# Finding Winnable Strategies to Expand the Reach of the Fresh Fruit and Vegetable Program Beyond School Settings



December 2016

Jessie Gruner, MS, RDN Robin DeWeese, PhD, RDN Punam Ohri-Vachaspati, PhD, RDN

Arizona State University
School of Nutrition and Health Promotion

Kristi Mollner, MS, RDN Gina Lacagnina, MS, RDN

Maricopa County Department of Public Health

# Finding Winnable Strategies to Expand the Reach of the Fresh Fruit and Vegetable Program Beyond School Settings

#### **ACKNOWLEDGEMENTS:**

This project was funded by The Arizona Nutrition Network (AZNN) under the United States Department of Agriculture's (USDA) Supplemental Nutrition Assistance Program: Nutrition Education and Obesity Prevention Grant Program. We would like to thank the district food service directors and supervisors, kitchen managers, teachers, principals, public relations directors, grocery store managers, produce managers and the staff at the Maricopa County Department of Public Health who made this project possible by dedicating their time to participate in interviews, arranging project logistics, and for sharing their expert advice, opinions and stories.

A special thanks to Michael Soto, the Fresh Fruit and Vegetable Program Specialist at the Arizona Department of Education for his support and guidance.

**Suggested Citation:** Gruner J, DeWeese R, Ohri-Vachaspati P. *Finding Winnable Strategies to Expand the Reach of the Fresh Fruit and Vegetable Program Beyond School Settings.*Phoenix, AZ: School of Nutrition and Health Promotion, Arizona State University; 2016.











# **TABLE OF CONTENTS**

	PAGE
EXECUTIVE SUMMARY	4
INTRODUCTION	6
METHODS	9
Sample Selection	9
Table 1: Number of interviews by stakeholder type	10
Interview Procedures	10
Analysis	10
RESULTS	11
Retail Managers	11
School Districts	15
Schools	18
Parents	22
Role of SNAP-Ed	24
CONCLUSION AND PRACTICAL APPLICATIONS	25
Limitations	27
Next steps	27
REFERENCES	29
APENDICES	31
Appendix A: Selection of FFVP-Participating Schools to Serve as Study Locations	32
Appendix B: Retail Interview Guide	33
Appendix C: District FFVP Interview Guide	38
Appendix D: School FFVP Interview Guide	42
Appendix E: Focus Group Interview Guide	46

#### **EXECUTIVE SUMMARY**

#### Introduction

Frequent consumption of fruits and vegetables has been linked to better dietary quality and positive health outcomes. Unfortunately, fruit and vegetable consumption among elementary school children falls far short of the recommendations. Therefore, finding strategies to promote fruit and vegetable consumption in children is a public health priority. One such strategy is the United States Department of Agriculture's (USDA) Fresh Fruit and Vegetable Program (FFVP), which provides fresh fruits and vegetables as snacks, at least twice per week, in elementary schools with high student enrollment from low-income households. The program aims to expand the variety of fruits and vegetables children experience, impacting their present and future health outomes. Another USDA initiative, the Supplemental Nutrition Assistance Program Education (SNAP-Ed), offered in community and school settings, aims to improve the likelihood that SNAP-eligible individuals will make healthy food choices consistent with the Dietary Guidelines for Americans. SNAP-Ed is a potential resource for FFVP schools, providing nutrition education, staff training, and promotional materials.

FFVP participation has been linked to greater preference for<sup>2,5</sup> and consumption of<sup>6-8</sup> fruits and vegetables among elementary school-age children. Further, anecdotal evidence suggests that grocery stores near FFVP schools often run out of produce offered as FFVP snacks, suggesting their shoppers may have a greater interest in FFVP items. Results from a recently completed study show that children from FFVP schools request more fruits and vegetables in stores and at home,<sup>9</sup> raising the possibility of creating partnerships between schools and grocery stores to cross-promote fruits and vegetables. The purpose of this study was to explore the potential for establishing successful partnerships between FFVP-participating schools and food retailers to promote the sales of fruits and vegetables in low-income communities.

#### Methods

Using a qualitative case study approach, input was sought from four groups of stakeholders – retail store and produce managers from stores located near FFVP-participating schools (n=6), district level FFVP personnel (n=5), school level FFVP personnel (kitchen managers n=4, teachers n=2), and parents of children attending FFVP-participating schools (n=25). FFVP personnel and store and produce managers participated in semi-structured interviews, and parents participated in focus groups (n=4) held at their child's school. Interviews and focus groups were conducted using a standard protocol and were transcribed verbatim. An inductive thematic analysis approach was used to identify key themes and categories that emerged across multiple interviews within each stakeholder group.

#### **Key Findings**

<u>Retail managers</u>. Grocery store and produce managers recognized that partnering with schools to promote the FFVP would increase sales, improve their ability to connect with the community, and create customer loyalty. The primary barrier they identified was a potential lack of communication between stores and schools. They emphasized the importance of keeping all partners on the same page, and suggested meeting face to face initially to establish roles.

Managers also cited the importance of promoting produce when it was in season to keep it affordable to low-income patrons. In their view, the success of a partnership could be measured by tracking sales figures, tonnage of produce sold, and the number of customers entering stores, as well as by simply talking with customers.

School district staff. School district FFVP personnel liked the simplicity and novelty of a store/school partnership. They acknowledged that cross-promoting FFVP produce in stores could increase fruit and vegetable consumption among families and enhance parents' knowledge of the FFVP. Like retail managers, district personnel cited cost of FFVP produce as a potential barrier. In-store promotions of FFVP items might create a stigma or hardship for families if parents were unable to afford such items. District staff also contended that a partnership should be mutually beneficial and feasible to all partners, with no undue burden on anyone. The partnership could be communicated to parents through the district website or a school newsletter. All five district personnel interviewed mentioned using parent surveys to measure the success of a partnership.

School FFVP staff. Kitchen managers and teachers anticipated that a partnership would be beneficial to both students and grocery stores. While kitchen managers did not foresee any potential barriers, including extra staffing time, teachers cited time as a potential barrier to this type of partnership. They emphasized their concerns for having extra class-time responsibilities added to their already full schedules. School-level FFVP personnel expressed the need for clear guidance about their role in the partnership, along with step-by-step instructions for carrying out that role. Kitchen staff often hear feedback regarding the FFVP from students waiting in the lunch line. This type of feedback would help them determine if a partnership with grocery stores was successful. Like district staff, school-level personnel believed promoting FFVP items in grocery stores would increase students' intake of fruits and vegetables outside the school setting.

