSA Program Models Successfully Targeting Low-Income Populations**

Program and Location	Characteristics	Key Evaluation Findings
Project Green Leaf, Greensboro, NC <sup>52</sup>	<ul style="list-style-type: none"><li>• Shares provided once per week</li><li>• Participants received “food guides” with information and recipes</li><li>• Produce delivered by volunteers to participant homes</li></ul>	Method: Post season survey <ul style="list-style-type: none"><li>• Participants reported wider variety in their diets</li><li>• Saved money on weekly grocery bill</li><li>• Participants wanted the program to continue and expressed interest in the signing up for following seasons</li><li>• Families still reported going without food or making choices between food and medication</li><li>• Author reported that project would not have been successful without outside funding to provide shares to participants at no cost</li></ul>
Cost-Offset CSA, Vermont <sup>54</sup>	<ul style="list-style-type: none"><li>• Participants pay 50% of the CSA cost, the remaining 50% is split between the farmer and outside funding from the Northeast Organic Farming Association of Vermont</li><li>• Shares provided once per week</li><li>• Participants required to have child in household</li></ul>	Method: two post-season surveys <ul style="list-style-type: none"><li>• Adults and children consumed more fruits and vegetables than the US median</li><li>• Adults and children were more likely to meet dietary guidelines for vegetable consumption than US average</li></ul>
Zenger Farms and Mid County Health Center, Portland, OR <sup>55</sup>	<ul style="list-style-type: none"><li>• Participants were chosen from a Federally Qualified Health Center to receive weekly shares of produce</li><li>• Shares were picked up at the Mid County Health Center</li><li>• Members paid on a sliding scale, most paid</li></ul>	Method: pre- and post-intervention surveys <ul style="list-style-type: none"><li>• Participants reported learning new ways to cook and prepare vegetables</li><li>• Participants reported cooking and enjoying new vegetables</li></ul>

	<p>\$5 per week using SNAP benefits or cash</p> <ul style="list-style-type: none"> <li>• Members received a newsletter containing pictures of the produce, recipes, and stories from the farm</li> </ul>	
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**Methods**

Semi-Structured Interviews with Food Access Stakeholders

Common barriers to CSA participation noted in the literature were used to inform the development of semi-structured interview questions for food access stakeholders in King County. HEAL staff reviewed the interview questions and provided content advice (Appendix 1). Interviews were conducted with five food access stakeholders, including a farmer with experience growing for CSAs, an employee of a non-profit that coordinates CSA distributions, a dietitian working in SNAP education, a farmer working on an educational farm, and an employee of an organization working to improve local food systems through farm stands and technical assistance for farms. Interviewees were recruited from the South King County Urban Agriculture and South King County Food Access Working Group meetings, and through recommendations made by local food access advocates. Interviews were conducted, audio-recorded, and transcribed by the report author, who then coded answers into themes which fell into the broad categories of barriers and recommendations for addressing access and participation in CSA programs.

Theoretical Model

Social Cognitive Theory (SCT) is an interpersonal level theory showing the importance of the social environment in influencing individual behavior.<sup>56</sup> The theory explains the interactions and reciprocal nature of personal, behavioral, and environmental factors that influence behavior change.<sup>56</sup> Constructs of SCT which are relevant to participation in a CSA program include positive reinforcements for subscribing to a CSA program, opportunities to increase self-efficacy, and opportunities to increase behavioral capability through skill building and increased access to produce.



During this project, questions were designed to address important personal, behavioral, and environmental factors that may influence CSA participation for low-income King County residents.

## **Interview Results**

Participant responses were categorized by common themes related to barriers and recommendations for improving access to CSA programs. Specific quotes from interview participants are included to further illustrate findings.

### Barriers to Access

The following themes were commonly discussed among food access stakeholders as barriers to CSA access for low-income community members.

#### *Perception of CSA Programs*

CSA members are often believed to lack socioeconomic, cultural, racial, and educational diversity. Findings from the literature review reveal this same perception. The lack of participant diversity may be partially explained by the reliance on word-of-mouth advertising, which may perpetuate CSA membership from similar communities and backgrounds.

- “I think there’s a perception that [CSAs] are an upper-income way of accessing food.”
- “I think right now [CSAs] have a stigma of being catered towards wealthy neighborhoods and communities.”

#### *Lack of awareness of CSA Programs*

Low-income individuals may not be familiar with the logistics of CSA programs, including the meaning of the acronym, CSA availability, and resources to enroll.

