



# **Cumberland PATH:** A Pilot Program to Increase Fruit & Vegetable Access in Rural Virginia

This case study of the Cumberland PATH fruit and vegetable benefit program highlights lessons learned and opportunities for organizations and other leaders interested in increasing access to fruits and vegetables in their communities.



## PROGRAM OVERVIEW

Supporting access to healthy foods and building equitable food systems requires responding to the unique challenges and assets of each community. Many households in rural areas in the U.S. have limited access to healthy foods and approximately 1 in 9 experience food insecurity.<sup>1</sup> Programs that address common barriers to accessing healthy food, such as lack of affordability and accessibility, can help support the health and well-being of households in rural communities.

Cumberland PATH is a fruit and vegetable benefit program that was launched in 2020 to increase access to healthy foods and improve food security in participating households residing in rural Cumberland County, VA. Families with children and older adults were eligible to enroll in this 6-month program between July 2020-July 2022. Participants received monthly benefits to be used for purchasing fruits and vegetables at participating stores. Although similar to a Produce Prescription program, the Cumberland PATH Program partnered with community-based organizations to enroll participants rather than health care partners due to the lack of healthcare infrastructure in the region.

**FRESH FOOD  
FOR YOU AND  
YOUR FAMILY.**

**Cumberland PATH**

## PROGRAM DETAILS

- **Total participating households:** 386 households served,<sup>2</sup> representing over 1000 individuals (~10% of the Cumberland County population served).
- **Where:** Cumberland County, rural community in South Central Virginia.
- **Eligibility:** Program available to residents of Cumberland County with children in the household, as well as households with older adults (≥50 years old).
- **Benefit:** Provided eligible households with \$40/household/month for 6 months redeemable for fruits & vegetables at participating vendor locations.
- **Recruitment:** Targeted low-income families with children by partnering closely with local food pantry and school district to refer and assist with outreach. Used social media, print flyers, in-person community events and word-of-mouth to reach potential participants (See examples of social media messages throughout case study).
- **Enrollment:** Enrolled participants over the phone or in person, ensuring a personal touchpoint with every participant.
- **Benefit Type:** During year 1, participants received paper vouchers. In year 2, participants were able to choose between vouchers or an electronic card. The voucher could be used for all fresh or frozen fruits and vegetables at participating small vendors and one grocery store location, while the card could be used for fresh produce at most large grocery store chains.
- **Data Collection:** Surveys included validated measures of food security and fruit/vegetable intake as well as impact and satisfaction questions collected at baseline and after 4-6 months of program enrollment. Conducted focus groups with over 25 participants at the conclusion of the program.

<sup>1</sup>Feeding America. Rural Hunger Facts. Accessed November 28, 2022. <https://www.feedingamerica.org/hunger-in-america/rural-hunger-facts>

<sup>2</sup>There were a total of 181 households during year 1, and 205 in year 2. 77 year 1 households re-enrolled in year 2. There were 309 unique households served.



## WHY CUMBERLAND PATH?

In interviews conducted prior to the pilot, caregivers of children in households with low income emphasized their difficulties accessing healthy food options, including physical, logistical and financial barriers, and a deep frustration with this reality. This was especially pronounced in rural communities with limited access to grocery stores, such as Cumberland, VA.

When a community member explained how she'd spend extra money for food, her response echoed that of many others: "[On] fruits and vegetables, because usually, they're the last thing I try to spend money on, because [they're] the first thing that goes bad, so I try to buy things that last longer so I can keep them every day."

Families are confronted with these difficult decisions daily as they work to stretch available funds to feed and provide for all family members. These decisions are made in the context of higher-than-average food insecurity rates, as well as limited access to federal nutrition programs. For example, in 2019, 19.1% of children in Cumberland County (11.3% of all residents) were estimated to be food insecure; nearly half (48%) of food insecure children in the County were estimated to be ineligible for federal nutrition programs, with

incomes over the 185% Federal Poverty Level (FPL) (\$47,638/year for a family of 4 in 2019), suggesting a gap between federal nutrition program coverage and households experiencing food insecurity.<sup>3</sup>