<u>Parents</u>. Many parents were unfamiliar with the FFVP by name, but were aware their child received fresh produce at school. Parents credited their child's requests for produce items at the grocery store to increased exposure to fruits and vegetables at school, which in turn exposed the entire family to more fresh produce and resulted in healthier eating habits at home. Price is a key consideration for parents' purchasing behaviors; sales on FFVP produce would encourage them to purchase those items at the grocery store. School colors or logos would draw parents' and children's attention in stores to FFVP produce. Multiple modes of communication would be necessary to communicate information about a partnership to parents – some preferred fliers, while others preferred text messages.

# **Conclusions**

Grocery store managers, school district and school FFVP staff, and parents expressed enthusiasm for cross-promoting fruits and vegetables at stores and FFVP schools. To build a partnership between schools and stores, a catalyst agency is needed to help initiate and organize all stakeholders. The Maricopa County SNAP-Ed program is uniquely suited to serve in this role. Future work should focus on developing a toolkit for creating and implementing a public-private partnership between FFVP-participating schools and nearby grocery stores to improve fruit and vegetable consumption in low-income communities.

"I think it might open some dialogue if the child is at the store with his parent or grandparent or whoever, and they see something that they can associate back to what they did in school, that might open a dialogue with them to say, oh, gosh, we had this today. Or, we had this yesterday – whatever. It's very possible that that would happen."

-A District Food Service Director on creating partnerships with grocery stores to promote fruits and vegetables.

#### INTRODUCTION

Among children, frequent consumption of fruits and vegetables has been linked to positive health outcomes, including reduced risk of weight gain and chronic diseases. <sup>10-13</sup> Additionally, fruits and vegetables provide important sources of vitamins and minerals, which are vital to childhood growth and development. <sup>14</sup> However, despite strong evidence supporting the benefits of fruit and vegetable consumption, consumption rates, especially among children, remain extremely inadequate. Less than five percent of children between the ages of 4 to 8 eat the daily recommended amount of vegetables, and only one percent of boys between the ages of 9 to 13 consume the daily recommended amount of vegetables. <sup>1</sup> While the majority of children between the ages of 4 to 8 meet the daily recommended amount for total fruit, boys and girls between the ages 9 to 13 do not. Over a third of adolescents consume fruits and vegetables less than once per day. <sup>1</sup> Compared to national averages, fruit and vegetable consumption is lowest among low-income households. <sup>1,15,16</sup> Furthermore, eating patterns established in childhood influence long-term dietary behaviors, weight status, and chronic disease risk factors. <sup>13,17,18</sup> Therefore, finding strategies that promote fruit and vegetable consumption in children is a public health priority. <sup>1,2</sup>

While government initiatives often address major public health concerns impacting the citizenry, Public-Private Partnerships (PPPs) have been promoted as a viable strategy for addressing a variety of issues, including smoking, obesity, and chronic diseases. PPPs combine the resources of government entities, such as programs or agencies, with the resources of private entities, such as businesses or not-for-profit agencies, to achieve societal goals. 19 Governments face increasing pressure to attenuate the morbidity and mortality that results from certain lifestyle behaviors and chronic conditions, in fiscally constraining climates, and the private sector lacks the means to provide public services on its own. <sup>20,21</sup> However, together, governments and the private sector can leverage resources and create mechanisms for successfully addressing complex problems.<sup>21</sup> There have been several PPPs formed specifically to promote fruit and vegetable consumption in the United States, including "fruits & veggies more matters","22 a PPP involving the National Cancer Institute, the Produce for Better Health Foundation, the United States Department of Agriculture (USDA), the Centers for Disease Control and Prevention (CDC), and the American Cancer Society; and "Let's Move Salad Bars to Schools," a PPP that includes the Chef Ann Foundation, the National Fruit and Vegetable Alliance, the United Fresh Produce Association Foundation and Whole Foods Market.<sup>23</sup>

The USDA offers a variety of programs that are designed to improve the nutritional status of children in school and community settings. The Supplemental Nutrition Assistance Program Education (SNAP-Ed) aims to improve the likelihood that persons eligible for SNAP will make food choices that are consistent with the 2015-2020 Dietary Guidelines.<sup>4</sup> SNAP-Ed is offered in community and school settings to reach participants from SNAP eligible households. Recently, SNAP-Ed implementing agencies have been encouraged to incorporate multilevel interventions and community and public health approaches including policy, systems, and environmental change efforts to encourage healthy food selection among SNAP participants.

The USDA's Fresh Fruit and Vegetable Program (FFVP) is a school food program that is specifically designed to improve fruit and vegetable consumption among elementary school-age children from low-income families.<sup>3</sup> The program aims to create healthier school environments by expanding the variety of fruits and vegetables children experience, thus impacting present and future health outcomes.<sup>3</sup> It provides fresh fruits and vegetables as snacks at least twice per week to children during the school day, outside of school meal programs, such as the National School Lunch Program (NSLP) and the School Breakfast Program (SBP).<sup>24</sup> The FFVP specifically targets elementary schools with the highest proportion of students receiving free and reduced-price meals. Each year, elementary schools can apply for FFVP funding if they participate in the NSLP and have a large percentage of students certified for free and reduced-price meals.<sup>3,24</sup> For the 2016-2017 school year, 104 schools in Arizona, all of which have 90% or more of enrolled students eligible for free and reduced-price meals, <sup>25</sup> were selected to participate in the program. To help with program implementation, schools are encouraged to work with local universities, extension services and local grocers.<sup>24</sup> SNAP-Ed agencies can also be used as a resource for FFVP schools, providing services such as nutrition education training and promotional materials. SNAP-Ed service providers often attend annual FFVP trainings to educate schools and districts on the resources they have available to schools.