- “I have definitely noticed that people are unfamiliar with [CSAs] and don’t know what the format is, where they might find one, how they might sign up for one, or anything like that.”
- “People don’t encounter the acronym or the definition of a CSA. If they are from another country, they may not be familiar and not interested in participating.”

### *Cost of produce*

Costs of the CSA produce are perceived to be higher than grocery store prices, affecting the CSA consumer-base.

- “I think [CSAs] are great programs, but the biggest barrier is going to be cost unless there is a subsidy attached to it.”

### *Upfront payment structure*

The upfront payment cost for a CSA, commonly due a few months before CSA shares are distributed, is often prohibitory for low-income community members. Additionally, CSAs don't often accept EBT, which is frequently utilized by lower-income community members to purchase food.

- “Having the payment ahead of time is hard for people that have really tight budgets. To pay \$500 ahead of time, which is a typical price for Seattle CSAs, seems unfeasible for people. And on the other hand, it's the thing that makes it really beneficial for farmers.”

### *Inconvenient CSA pickup location*

Although pickup locations vary depending on the farm, King County CSAs are typically picked up from an individual's house in a neighborhood. For lower-income community members, this may be prohibitory due to lack of transportation to neighborhood houses and short pickup windows.

- “People [may not] have transportation to get to a drop-off spot. If they didn't have time due to jobs, kids, or whatever is going on in their life, that would also affect their ability to [pick up produce].”

### *Produce amount and selection*

In the typical CSA model, members do not have the ability to customize the weekly produce they receive. While this may help some individuals try unfamiliar produce or new recipes, this aspect of a CSA may not be ideal for everyone. Additionally, the quantity of produce varies by CSA. Larger families may prefer receiving greater quantities of single items whereas a smaller family may prefer smaller quantities of multiple produce items.

- “I think family size is always an issue because many of the people that we interact with live with their extended family. Being able to pick more of one thing to make a whole meal or provide more of one thing to the entire family would be a huge benefit.”
- “When [a CSA program] switched to the option of choice, where people could pick what went into their bag, they liked that significantly more than the CSA model where you have a subscribed bag with a quantity of produce you are committed to... If there was produce that they knew they weren’t going to use, they weren’t committed to that.”

### *Commitment to full season of produce*

Committing to the full CSA season may be challenging for potential members due to uncertainties around living situations and monetary constraints. Considering that farmers need a commitment to a full season to plan for growing, this is a challenging barrier for farmers and participants.

- “... If you are paying all this money upfront, or if it’s automatically deducted from your credit card or EBT card... that can be a barrier for lower-income communities because you might want to commit, but what happens if you have a medical debt that you can’t afford, and they’re already committed to a CSA program? Then it puts people in a bind.”
- “The people we interact with often have transient lifestyles. They may not have stable housing, they may not have stable employment, and so they may not stay in the same place all the time. Seeing an entire season through could be difficult.”

## **Recommendations to Increase Utilization of CSA Programs**

Current CSA operations are not conducive to participation by lower-income households in King County. Alternative approaches to traditional CSA messaging and operations can help address commonly reported barriers to participation.

### *Improve CSA messaging*

For individuals without previous knowledge of CSA programs, the concept, acronym, and program purpose may be unclear. To increase participation throughout King County, messaging and advertising must be inclusive and clear to all community members.

- Use alternative names for CSA programs to increase the understanding of program goals. Program names should be descriptive and able to be translated into other languages. For example, the Good Food Bag program in King County is able to convey the purpose of the program through an easily translatable and descriptive name.
- Increase messaging about the benefits and opportunities of participating in a CSA program to increase awareness and further understanding of programs.
- Utilize various channels of advertising to reach broader audiences through social media, flyers in central community locations, and word of mouth. Food advocacy groups should act as champions and work with farmers to collaborate on methods and messages for advertising CSA programs.

### *Create inclusive payment structure*

To increase the accessibility of CSA programs for lower-income individuals, barriers in payment structure must be addressed. The upfront costs attached to CSAs should be limited and support should be available for CSA programs to increase acceptance of EBT payment.

- Utilize creative sources to provide funding to farms for pre-season costs. For example, local organizations interest in food access could donate the money necessary for farmers to begin the season. This would enable CSA participants to pay for shares weekly, removing the barrier of a high up-front cost.