Cumberland PATH responded to this challenge by providing families with money specifically for fruits and vegetables, and by supporting a shopping experience marked by dignity, choice, and increased accessibility. The pilot was a collaboration of [Share Our Strength's No Kid Hungry Campaign](#), [Vouchers 4 Veggies](#), and local non-profit Cumberland Community Cares, with the support of other local institutions and community members. It was built upon a model previously developed by Vouchers 4 Veggies, and tailored to the local community using the principles of human-centered design. Program staff sought the input of community members to inform pilot design, and make modifications between year 1 and year 2. For example, local stakeholders advocated for the inclusion of older adults in Cumberland PATH due to their high rates of food insecurity in the community. Community members also expressed a strong desire for choice in where benefits could be redeemed, including opportunities to redeem at small, local stores and farm stands as well as larger supermarkets outside of Cumberland County. This feedback was taken into account when creating the vendor network. The program sought to build on local assets by working with locally-owned small businesses and farmers, while ensuring choice and flexibility for program participants.



<sup>3</sup>Feeding America. Map the Meal Gap. <https://map.feedingamerica.org/county/2019/overall/virginia/county/cumberland>.

## PROGRAM OUTCOMES

Survey data was collected from participants during year 1 and year 2. Over the course of the program, we collected matched baseline and follow-up survey data on 151 unique participants. The United States Department of Agriculture (USDA) 6-item Food Security Survey Module was used to measure food security status. Ten items from the Dietary Screener Questionnaire (DSQ) were used to assess fruit and vegetable intake. Surveys also contained questions about program impact, child fruit and vegetable intake, food budget, and program satisfaction. Demographics, including income, household size, and race/ethnicity were also obtained upon enrollment. See Appendix for further details.

### BENEFIT REDEMPTION

Overall, benefit redemption was approximately 63% over the course of the program.<sup>4</sup> Among voucher users, average redemption was 58%, while the average card redemption was 69%. Providing participants the choice to use either a voucher or card resulted in an overall increase in redemption rates (69% in year 2 vs. 56% in year 1; See Appendix for more details.) Lower redemption in year 1 may be explained by decreased availability of produce due to farmers market closures, decreased availability of produce during the winter months, and limited store options. Across other Vouchers 4 Veggies programming in San Francisco and Los Angeles during the same time period, benefit redemption ranged from 60-80%.

During year 2, 90% (185) of participants opted to receive the card, while just 10% (20) selected the voucher.

### PARTICIPANT BENEFIT CHOICE\*

#### REASONS FOR CHOOSING THE CARD

- Available stores
- Fear of losing the paper voucher
- Would not lose out on benefits if they spent in less than \$10 increments (the amount of the voucher)

#### REASONS FOR CHOOSING THE VOUCHER

- Preference for purchasing frozen fruits and vegetables (only available with paper voucher due to technology constraints with the card)
- Access to smaller, more convenient store options

*\*Based on participant response to question about benefit choice collected during enrollment*

### HIGH PROGRAM SATISFACTION

Program satisfaction was high among participants, with 95% rating their level of satisfaction with Cumberland PATH as high or very high. 82% reported that the monthly benefit amount was “about right” and found it easy to find fresh fruits and vegetables at participating stores.

### IMPACT

Cumberland PATH had an overall positive impact on participants' health and diet. Over 90% indicated the program: (1) helped them eat more kinds of fruits and vegetables, (2) helped them feel more confident in their ability to make healthy food choices on a budget, and (3) improved their knowledge about the importance of fruits and vegetables in their diet. The majority of participants (over 80%) reported feeling their overall health had improved and they were eating less unhealthy foods because of this program.

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<sup>4</sup>Benefit redemption was calculated by dividing total dollar amount of benefits redeemed by total dollar amount of benefits distributed in aggregate and for each year respectively.



## FRUIT AND VEGETABLE INTAKE

Almost three-quarters of participants reported they ate more fruits and vegetables after the program than they did before receiving Cumberland PATH. There was a statistically significant increase in participants' mean fruit and vegetable daily frequency intake between baseline and follow up (increase from 3.69 to 4.2 mean daily frequency,  $p=.02$ ). In year 1, the majority of participants with children felt the program helped their children consume a larger quantity and more varieties of fruits and vegetables. Of the 50 participants that responded to questions about their child's fruit and vegetable intake, 94% reported the amount of fruits and vegetables consumed by their children had increased, and 92% reported their children ate more kinds of fruits and vegetables because of the program.