The FFVP has been shown to be a successful school-based initiative. Several studies have found positive associations between FFVP participation and increased preference for, <sup>2,5</sup> and consumption of, <sup>6-8</sup> fruits and vegetables among elementary school-age children. Additionally, the benefits of the FFVP may go beyond providing fruits and vegetables as snacks in the classroom, to improving the overall school food environment. Schools that participate in the FFVP are more likely to offer fresh fruit with school lunches compared to non-participating schools, <sup>26</sup> and FFVP participation is associated with greater nutrition education and promotion efforts. <sup>27</sup> There is also evidence that the FFVP may have an impact on the home food environment. In an evaluation report to Congress, some parents reported that their children, who participated in the FFVP at school, were requesting more fruits and vegetables at home. <sup>5</sup> This finding is supported by results from a recently completed study which show that children from FFVP-participating schools made significantly more requests to their parents to purchase fruits and vegetables at the grocery store compared to children from non-FFVP-participating schools. <sup>9,28,29</sup> Further, anecdotal evidence suggests that food retailers located near FFVP schools sometimes sell out of specific fruits and vegetables during the times those items are featured as part of the FFVP. <sup>30,31</sup>

These observations and findings pose interesting questions: Can the impact of the FFVP be amplified beyond schools into the retail food environment? Can feasible strategies be developed for cross-promoting fruits and vegetables in FFVP-participating schools and at nearby retail stores? Can SNAP-Ed's mandate to incorporate multilevel interventions and community and public health approaches be used as a catalyst to develop PPPs between FFVP schools and retail stores? What are parents' views on such cross-promotion strategies and how likely are they to respond to such efforts? This study aims to answer these questions and explore the potential for establishing successful PPPs between schools and food retailers to promote the sales of fruits and vegetables in low-income communities. Using a qualitative case study approach, we sought input from four groups of stakeholders — retail store and produce mangers from stores located near FFVP schools, district food service personnel from school districts participating in the FFVP and the SNAP-Ed program, school FFVP personnel, and parents of children attending FFVP-participating schools. Each group provided input on the following key issues:

#### **Key Questions:**

- Can the impact of the FFVP be amplified beyond schools into the retail food environment?
- Can feasible strategies be developed for cross-promoting fruits and vegetables in FFVP-participating schools and at nearby retail stores?
- Can SNAP-Ed's mandate to incorporate multilevel interventions and community and public health approaches be used as a catalyst to develop PPPs between FFVP schools and retail stores?
- What are parents' views on such crosspromotion strategies and how likely are they to respond to such efforts?

#### Retail store/produce managers

- 1) awareness of the FFVP; current partnerships with schools; and current fruit and vegetable promotion strategies used;
- 2) perceptions about using cross-promotion strategies with FFVP schools, including potential barriers and facilitators to creating successful partnerships; and the impact of the FFVP on fruit and vegetable sales.

# <u>School district food service and school FFVP</u> personnel

- 1) current efforts to promote fruits and vegetables within school programs, engagement with the SNAP-Ed to promote fruits and vegetables; and current partnerships with retailers;
- 2) perceptions about using cross-promotion strategies with food retail stores located near FFVP schools, including potential barriers and facilitators to creating successful partnerships; and prospects of leveraging SNAP-Ed to create linkages between schools and retail food establishments.

# Parents of children attending FFVP schools

- 1) awareness about school food and education programs including the FFVP and SNAP-Ed; and the impact such programs have on children's dietary behaviors;
- 2) views on cross-promotion efforts between schools and retail establishments, and their likelihood of responding to such efforts.

#### **METHODS**

#### Sample Selection

The study setting consisted of schools and grocery stores in the Phoenix metropolitan area. A two-stage sampling procedure was used, first selecting schools within school districts (**Appendix A**), and then selecting grocery stores near FFVP schools.

The Arizona Department of Education (ADE) provided a list of 104 elementary schools across the state that were selected for participation in the FFVP for SY 2016-17.<sup>25</sup> One of the aims of the study was to investigate if SNAP-Ed, offered through Maricopa County Department of Public Health (MCDPH) as a case in point, could be used as a catalyst for creating partnerships between schools and retailers. Therefore, only schools that participated in the FFVP and SNAP-Ed through MCDPH were eligible for the study. Forty-one schools met the criteria of offering the FFVP and participating in SNAP-Ed through MCDPH. Of these schools, 3 schools were new to the FFVP, 10 schools had participated in the FFVP for only one year, and 28 schools had participated in the FFVP for four or more years. A decision was made to include only schools that had prior multiyear experience working with the FFVP so they were familiar with program implementation. Therefore, only the 28 schools (schools with four or more years of experience) were eligible for the study. Once the sampling frame was set, one school from each district was randomly selected to participate in the study. One district had 12 schools (approximately 43% of the sampling frame) that met inclusion criteria; therefore, two schools were randomly selected from that district, resulting in a sample of 6 schools from five school districts.

MCDPH's Office of Epidemiology utilized the Near tool in the ArcGIS Toolbox to determine the first, second and third closest grocery stores to each FFVP school included in the sampling frame. The closest grocery store to each selected school was invited to participate in the study. If the closest store was not available to participate (n=5), the second closest was considered for participation, followed by the third closest (n=4). In 4 cases, the second or third closest store included in the study was the closest store to another non-selected FFVP school. A total of 6 stores were interviewed for the study and they were located between 0.4 and 1.5 miles from a FFVP-participating school.

In stores, corporate office personnel assisted the research team in arranging interviews with the store and produce managers at each selected store. In schools, recruitment began by sending emails to Food Service Directors (FSD) at each district. A list of contacts at each school district was provided by ADE. The FFVP Specialist at ADE also sent e-mails to FSDs informing them of the study and encouraging their participation. FSDs in each of the five school districts connected the research team to FFVP staff members at each selected school. FFVP staff members consisted of kitchen managers (n=4) or teachers (n=2). The FSD and the FFVP staff member at each school then assisted the research team in organizing focus groups, for which parents were recruited by school staff. In retail stores, recruitment began by contacting district managers and public relations specialists at each grocery chain. A list of interviews completed by each stakeholder type, including retail personnel, school personnel, and parents, is summarized in Table 1. Retail

and produce managers along with school and district FFVP personnel were offered a \$25 gift card as an incentive for participating in the study and focus group parents were offered a \$10 gift card as an incentive. All study participants were over the age of 18. The research study was approved by the Institutional Review Board at Arizona State University.

**Table 1:** Number of interviews by stakeholder type

Stakeholder	Number of Interviews
RETAIL LEVEL	6
Grocery Chain #1	3
Grocery Chain #2	2
Grocery Chain #3	1
SCHOOL DISTRICT LEVEL	5
District Food Service Director (FSD)	3
FSD + Director of the FFVP	2
SCHOOL LEVEL	6
Kitchen Manager	4
Teacher	2
FOCUS GROUPS (total n = 25)	4
School #1 – Spanish (n = 5)	1
School #1 – English (n = 7)	1
School #3 – Spanish (n = 7)	1
School #4 – Spanish (n = 6)	1
TOTAL INTERVIEWS/FOCUS GROUPS	21

#### Interview Procedures

Interviews and focus groups were conducted using a standard protocol. An outline of interview questions can be found in **Appendices B-E**. Two trained data collectors attended each interview or focus group; one data collector conducted the interviews and the other served as the note taker. Interviews lasted between 29 minutes and an hour and 41 minutes, and took place in school district offices, school cafeterias, classrooms, and grocery store manager offices. Interviews were offered in either English or Spanish and due to the large Hispanic student enrollment in selected schools, three focus groups were conducted in Spanish and one focus group was conducted in English. All interviews and focus groups were audio recorded and transcribed verbatim. Focus groups and interviews conducted in Spanish were transcribed and translated into English. Each interview was carefully reviewed by the project manager for accuracy.