- PHSKC should work towards a system to increase the feasibility of CSA programs accepting EBT. Providing technical support in this area will assist the farmers and allow them to gain customers by accepting additional forms of payment. To assist farms in implementing systems to accept EBT payments, guides are publicly available, including “The CSA Farmer’s Nationwide Guide to Accepting SNAP/EBT Payments” written by Zenger farms.<sup>57</sup>
- Employers and large businesses can provide subsidies and incentives to their employees for joining a workplace CSA program.

*Identify convenient pickup locations*

CSAs should aim to choose pickup locations for shares that are accessible for participants. Ideally, pickups should occur at locations participants are already visiting, such as childcare centers, schools, or community centers.

*Allow for customization of produce amount and variety*

- CSA programs should aim to increase the cultural relevance of produce in shares. Prior to planting for the season, farmers should have discussions with potential participants to ensure produce will be culturally relevant for consumers. Programs could achieve this by offering a choice of produce to participants, so they are able to choose the produce desired on a weekly basis.
- CSA programs should aim to offer choice to consumers regarding size and timing of shares. Participants with larger families may want shares of produce more frequently, whereas smaller households may want to space apart their shares.
- Local farms can collaborate with other farms in the area to create an aggregate CSA, combining produce from multiple farms into a single CSA program. This would lower the costs of marketing and delivery for individual CSAs and provide a wider array of produce to participants.

## **Areas for Future Work**

Previous reports have analyzed barriers experienced by farmers in supporting CSA programs in lower-income communities. While this project aimed to understand current barriers to accessing CSAs for lower-income households from the viewpoint of food access stakeholders, a more comprehensive understanding of barriers and approaches to increase participation could be achieved through the following strategies:

- Building on this project, PHSKC and local food access organizations should evaluate current non-traditional CSA programs in King County to develop best practices. Organizations supporting these programs to increase food access should aim to work collectively to address barriers faced by lower-income households.
- PHSKC and local food access organizations should aim to initiate conversations with lower-income households to understand their perspectives of CSA programs and existing barriers. Discussions should focus on current awareness of programs, barriers to accessing programs, and proposed changes to programs to increase accessibility. In addition, conversations could be facilitated between CSA farmers and lower-income individuals to brainstorm potential solutions.

In order to create a sustainable method of supporting local agriculture in King County through CSA programs, farmers, community organizations, and community members need to work together to address existing barriers. The current system of CSAs fails to address barriers experienced by lower-income households, which must be addressed to increase food access and decrease food insecurity.

## **Recommendations for Alternative CSA Program**

To assure CSA programs which are accessible for lower-income community members, considerations for the development of alternatives to traditional CSA programs could be explored. These programs could retain a mission similar to traditional CSA programs but would address barriers faced by low-income individuals in CSA participation. One example of an alternative CSA program would be a farm stand, located at a community organization site.

The main differences between this and a traditional CSA include:

- Location at an organization accessible by community members such as a community center, YMCA, or school
- Offers choice of produce amount and selection
- No commitment necessary to participate in the program
- No upfront cost
- Accepts EBT payments

## Chapter VII: Strategic Plan: Recommendations for Alternative CSA Program

The current model of CSA programs includes many barriers to participation by lower-income households. This strategic plan moves away from the 'traditional' CSA model, yet incorporates the main vision of CSA programs in a new framework. Considering that this program would incorporate new concepts, it will be referred to as an alternative CSA program.

The alternative CSA program would operate similarly to a farm stand, allowing community member's choice over the quantity and selection of produce. A local food access organization would lead the program and act as an intermediary between the farms and the consumers. The lead organization could apply for grant funding to cover initial costs such as advertising materials and farm stand equipment. Additional funds could cover the pre-season farm costs, including planting and preparing for the upcoming season. The organization could partner with local farms to purchase produce, using grant funds, for the season and with a community organization to host the weekly farm stand, such as a local YMCA or community center. The amount of produce purchased from the farm would remain constant for the whole season, which would allow the farm to prepare for the season. The amount of produce depends on interest from the clients at the community organization.

This community organization must be located where the target population is already congregating in order to build upon a base of potential participants. Additionally, the community organization should have employees and/or volunteers that would serve as program champions. Promotional activities could include the distribution of flyers and describing the program purpose and operation to potential members.

The lead organization must be able to accept various methods of payment. In addition to accepting cash and card payments, it would be advisable for the organization to accept EBT payments.