## FOOD SECURITY

At baseline, 32% of Cumberland PATH participants lived in food insecure households, and 9% reported experiencing the most severe form of food insecurity (very low food security). This is higher than the national average, which estimates food insecurity rates at 10.2% and very low food insecurity rates at 3.8%.<sup>5</sup> Among the participants that completed surveys at both time points, participants' mean food security scores improved between baseline and follow up. Furthermore, approximately 17% of participants improved their food security category by one category between baseline and follow-up, though both results were not statistically significant. The number of participants who reported needing more money for food decreased, with 62% of participants at baseline reporting needing more money to meet their household food needs compared to 42% at follow-up.

Similar outcomes (e.g. high rates of program satisfaction, increased fruit and vegetable intake and reductions in food security among program participants) have been demonstrated across other Vouchers 4 Veggies programming operating in other geographic locations (see [Vouchers 4 Veggies 2021 Impact Report](#)).

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<sup>5</sup>Coleman-Jensen, Alisha, Matthew P. Rabbitt, Christian A. Gregory, and Anita Singh. "Household Food Security in the United States in 2021." Accessed November 22, 2022. <http://www.ers.usda.gov/publications/pub-details/?pubid=104655>.



## PILOT LEARNINGS

Surveys, focus groups and ongoing communication with participants offered many learnings for Cumberland PATH and similar programs. For a review of learnings from a broader set of rural Produce Prescription programs, see the [Rural Produce Prescription Toolkit](#).

### WHAT WORKED WELL

Participants expressed a high degree of satisfaction with these critical aspects of the program:

**Ease of use:** From the enrollment process, to use of paper vouchers and cards while making purchases, participants reported an easy, clear, and unobtrusive experience. We intentionally designed the program with a low barrier to entry (e.g., minimal eligibility and enrollment requirements) in order to maximize participation, reduce stigma, and encourage monthly benefit redemption. Participants valued an enrollment process that minimized paperwork and other burdens that often discourage participation and retention in other programs.

*"A simple process. I have encountered other programs. After the fourth or fifth page, and question, you're like, 'you know, never mind, I'm good.' Simple can work. And it's effective. It did what it was supposed to do. But I have encountered arrangements where I stopped in the middle. Never mind, it's not that important. I'd rather not."*

**Ability to choose:** Participants appreciated the ability to choose the fruits and vegetables that their family members desired, as well as the opportunity to decide their benefit type and when and where their benefit could be redeemed. They valued the option to choose between different stores and to shop on their own schedule, making Cumberland PATH easier to access than programs that operate at a specific time or location. The increased access to large stores available with the card was especially attractive, particularly given the transportation challenges faced by program participants in this rural community.

*"Fresh fruit that we like and eat. Not something that was chosen for us and a few days past its prime!"*

**Avoidance of waste:** Alongside the high value placed on choice, many participants expressed a desire to minimize both food and financial waste. People preferred the card over the paper vouchers for this reason, as it was easier to efficiently use each cent of their benefit. Regarding food waste, participants appreciated being able to select the exact fruits and vegetables they wanted and not receiving items they couldn't or wouldn't use.

*"I absolutely loved the card this year... If I didn't have the card, I could pull it up on my phone... I'm not an organized person. When you are driving 25-45 minutes [each way] to the store, you want to make sure you have it."*

**Access to healthy options:** Participants emphasized how this addition to their monthly food budget contributed to meaningful changes in household members' access to what they identified as healthy food options.

**Responsive, respectful program staff & processes:** Cumberland PATH relied on individuals deeply embedded in the community to serve as an initial touchpoint and respond to questions about benefit use. Both frontline program staff and those managing program operations provided highly valued customer service with a quick turnaround.