#### **Analysis**

MAXQDA (version 12, MAXQDA, VERBI Software – Consult – Sozialforschung GmbH, Berlin, Germany) was used to organize and analyze interview text and field notes. An inductive thematic

analysis approach was used to identify key themes and categories that emerged across multiple interviews within each stakeholder group (store/produce managers, FFVP personnel and parents). Two coders were used for coding. Coding for each stakeholder group began with both coders openly coding each transcript to identify main topics. Researchers compared open codes, discussed topic discrepancies, and created a final codebook to capture and summarize emerging themes within each stakeholder group. Once all themes were summarized, the summary statements were checked for duplicates and grouped to reduce the number of categories. The data were then coded a second time to fit into one of the emerging categories. After the second round of coding, discrepancies were again discussed and resolved. The number of final coded statements for each category and subcategory were reviewed to identify predominant themes.

#### **RESULTS**

This report focuses on the themes that emerged from the data addressing key aims of the study including perceptions about partnerships, barriers to creating partnerships, implementation strategies, and signs of success. The themes are summarized below, stratified by stakeholder type.

#### **Retail Managers**

A total of six interviews were conducted with store and produce managers at six stores representing three different grocery chains. Three stores from a local grocery chain, two stores from a grocery chain with locations in the southwest part of the United States, and one store from a larger, national grocery chain were included. In general, managers were familiar with the NSLP and the SBP. A few were familiar with a school snack program but were unsure if it was the FFVP specifically. Managers learned about school food programs through family members, such as nieces and nephews, or their own children. Most managers were aware of nearby schools, although they did not know them by name specifically. They were aware that there were elementary schools in the area, and were sometimes able to provide the cross-streets of specific schools.

#### A partnership with schools would be a good idea

Store and produce managers interviewed unanimously believed that creating partnerships with nearby schools to promote fruit and vegetable consumption in children was a worthwhile idea. Other than providing schools with donations for events, holiday drives and sports teams, no formal partnerships between retailers and local schools were in place. Managers expressed interest in learning how they could be involved in such a partnership and were eager to offer their help in creating and carrying out partnerships with schools.

"If you ever decide to get the program running and you wanna work with us, we would love to help you guys out." (Store 610)

They immediately recognized the benefits a partnership would offer to stores, including the ability to connect stores to the communities in which they serve, and a possible increase in sales, not only now, but in the future.

"It's not just because we want free publicity. It's because we want them to understand that companies do have values and do care for our communities." (Store 611)

"I think it would have a big impact on sales because if they [customers] were shopping somewhere else, and they see what we're doing as an organization to help the community, I can see them supporting us to make sure that we stay in the community. I mean, customers already give us credit for a lot of stuff that we do as far as donating to the homeless, all the donations we do, all the promotions we do. This would be just another step in the right direction with being involved with our community in the area." (Store 605)

"It would be very effective because these children would be our future clients." (Store 603)

#### Barriers to partnering with schools

Store and produce managers indicated that a partnership with schools would be fairly easy to implement, with few hurdles. The primary potential obstacle cited was communication between partners (schools and stores) to make sure that all parties were on the same page. Managers consistently expressed that the success of the partnership would be tied to adequate communication between involved parties. Some had experienced programs breaking down in the past due to lack of communication and suggested that if both parties were actively involved in the partnership, it would lead to success.

"I really don't see any barriers just as long as the communication between the stores and the principal and our office, make sure everybody's in line to make it happen if that's the way it's going to work. . . That's the only concern I might have, someone dropping the ball and not having the communication." (Store 605)

"If the school is not motivated and really pushing it and they don't communicate with our company, then you can see the program start here, then start to trend down because of the lack of communication. And when you have a partnership with a school or company or someone, then they have to be involved. They can't be, okay, this is what we want to do now take care of it and let me know if you have any problems." (Store 601)

Managers specifically mentioned the need to coordinate with schools to ensure that the store could offer, at a decent price, the produce served in schools. The principal consideration in this regard was the importance of serving in-season produce as FFVP snack items.

"In a lower income family it makes a big difference. They probably love strawberries as much when it's \$4.99, [as] when it's \$1.50, but [during the winter they may think], 'Oh, my God, I've got to make my dollar last,' so they'll probably shy away from it." (Store 603)

#### Strategies for implementing a successful partnership with schools

Interviewers explained to managers that they were exploring collaborations between schools and retailers to promote fruits and vegetables. Managers were given a possible scenario of what such a collaboration might look like. In the example provided, the schools would inform retailers about the FFVP snack schedule in schools, and then those items would be promoted in stores. The idea would be to increase children's exposure to fruits and vegetables, as they try fruits and vegetables at school, see fruits and vegetables at the grocery store, and eat fruits and vegetables at home when their parents purchase FFVP items. Managers were then asked for their ideas about how specifically this type of partnership might work. In terms of promoting FFVP items in stores, managers offered a wide variety of implementation strategies. The most common idea was to have signage promoting the FFVP items that had been served in schools that week, and even offer samples. Some suggested using school logos and school colors to appeal to students.

"If we get together with school districts and we kinda designate what schools are near my store, we can go and make some big signs for Monday is gonna be banana. So we can put so-and-so elementary school is gonna be doing banana this week or this day. And so-and-so elementary school is gonna do apples, red apples, red Delicious apples, or nectarines, oranges, whatever it is. And we can put the school name in. And since they are in our neighborhood, they will be coming to our school. Look mom, that's my school and this is what we're eating." (Store 611)

"One thing we can do, too, for example, we're promoting cantaloupe in the store, let us know, 'hey we're looking for more cantaloupe,' so when you come here, we have cantaloupe, we can cut one up, little squares with little tooth picks, and each kid can come and taste it including the parents." (Store 603)

Managers explained that establishing a partnership would best be accomplished by an initial face-to-face meeting of all involved parties, including a corporate representative, store personnel, and school personnel to establish the relationship and ensure that everyone was on the same page. School personnel could come to stores or managers could go to schools to initiate the partnership.