To address the barrier of choice in 'traditional' CSA programs, a farm stand could provide multiple options of produce for consumers. There are a number of different methods the food access organization could use to increase produce choice. The first option would be to set up the stand similar to a farmer's market. This would allow customers to choose the specific



items and quantities desired. Another option would be to set a certain price point and allow customers to choose a certain number of items. For example, for \$4 a customer could choose 6 produce items. Allowing choice of produce ensures that consumers would be able to choose what works best for them and their families.

To further incentivize the program, creative approaches could be considered to increase participation. For example, participants could be given a punch card at their first visit and could receive additional punches for each weekly visit. Once participants receive a certain number of punches, they could be entered into a drawing for an item donated to the program, such as a cookbook, piece of kitchen equipment, or a gift card.

Evaluation of this project would begin by assessing the total sales of produce and unsold produce from the season to determine the cost-effectiveness of the program. Further evaluation of the program should include interviews or focus groups with participants to discuss the selection of produce, ease of payment, and desire to participate in future seasons.

## **Partners**

To assist in the promotion and success of this program, partnerships with various community organizations are vital. The following types of organizations would be essential partners in this proposed program model:

### Local organization focusing on food access

The driving force behind the farm stand program would be a local organization with a mission of increasing food access and decreasing food insecurity in King County. Examples of organizations in King County with this mission include the Food Innovation Network, Food Empowerment Education & Sustainability Team, and Tilth Alliance. This organization would be responsible for applying for grant funding to support the project, organizing, and implementing the efforts.

### Farms and farmers

The chosen farm(s) should be interested in increasing food access for lower-income community members and have connections to the community. Previous renditions of programs such as these have contracted with newer farms to support up and coming farmers. Another

option would be to partner with a collective of farms who aggregate their produce to offer a greater variety of options.