*"There just didn't seem to be anything about it that would be—from the application, to picking out your own groceries at whatever store you chose that they allowed you to shop at—it looked like to me there was nothing complicated, or difficult, or embarrassing about using this card."*

## CHALLENGES AND FUTURE CONSIDERATIONS

### LEVERAGING LOCAL RESOURCES TO DEVELOP PROGRAM CHAMPIONS

Rural Cumberland County has limited local infrastructure, including a lack of health care institutions that often serve as key implementation partners in Produce Prescription programs. Instead, Cumberland PATH successfully partnered with the local school district and food pantry as hubs for referrals and recruitment. Individual community members also served as essential champions for the project, including teachers and program participants. Word of mouth was especially powerful in this small, rural community. While in many communities, health care leaders and institutions can champion these types of initiatives, it is vital to develop other models for implementation when health care partnerships are not feasible.



### INCORPORATING COMMUNITY INPUT

Cumberland PATH sought to design and adjust in response to community feedback throughout the pilot, from the initial planning phase through implementation. For example, while the program focused on households with children, community members requested that we include other vulnerable populations such as older adults as well. We secured additional funding for this population to ensure the program was inclusive and respectful of local needs. During the pilot, participants requested an expansion of shopping options, in terms of location, store type and other factors, based on transportation challenges, shopping preferences and the limitations of seasonal availability. In response to this demand, we worked to expand the range of stores where benefits could be redeemed while navigating within the constraints of available technologies.

### PROGRAMMATIC LIMITATIONS

Although participants appreciated the program's flexibility and the ability to choose the benefit type that worked best for their family, there were also a number of limitations inherent in the program design that required participants to make tradeoffs. For example, paper vouchers could be used to purchase fresh or frozen fruit and vegetables at a small number of local stores, while limitations in card technology meant that the card could be used to purchase only fresh produce at specific national grocery store chains, none of which were located in Cumberland County. Differences in seasonal availability and the constraints of physical paper vouchers versus an electronic card (e.g., concerns about losing paper vouchers or concerns about whether or not the electronic benefits were processed at check out) heightened these tradeoffs for participants. In addition, the Cumberland PATH benefit did not rollover from month-to-month, and unexpected events such as a snowstorm or car troubles on occasion kept participants from utilizing their benefits before they expired. These limitations created barriers to full redemption of Cumberland PATH benefits. Other programs may consider strategies to increase flexibility and minimize these tradeoffs, such as building systems that allow the purchase of both fresh and frozen fruits and vegetables, or providing a 3-month window rather than benefits expiring after one month.

# BRING FRUITS AND VEGGIES HOME.

## RECOMMENDATIONS

The challenges and opportunities of Cumberland PATH point to several recommendations, relevant in rural communities and beyond.

**Build programs that easily integrate with current and future shopping practices:** Design programs that can be used in a variety of settings (e.g. self-checkout, curbside pickup, delivery, online ordering, and at small, mid-sized and large stores and markets) so that they more easily align with participants' existing shopping habits. Make it easier to use benefits alongside SNAP, WIC and other nutrition assistance programs.

**Consider partners in health care and beyond:** Work with community members to identify individual and institutional assets and organizational partners for outreach, enrollment and other program operations. A diverse set of stakeholders is critical to program success, and will vary across communities. Individual and institutional champions, including those outside of the health or nutrition fields, can provide a critical, trusted link to community members.

**Develop card technology to maximize program flexibility:** Limitations in current technology create constraints for program operators and participants related to which foods can be purchased with the benefit and where benefits can be spent. Investments in card technology by program operators, funders, and technology companies could increase program flexibility for participants, for example by enabling the purchase of both fresh and frozen items, or allowing a wider variety of store types (e.g., small, mid-sized and large stores) to participate in the program while minimizing the cost of expanding a program's vendor network.

### **Support policies that create sustainable funding mechanisms for increased fruit and vegetable access:**

Work towards sustainable and equitable funding for fruit and vegetable benefit programs, including in rural and other communities that have historically had limited investment in this area. Funding should cover fruit and vegetable benefits as well as resources to build and maintain organizational capacity to administer and sustain these programs. Opportunities both within health care (e.g. via Medicaid) and beyond can be leveraged to increase equitable access to Produce Prescription programs. The [White House National Strategy on Hunger, Nutrition and Health](#) has called for an expansion of Produce Prescription programs as a key tool in the work of ending hunger and reducing diet-related diseases and disparities, and entities within both the public and private sectors have responded by committing funding to support these efforts. For further suggestions on funding opportunities for Produce Prescription programs, see the Funding section in this [Rural Produce Prescription Toolkit](#) and [Mainstreaming Produce Prescriptions: A Policy Strategy Report](#).