"The main thing is just the relationship and visiting with everybody. Contact the principal, and teachers and principals will come to the store, and we'll work with them and us as directors and produce managers [knowing] what the idea is and the whole group working together. And that's the best way to develop something." (Store 602)

Maintaining the partnership could be accomplished by regular brief calls and/or emails to confirm agreement on implementation details.

"Email's the best way that we all get the best communication. Once in a while, probably a phone call. At the beginning of the week, beginning of the month saying this is what I'm going to do. Actually, if you're doing something for the month, here's our 20-minute conference call between the warehouse, the involved store, with the schools. This is what we're doing. This is how we're going to go about it, and we're on the same page. Then after that, it's just a little reminder email. Hey, this is what you're going to get. This is where it's going. They already know it's coming." (Store 605)

#### Measuring the success of a partnership

Most managers mentioned that increases in key store metrics could be used as objective indicators of a successful partnership. Sales figures, tonnage of produce sold, and number of customers entering stores are routinely tracked using software programs at both the store and corporate levels. Increases in any of these metrics after implementation of a partnership could demonstrate success.

"We could tell you what we sell. I could tell you [our produce manager] sold 15 pounds of Roma tomatoes on the vine yesterday. We can tell you how many customers walked in our door yesterday. Technology will tell us – I can look at my computer right now telling me I had 55 more customers ring up through my front registers than I did last year." (Store 605).

Managers also mentioned communication with customers as a subjective way to determine if the partnership was working. Customers noticing signs in stores promoting items children were offered in schools and asking about the program would be a way to track the success of the partnership.

"If they see the signs and they ask. It shows that they're interested or they wanna know more..." (Store 610)

# Motivation to create partnerships with schools

Most managers indicated that the primary factor that would motivate them to form a partnership with schools would be the potential of the partnership to positively impact children's health by promoting healthier eating.

"To me, being a father, it's just seeing kids eat healthier. I see parents buying junk food galore, and then they're wondering why some of the kids are heavy set, and we struggle as a nation. We don't have that education to break that old habit." (Store 603)

"Just the fact that it's for kids. We all have kids. . . I think that's a good idea to promote good eating." (Store 605)

#### **School Districts**

A total of seven FFVP personnel in the five participating school districts completed semistructured interviews for the study. In two districts, interviews were conducted with the district FSD; in one district, an interview was conducted with the child nutritionist overseeing the FFVP program; and in the remaining two districts, interviews were conducted with the district FSD and the individual overseeing the FFVP. District personnel had between two months and 29 years of experience in their current positions, and between 3 and 29 years of general school food service experience.

# It would be great to partner with grocery stores

When responding to the idea of developing partnerships with nearby grocery stores to promote fruit and vegetable consumption by identifying and promoting FFVP items in stores, school district staff were unanimously supportive. They perceived implementation of such a partnership to be feasible and liked the simplicity of the idea.

"That'd be a really easy collaboration, honestly." (District 500)

"The ideas you pose I think are great. They sound simple and achievable, which is definitely what we need. Simple and achievable. (District 300)

The district staff enjoyed the novelty of the idea and expressed that this type of PPP could provide the necessary linkages to connect retail stores, schools and parents, and increase the potential for families to choose fruits and vegetables at the store, as well as expanding parents' knowledge of the program.

"I really like the idea of connecting all of those dots because I think you would probably see some going ahead and making that choice to choose that [fruit or vegetable] item. I think it could be a great partnership." (District 300)

"It would definitely help us because one of the goals is to increase their consumption, and then be able to recognize that fruit or vegetable at a grocery store. So if you would have a partnership with the grocery store, you can pretty much tie those two together. If they're working to make sure that those fruits and vegetables are identified for the program, and then you have announcements, and you have teachers encouraging, staff encouraging the consumption, I feel like those two collaborations could be a possibly beneficial one for the students." (District 400)

"I think that'd be cool to expand the parent connection to the program." (District 500)

# Barriers to partnering with retailers

District level staff believed there would be few barriers to partnering with grocery stores. Cost of produce was a potential issue mentioned in various contexts. District personnel stated that partnerships might create a stigma or hardships for families if children were to request FFVP items they saw promoted in grocery stores and parents were unable to afford such items, particularly the rare or unusual ones.

"I think probably the biggest barrier for this demographic might be financial. So depending on the cost of that item, [parents] may or may not be able to choose it." (District 300)

Recognizing the business goals of retailers, FFVP staff wanted to ensure that a partnership would be mutually beneficial and feasible, with neither the stores nor schools carrying an undue financial burden.

"I think it could be a great partnership between the grocery store and us, trying to find items that fit both our needs because I mean they're a business too. So they may not choose to want to purchase some of these items, like rambutans. Knowing that's probably not gonna fly off the shelf. And it's quite costly." (District 300)

"I would hope if it's a cost, depending on what the cost is, it would be something they would absorb and not the school district. That would be a factor." (District 100)

As the FFVP is designed to target schools in low-income areas, these schools are often located in food deserts, giving parents limited access to fresh foods such as fruits and vegetables. Although all schools included in the sample were located within 1.5 miles of a grocery store, one district staff person did bring up the issue of access to grocery stores in the general area covered by the school district.

"Just being in central Phoenix, it's food desert. The only grocery store that I know in this area is [name of non-participating grocery store] . . . So us being in a food desert is probably an issue." (District 400)

It should be noted that staff indicated that barriers could be easily overcome, often offering strategies to overcome obstacles. Some staff were initially unable to identify potential barriers to a partnership, and required additionally probing.

#### Strategies for implementing a successful partnership with retailers

FFVP district personnel explained that implementing partnerships in grocery stores would be a fairly easy process, requiring approval from the superintendent or school board to initiate.

"So it would just probably be following the chain of command. So myself to my supervisor. That supervisor would go to the superintendent. And the superintendent would run it by the governing board. And then if approved, then we would start the process." (District 100)

An initial meeting with store managers would be required to agree upon each partner's role and understand how FFVP produce would be promoted in stores. District FFVP personnel would then send produce managers the weekly schedule for serving the FFVP fruits and vegetables in schools.

"We need to talk basically, to see how we can do it and how we can partner. I'm willing to try anything. So it's more for [store managers] to talk to me to see how we could make it happen." (District 200)

"Probably supply them with my menu. See if they're willing to participate, and see what strategies they would use as far as signage." (Store 400)

District personnel also suggested using the district website or school newsletter as a strategy to communicate the partnership to parents and encourage them to shop at the partnering grocery store.