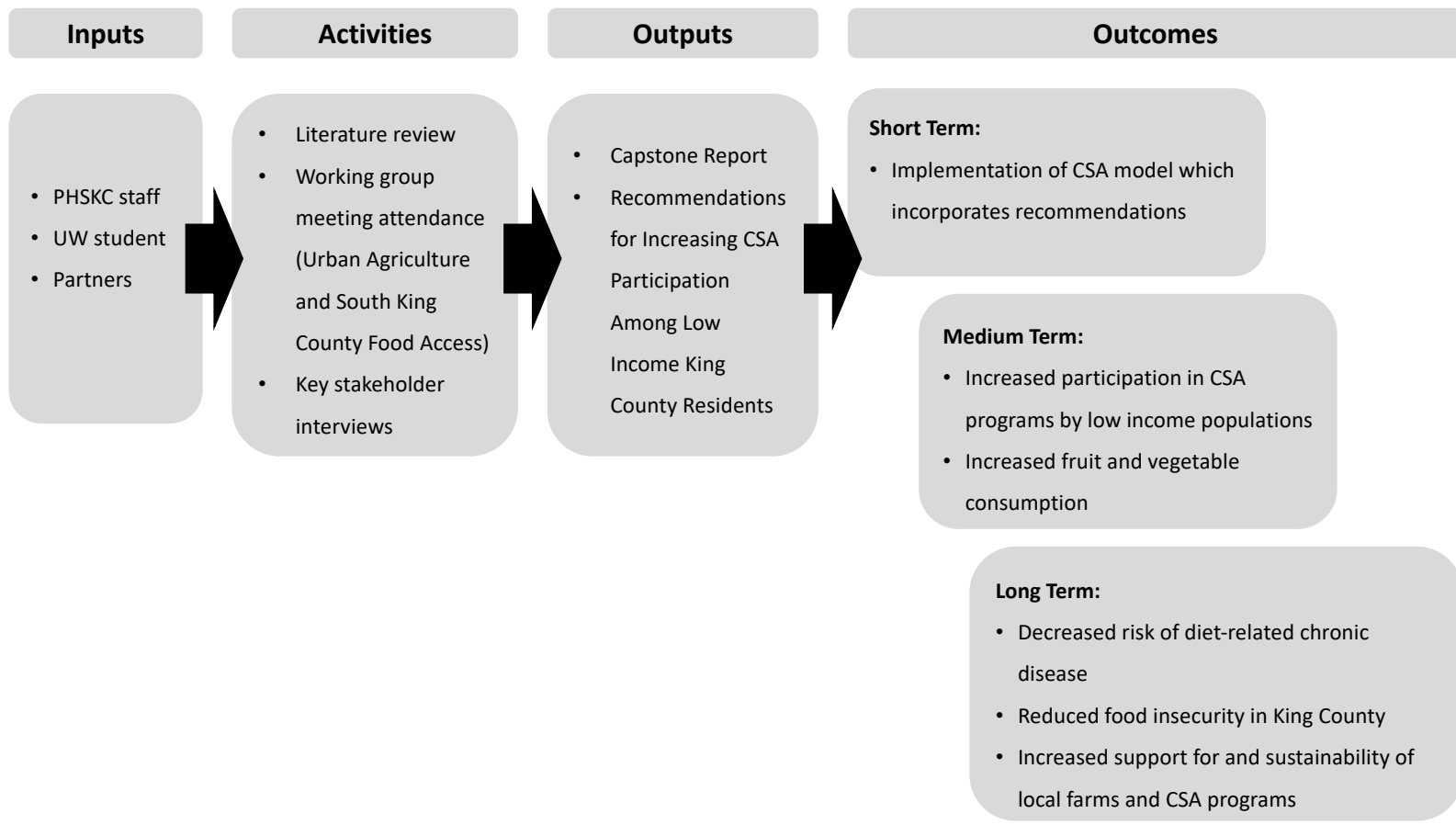
#### Hosting community organization

To address barriers associated with 'traditional' CSA pickup locations, this alternative CSA program should aim to host the farm stand at a location that members of the community are already visiting. Examples of easily accessible locations would be a local YMCA or community center, which would reduce barriers related to transportation and pickup. Additionally, this would allow for business from people who haven't heard about the program but are visiting the community organization. This could act as a symbiotic relationship, drawing customers to the farm stand from the community organization and vice versa.

#### Technical Assistance

Engaging an organization, such as PHSKC, to provide technical assistance and logistical support would be vital to the program's success. Ideally, this organization would be able to provide start-up costs for the project. Additionally, the expertise of this organization would assist the local organization with accepting EBT payments and evaluating outcomes.

# Logic Model



## Chapter VIII: Communication Plan

In order for the alternative CSA program and farm stand to succeed, the community must be informed about the benefits of participation. Existing channels of communication from the community pickup location, and those known to be used by the target population can be used to advertise the program. An existing framework of eight steps for public health communication can act to lay the groundwork for communications planning.<sup>58</sup>

1. Determine goal

The goal of this communications campaign is to spread the word about a weekly farm stand located at a community organization. The farm stand would focus on providing local produce to a community with lower rates of food access.

Advertising the farm stand prior to implementation would engage potential consumers already frequenting the community organization.

2. Identify and profile audience

The audience includes members of the community who are attending the community organization or are potential members of the organization. Before initiating the process of implementation, it is vital to identify the interest of potential participants and to ensure that the program is culturally relevant to the population.

3. Develop and test messages

Messages for the farm stand program should focus on the availability of fresh produce on a weekly basis at a convenient, community location. The messages should also include information about accepting various forms of payment for the produce, including EBT.

4. Select communications channel

One method of communication could be flyers distributed at the community organization site(s). Messages could also be communicated via social media currently used by the community organization such as Facebook or Instagram, and community/local newspapers.

5. Choose activities and materials

If there are upcoming local events, organizers of the program should consider setting up a table to advertise. Additionally, information could be distributed at local schools, churches, and community groups. This information could be distributed as flyers or as posters hung throughout locations.

6. Establish partnerships

The central partnership would be the relationship between the food access organization and the local community organization. In addition to this, partnerships should be considered with schools, churches, and neighborhood groups within the community. These groups would promote the program and engage potential consumers.

7. Implement the plan

Specifics regarding the implementation of this communications plan would be developed prior to the beginning of the farm stand season, which will be during the summer months. This will include the development of activities and a timeline, roles and responsibilities, funding, and other support.

8. Evaluate and make mid-course corrections

Evaluation of the communication plan would be ongoing during the program. Based on the number of participants, participant feedback, and farm feedback, the program can decide if additional advertising and outreach is needed.

## Chapter IX: Project Summary

In King County the prevalence of food insecurity has increased, with 11% and 12% of households reporting food insecurity in 2011 and 2012, respectively. The prevalence increased in 2013, with 15% of King County households reporting being food insecure, indicating that in the previous 12 months their food did not last, and they lacked sufficient resources to buy more.