**Center participant experience from design through evaluation:** Minimize barriers to participation, prioritize a dignified and respectful experience, and maximize flexibility in program operations and interactions with participants (from outreach and enrollment through benefits redemption and data gathering). Design programs that leverage local expertise and assets and that allow for supportive interactions with program participants.



## APPENDIX

### BASELINE PARTICIPANT DEMOGRAPHICS (N=309 UNIQUE PARTICIPANTS)

	N	%
<b>RACE/ETHNICITY</b>		
Black or African American	128	41%
White or Caucasian	151	49%
Latino or Hispanic	10	3%
Native American or American Indian	0	0%
Middle Eastern or North African	0	0%
Asian or Pacific Islander	0	0%
Multi-Racial	9	3%
Missing	11	4%
<b>MONTHLY INCOME</b>		
No Income	13	4%
\$1-\$1000	51	17%
\$1001-\$2000	94	30%
\$2001-\$3000	53	17%
\$3000 or more	55	18%
Missing	43	14%
Number of Households < 200% FPL*	293	95%
<b>HOUSEHOLD SIZE</b>		
1	28	9%
2	66	21%
3	68	22%
4	69	22%
5	46	15%
More than 5	22	7%
Missing	10	3%
<b>NUMBER OF PEOPLE IN THE HOUSEHOLD UNDER 18</b>		
0	68	22%
1	78	25%
2	79	26%
3	48	16%
4	13	4%
5	3	1%
More than 5	2	1%
Missing	18	6%

\* % of Federal Poverty Level (FPL) based on household size and average monthly income multiplied by 12 months

## APPENDIX

### BASELINE PARTICIPANT DEMOGRAPHICS (N=309 UNIQUE PARTICIPANTS)

	N	%
<b>SOURCE OF REFERRAL</b>		
School	179	58%
Food Pantry	56	18%
Friend/Word of Mouth	26	8%
No Referral	5	2%
Other	33	11%
Missing	10	3%
<b>FOOD ASSISTANCE PROGRAM PARTICIPATION**</b>		
Received food from family/friends	7	2%
SNAP	63	20%
WIC	22	7%
Food Pantry	58	19%
Free School Meals/Summer Meals	107	35%
Other	33	11%
Participated in any food program	179	58%
<b>FOOD SECURITY</b>		
High or marginal food security	115	37%
Low food security	72	23%
Very low food security	29	9%
Missing	93	30%

*\*\*Total will equal greater than 100%; Participants could select multiple responses*