"I think we could probably do something on our website, or maybe on our Nutrition Express, hey, we're now partnering with such and such shopping center. So kids, when you have your FFVP, you can also find it in a place like this." (District 100)

#### Extending the reach of the FFVP

When asked about the impact of a partnership with grocery stores, FFVP staff indicated that it could help to expand the goals of the FFVP to the home environment, including increasing fruit and vegetable consumption at home. It could also help make parents more aware of the types of fruits and vegetables that students are trying in schools.

"I think it might open some dialogue if the child is at the store with his parent or grandparent or whoever, and they see something that they can associate back to what they did in school that might open a dialogue with them to say, oh, gosh, we had this today. Or, we had this yesterday – whatever. It's very possible that that would happen." (District 500)

#### Measuring the success of a partnership

All five district personnel interviewed mentioned using surveys as a method to measure the success of a partnership. Interviewing all parties involved, including students, parents, and store managers would provide information on all aspects of the partnership.

"Maybe surveys. Speak to parents. Ask if they've noticed a difference in their child when they go grocery shopping. If they're saying, oh, this is the fruit or vegetable that was served at school. Can we buy it? So something like that, probably a survey." (District 400)

"You'd have to probably maybe survey the store and see if they had any comments back." (District 500)

Another proposal was to use a token or ticket system in which tickets would be counted to assess how many FFVP items had been purchased from partner stores.

"We might be able to create some fun games or something like that, tokens where kids drop off a token in a bucket someplace in the produce section. We could create contests I'm sure along the way. Like if we provided our teachers with the tickets that they can give to the kids and if the kids go to the grocery store with mom or dad and put it in a bucket, if it just has — we don't want an identifier obviously related to the kid for security reasons. But a ticket that you know is a [name of school] student." (District 300)

# Motivation to create partnerships with retailers

FFVP district personnel were asked what would motivate them to create partnerships with retailers. Similar to retail managers, district personnel stated that they were motivated by the possibility of the partnership improving the health and lives of students and families.

"We know that what we're doing makes a difference for kids and for families. If we can get them eating healthier, we all benefit." (District 500)

"Just seeing the students get excited about the fresh fruit and vegetables, knowing that they're getting proper nutrition." (District 400)

#### **Schools**

The stakeholder group for school-level FFVP personnel consisted of kitchen managers and teachers. Two teachers and four kitchen managers from six schools in three school districts completed interviews. Kitchen managers had between 3 and 17 years of experience managing school food programs, and teachers had taught in their respective schools for 3 and 5 years. In addition to having experience in their current positions, school FFVP staff were very familiar with the community surrounding their schools. During interviews, they shared characteristics of students and parents, including shopping practices and socioeconomic issues, including hunger. The FFVP is designed to target schools in low-income communities; FFVP school staff explained that families in these communities often deal with issues of hunger and limited food budgets.

"[We have] a lot of homeless children here. We classify homeless, they're living in shelters here, or maybe with other family members. We're probably 90 percent Hispanic and English is a second language." (School 502)

"And we do have — I'm guessing almost 20 kids that I know of in this school that do not have a meal when they go home at night. Because either their parent works or there just isn't anything there, especially at the end of the month." (School 101)

# <u>Interested in creating partnerships with retailers</u>

When asked their thoughts about creating a partnership with grocery stores to promote fruit and vegetable consumption among students, school staff expressed interest and support. They anticipated that a partnership would be beneficial to both students and grocery stores.

"I think it would be really cool if like a lot of these people shop, let's say at [name of non-participating grocery store], and they maybe have a sign up saying at your local school you're serving this, this week. You know kiwi, try it when it's on sale or you know we do mangos and stuff. We try to pick fruits and vegetables that are — like a lot of Hispanic children love the mango and the papaya you know and stuff like that. Pineapple, they love pineapple and certain things. That would be cool if they advertised it that weekend. I think it would...bring them business." (School 502)

#### Barriers to partnering with retailers

Teachers cited time as potentially a major barrier to this type of partnership. They emphasized the importance of not adding extra class-time responsibilities to their already full teaching schedules. Any tasks associated with the partnership should be straightforward, simple, and planned out for them.

"It's not gonna work if I have to make activities around it. Something quick and easy that is clear, concise, to the point." (School 201)

Kitchen managers indicated that time, including staffing time, would not be a barrier for creating a partnership. School FFVP staff perceived that the time and labor demands for a partnership would burden stores more than it would burden schools. Stores would be in charge of tagging FFVP items and for setting out promotional materials; school staff perceived their role to be supplying FFVP schedule information to the stores.

"So [school kitchen staff] prepare the item and they put it in the bags. Usually two of them but if they need help I also have another person that's available. So extra staffing isn't a problem." (School 102)

"It seems like it would be more on their side than our side, but I'm sure there are some business aspect that I don't know about." (School 202)

#### Strategies for implementing a successful partnership with retailers

School staff are responsible for carrying out district or school-level policies and practices but are rarely responsible for creating these programs and practices. For example, districts decide which items will be offered for the FFVP during a given week. Kitchen managers are responsible for supplying FFVP snacks to teachers, and teachers are tasked with incorporating snack distribution into their daily schedules. Therefore, developing a partnership with grocery stores would need to follow a similar chain of command, where district staff would take the lead on initiating and developing these partnerships. In terms of implementing a partnership at the school level, FFVP staff expressed the need for clear details about their role in the partnership, along with step-by-step instructions for how to carry out their role in their schools.

So it would definitely need to probably come from a district level, somebody in charge that does stuff with the food in the cafeteria that has that time and resources to go talk to the grocery stores and what could they do. [And] then they would just relay what are we doing to us." (School 201)

Although school FFVP staff need to receive approval and instructions from the district in order to facilitate a partnership with grocery stores, they presented some innovative partnership ideas, including using the partnership for school fundraisers.

"Like Target does, you spend so much, you can donate so much money to the school. So instead, maybe so much produce sales, if the school comes in and they bring in a coupon or say, we belong in the [name of school district], or a tag, keychain, something, they scan it, and a percentage of the produce sales goes back into the [district]." (School 202)

# Signs of a successful partnership with retailers

Kitchen staff are in a unique position to receive feedback directly from students because they are some of the only school employees who have the opportunity to connect with the majority of students multiple times every day, particularly in schools where most students participate in breakfast and lunch programs. Staff often hear feedback regarding the FFVP when they walk through the cafeteria during meal times and while students wait in the lunch line. Therefore, it is not surprising that FFVP school staff indicated that they would rely on these same feedback channels to determine if a partnership with grocery stores was successful.