Food insecurity and chronic diseases in adults, including hypertension, coronary heart disease, hepatitis, stroke, cancer, asthma, diabetes, arthritis, chronic obstructive pulmonary disease, and kidney disease. Food insecurity has been linked to diets low in fruit and vegetables. One explanation for this association is that diets rich in fruit and vegetables may be more expensive. Food insecure households may also have less access to fruits and vegetables due to food environments with fewer grocery stores or a lack of transportation options.

Alliances between farmers and consumers through community supported agriculture (CSA) programs have been used as a strategy to enhance food security, as well as encourage local food choices, educate consumers about farming, and strengthen the local farming economy. However, CSA members are predominately middle-class, Caucasian, urban, and highly educated. Lower-income households experience multiple barriers to utilizing CSA programs, including perception and awareness of programs, challenging payment structures, inaccessible pickup locations, limited selections of culturally relevant produce, and difficulty committing to an entire season. To increase access to fruit and vegetables for lower-income households, alternatives to traditional CSA programs such as community farm stands should be considered.

## **Appendix 1:** Script for semi-structured interviews with food access stakeholders

### Introduction:

*Thank you for your willingness to speak with me today. As you may know, I am a master's student at the University of Washington Program in Nutritional Sciences. For my capstone project, I am looking into barriers faced by low-income individuals in community supported agriculture participation. CSAs have been proposed as an approach to increase food security and access in lower-income populations.*

*Today's interview should take 20 to 30 minutes. If you would like to stop at any time, please let me know. Also, you can skip any question that you do not feel comfortable answering. I want to assure you that your name and affiliation will be kept confidential during the interview process. All data will be de-identified during the analysis process. The main output for this study is a report to PHSKC.*

*I would like to audio record our call so that I can transcribe our discussion? Do I have your permission to record our call? [If no, do not record and take hand-written or typed notes.] Finally, if you do not want to answer any questions or need to end the interview early, just let me know. Thank you.*

### Interview Questions:

1. Can you tell me a little about how your organization works on food access in the community?
2. Can you tell me about some overall food access concerns that community members discuss with you?
  - a. Cost
  - b. Transportation to destinations
  - c. Lack of destinations
  - d. Finding the right options
  - e. Quality
  - f. Stresses of life
3. How familiar do you consider yourself with Community Supported Agriculture (CSAs)? Have you personally participated in a CSA?
4. Does your organization have any relationship with CSA providers, or work with CSA organizations?
  - a. Act as a pickup site?
  - b. Refer community members to CSAs?
  - c. Provide produce for CSAs?
5. How would you describe interactions between your community members and CSAs?
  - a. Do you ever do outreach or education related to CSAs?
  - b. What types of experiences do you think community members have had?

- c. Have you heard stories from community members you interact with about their CSA experience?
  - d. What has made their individual experiences positive or negative?
- 6. What positive impacts do you think CSAs can/do have on low-income community members?
  - a. Why?
  - b. How do you feel that in an ideal world CSAs could improve food access for your community?
  - c. Are there any negative impacts?
- 7. **Payment:** How do you think the payment structure of CSAs may be conducive or prohibitory to low-income individuals?
  - a. Do you have any experience working to overcome the payment issues?
  - b. For the individuals that you interact with, do you think that the up-front payment method is feasible?
  - c. Do you think EBT acceptance by farmers would increase CSA participation?
  - d. Do you think that incentive programs (i.e. acceptance of Fresh Bucks) would affect CSA participation?
- 8. **Pickup/transportation:** CSAs typically drop boxes at a communal area for pickup – how do you think this may affect the participation of community members you interact with?
  - a. Have you ever been approached by a farmer looking to set up a drop site, or have you ever approached a farmer to establish a drop site?
  - b. Can you think of any places that could function as a good drop site?
    - i. What about the place makes you think it would be successful?
- 9. **Food choice:** For the community members you interact with, do you think that the produce in CSA boxes would be culturally relevant?
  - a. What types of foods would they be wanting?
- 10. **Food choice:** How do you think community members react to the selection of produce they receive?
  - a. How do you think they would react to programs that let the consumer choose what is in their weekly box?
- 11. Can you think of any additional barriers to CSAs for in-income individuals? Can you think of anyone else that is involved in food access and CSAs that I should talk to?
- 12. Anything else you would like to add?



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