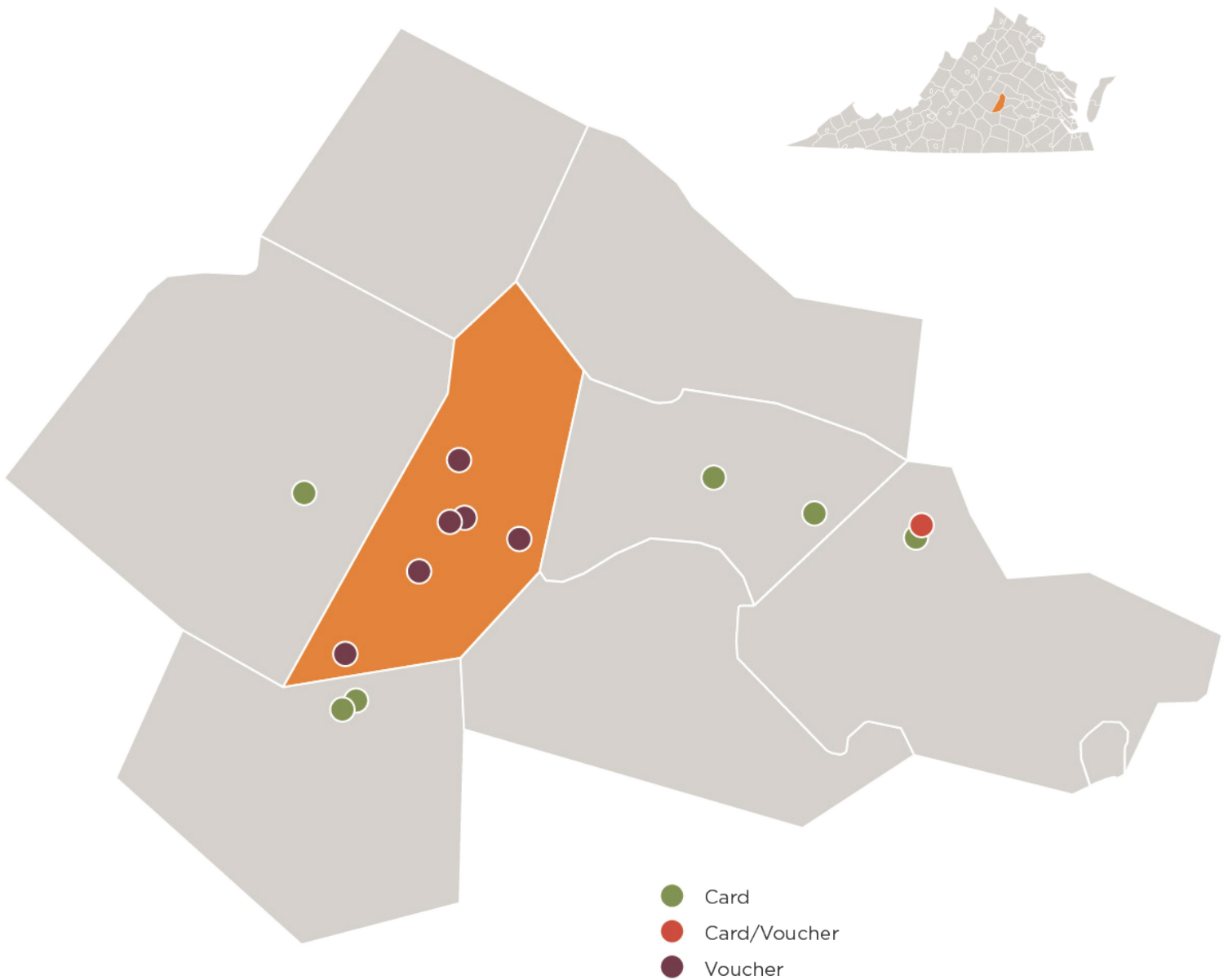
### BENEFIT REDEMPTION DATA

	Card Redemption	Voucher Redemption	Overall Redemption
<b>YEAR 1</b>			
Households with children	N/A	49%	49%
Older adults (50+)	N/A	66%	66%
Total population	N/A	56%	56%
<b>YEAR 2</b>			
Households with children	64%	76%	65%
Older adults (50+)	83%	78%	82%
Total population	69%	77%	69%

## APPENDIX

### CUMBERLAND PATH VENDOR NETWORK

These are vendor locations where the card and/or vouchers could be used to purchase fruits and vegetables in Cumberland and surrounding counties.





To learn more or for any questions,  
please reach out to [innovation@strength.org](mailto:innovation@strength.org) or [eatsf@ucsf.edu](mailto:eatsf@ucsf.edu).



Vouchers 4 Veggies (V4V), a transformative program housed within the University of California San Francisco's Center for Vulnerable Populations, aims to increase access and affordability of healthy foods for households with low incomes by providing vouchers for fruits and vegetables.

Founded in 2015, V4V was originally designed to address the unique food security issues in San Francisco, but has since expanded to several other communities, including both urban and rural, across the country.



No Kid Hungry is working to end childhood hunger by helping launch and improve programs that give all kids the healthy food they need to thrive. No Kid Hungry is a campaign of Share Our Strength, an organization committed to ending hunger and poverty. No Kid Hungry's Program Innovation team designs strategies that meet the needs of families facing economic insecurity and works to improve the user experience of federal nutrition programs.