"We hear all the gossip. I always say, you want to know something, come to the cafeteria. They tell you everything and they don't censor. You gotta love it because they're just telling you from their heart whether it's good or bad. You just listen." (School 502)

"Probably just the feedback that I get from them or the parents that they come in and they mention it." (School 102)

Food waste is also an effective indicator of which items are well-received by students, and could be used to detect any changes in the amounts of fruits and vegetables students consume after initiation of a partnership.

"...what's not being thrown away, what is being thrown away." (School 101)

# <u>Impact a partnership with retailers could have on exposure</u>

The FFVP aims to improve children's overall diet and to create healthier eating habits by increasing awareness and exposure to fruits and vegetables at school. When asked about the impact of a FFVP partnership, school staff agreed that exposing children to fruits and vegetables outside of school settings, such as in grocery stores, may increase the impact of the FFVP on diet quality and eating habits. FFVP staff reflected that a partnership could help increase awareness of FFVP items in the grocery stores and get students more involved in the grocery shopping experience.

"I think it would make them more aware of where the item comes from. You know like farm to school, or farm to store, from store to home. I don't think some of the kids understand that concept. It comes from the ground and then it goes —" (School 101)

"I think it would work [to increase] fruits and vegetables consumption." (School 501)

# Motivation to create partnerships with retailers

When asked what would motivate them to create partnerships with grocery stores, school FFVP staff cited student enjoyment of the program as their primary motivator.

"Probably just the experience for the kids, that would be my motivation. Because I know that from this area that they're in they don't get opportunities like that. So they would probably really like it." (School 102)

"If the kids enjoyed it, it would motive me more to do it. If I heard positive feedback, then I would be like oh, okay. The other kids will like it. So I'll be more motivated to say something about it because it worked out well." (School 201)

Since kitchen managers rely on teachers to carry out the FFVP in their classrooms, managers would also rely on teachers' motivation to achieve the maximum potential of a partnership. If teachers are not interested in or do not see the benefit in a school food program, it will be difficult to implement.

"Interest from teachers. Or from the district office of Child Nutrition. If they're not interested, then there's no reason for me to even attempt it." (School 101)

#### **Parents**

Four parent focus groups were conducted in three schools across two districts. Participant numbers ranged from five to seven per focus group, with a total of 25 parents. One focus group was conducted in English and three were conducted in Spanish. All but two participants were female; the majority of parents (n=15) were in the 35-50 year-old age range; and four parents had a bachelor's degree or higher. When asked if anyone in the household participated in a list of food programs over the past year, 10 participants reported participating in SNAP and five reported participating in the Special Supplemental Nutrition Program for Women, Infants and Children (WIC).

# FFVP knowledge and awareness

Parents were asked if and what they knew about the FFVP program at their child's school. Most had a general knowledge that their child received fruits and vegetables at school, but did not distinguish between the FFVP and other school food programs such as the NSLP or SBP. When filling out a pre-focus group questionnaire, about half of parents selected the FFVP as one of the school food programs available to their child.

"And also they eat well here, they talk, 'Mommy, it was so good.' They like everything, both of them. They like whatever is given to them. And their milk, or snacks, and my daughter also says they eat a lot of fruits and vegetables." (Focus group 3)

"They're always proud of what they come home and tell me what they're eating, especially the salad bar. My son tells me. He brags about it every day about eating there. It makes it easier to stay with the healthy eating habit." (Focus group 1)

# FFVP impacting home environment

Although parents were not necessarily familiar with the name of the program providing their child with fruits and vegetables as snacks, they were keenly aware of its impact not only on the child, but on the entire family as well. Parents reported that their child sometimes tells them about a fruit or vegetable they have eaten at school, or they recognize it in the grocery store and request that the parent buy it. Parents also shared stories of their children bringing home unique fruits or vegetables to show them. As a result, the entire family is exposed to more fresh produce. In some cases purchasing the requested fruit or vegetable is a parent's first experience with the produce item, particularly the more exotic ones, creating a learning experience for the entire family. Parents further described transformations to their child's eating habits as a result of increased exposure to fruits and vegetables at school.

"It changes the way we eat. It influences in a way in which we learn, and we begin to change the routine we have all the time with tortilla, meat, beans, and rice. We begin to use vegetables. They say, 'I don't want the chicken, I just want the vegetables and rice.' Those are things that we see, changes in them, and we have to do it. If we aren't used to eating that way, we then learn." (Focus group 3)

"I have a daughter in high school right now, and every time I go to the store, she likes the mixed fruit cups a lot. And she gets home from school, and if she sees there are no fruits in the refrigerator, 'Mommy, there aren't even fruit cups.' But every time she gets home from school, 'Mom, are there any apples? Are there pears? Or grapes?' The one that's in high school. Since she came to school here, she began to eat, and eat that. She would get home from school, and she wouldn't eat, but the first thing she would eat was a fruit. I would tell her, 'Stop – eat first.' 'No, first, I'll eat a fruit, and then I'll eat.' Always." (Focus group 3)

I was telling them that she gets home and she tells me, "Mom, I brought a new fruit." And she took home a fruit I never saw before, and it's called star fruit, and it was a star, it was cut in the shape of the star. . ." (Focus group 4)

#### Positive perceptions about a partnership

Focus group participants perceived the potential for a partnership between schools and nearby grocery stores as positive overall. They emphasized that the promotions they primarily consider when making purchasing decisions are price promotions; therefore, any promotions that are part of the proposed partnership should take price into account.

"I would like it, especially if it was a sale. That would really – A weekly sale. Yeah, that would be great. Yeah, that would really encourage me to buy that." (Focus group 1)

Parents further explained that their children have a great deal of pride in their school, and that connecting the FFVP items in the store to the school by using school colors or logos would effectively catch their attention and that of their children.

"If it's a local store, it would almost seem like a good idea if they mentioned the school like [name of participating school]. So then the kids would be like oh, that's my school, and they'd be proud of their school – and to see outside of school, see it at the grocery store." (Focus group 1)

"Some logos they can recognize, for example, we go to the store and the labels have – for example some cereals or the gummies have the logo of some of the channels they watch . . . so they see it and say, 'Mom, this is what I watch on TV.' And they remember, so if they link it to something about the school...they still get excited when remembering or finding a link." (Focus group 4)

#### Communicating with parents

Focus group participants were asked how the partnership should be communicated to parents so they would know what fruits and vegetables were being promoted at which stores and on what days. Multiple modes of communication would be necessary, as parents have different preferences for receiving information about school events. For example, some parents believed fliers would be the most effective and mentioned that, although the school website is an efficient way of communicating, not all parents have access to the Internet and would, therefore, not have access to the partnership information. Some parents mentioned that their children were unreliable at showing them fliers received at school, and text messages would be more effective.

"With fliers sent home from the school promoting the store." (Focus group 3)

"My daughter comes with the paper on hand and tells me, 'Mom.' And my son in 6<sup>th</sup> grade doesn't do it, 'What happened? Where is it?' 'In my backpack.' And [my daughter] told me, 'Here it is Mom.' I knew the schedule for her. (Focus group 4)

"The text message is very convenient because it's instant and you see the message and what you need to know and you can answer right away." (Focus group 4)

#### Role of SNAP-Ed

In addition to their perceptions and ideas about a partnership with grocery stores, district and school FFVP personnel were asked about their familiarity with SNAP-Ed, any SNAP-Ed services they were currently using or had used in the past, and the potential support SNAP-Ed could provide in creating partnerships with retailers. Some district FFVP personnel were well aware of the SNAP-Ed program and the resources available through MCDPH and were also able to provide the names of specific individuals they were currently working with or who they had worked with in the past.

[Name of MCDPH staff member] and I, I know communicate frequently. I'm very familiar of their office and their resources that they provide us." (District 300)

Other FFVP district staff had heard of the SNAP-Ed program but were unable to identify program specifics such as services and resources.

"I've heard of it, but I'm not really familiar with it. (District 100)

One staff member mentioned the information they received about SNAP-Ed resources at their FFVP training.

"And I know that we can use some of their supplies, but I went to training for the Fresh Fruit and Vegetable Program. They have blow-up balloons, jumping machines, and all this other neat stuff that was only for the schools that participated in the Fresh Fruit and Vegetable Program." (District 400)

School personnel were less aware of SNAP-Ed resources and were unsure if there were any teachers or individuals at their school taking advantage of such resources. Additionally, school FFVP personnel had difficulty differentiating between materials and support provided through SNAP-Ed, and materials provided and offered by the district. Some districts provide their own nutrition education materials, such as FFVP nutrition education cards and nutrition education posters, which are likely similar in content to SNAP-Ed materials, making it difficult to distinguish between the two programs.

"I never heard of the SNAP-Ed. I'm not saying we don't have it. Maybe in some of our schools, but none of the schools I've ever worked at." (School 502)

"Not from SNAP-Ed, but I know our school district does it. Our dietitians teach in our classrooms three to four days a week." (School 502)

Schools and districts receive promotional materials such as FFVP snack bags and posters from ADE as well. Since educational materials and support are coming from multiple sources, branding may help FFVP staff identify which support is being offered through the district and which resources are available through the SNAP-Ed program at the MCDPH.

While more awareness is needed regarding the services offered through SNAP-Ed, there is great potential for SNAP-Ed to serve as a partner and/or a facilitator in extending the reach of the FFVP by partnering schools with nearby grocery stores. SNAP-Ed could serve as a linking partner, helping connect schools and stores by locating potential partnership sites, facilitating partnership introductions, assisting in forming partner roles, helping to delegate partner responsibilities, establishing channels of communication, and ensuring that schools and stores remain connected and have adequate resources for carrying out partnership goals. Additionally, as suggested by a district FFVP staff member, SNAP-Ed could provide store signage or other promotional materials to market the FFVP in stores, and promote retail stores in FFVP schools.

"If they could provide some funding for the signage or things like that. That would be great. They're always willing to help, which is nice." (District 500)

#### CONCLUSION AND PRACTICAL IMPLICATIONS

Using a qualitative case study approach, this project aimed to explore the potential for establishing successful PPPs between FFVP-participating schools and nearby retailers to promote fruit and vegetable consumption in low-income communities. Our research revealed three key findings: 1) Stakeholders collectively support forming PPPs; 2) Overcoming communication between partners and price barriers for FFVP items is necessary for creating and sustaining

successful partnerships; and 3) Partnerships between FFVP schools and retailers can be mutually beneficial and have a positive impact on the community.

#### Unanimous support for creating partnerships between schools and nearby retailers

Stakeholders from each group unanimously supported the idea of creating PPPs between schools and grocery stores. Store and produce managers were eager to learn how they could be involved and are ready and willing to begin partnerships now. Schools are equally prepared to participate in partnerships if they receive the appropriate guidance from the school district. Teachers may need added support and resources to ensure that promotional efforts are carried out successfully in the classroom. Discussions with additional teachers could ensure that their concerns are adequately captured and mitigate barriers for this unique stakeholder group, as they will be key players in promoting the partnership in schools. Clear, concise, and easy-to-implement instructions on executing the partnership in classrooms can ease potential burdens and reduce the chances of a partnership cutting into already limited class time.

#### Overcoming communication and price barriers

In order to ensure successful initial and ongoing implementation of a PPP between grocery stores and schools, all partners must engage in open communication. An initial face-to-face meeting to review the goal of the partnerships, to establish partner roles and responsibilities, and to create a plan for maintaining regular communication, such as through monthly calls and/or weekly emails, will facilitate the successful initiation of a partnership. Identifying a community organization to help establish a connection between stores and FFVP schools and to facilitate regular communication between partners may help reduce potential barrier expressed by key stakeholders.

Offering FFVP produce in schools when it is in-season will aid stores in selling such items to patrons at reasonable (and discounted) prices. Selecting items that are out of season may impact the ability of parents to purchase FFVP fruits and vegetables for their families. District personnel stated that in-season produce is offered as part of the FFVP whenever possible, and store personnel stated that they promote fruits and vegetables when they are in-season; therefore, providing families with fresh produce at the lowest possible prices should be feasible except in instances when more exotic options are selected as FFVP snacks.

#### Mutually beneficial and a positive impact on the community

School/store partnerships would bring multiple benefits to schools, stores and families. Not only would customer traffic increase in stores, but produce and overall sales would both rise. A partnership with schools would increase opportunities for grocery stores to foster connections to the community and cultivate customer loyalty among current and future shoppers. Further, increasing children's exposure to fruits and vegetables would encourage healthier eating habits, thereby achieving the overall goal of the FFVP. Schools are also required to have wellness policies; a partnership could help participating schools achieve the goals of these policies by improving

the overall health of students. Partnerships may increase the likelihood of parents purchasing produce items if they know their kids are eating and enjoying them at school. All family members of a child in an FFVP-participating school would therefore be exposed to new fruits and vegetables, resulting in healthier eating habits at home.

#### **Evaluating success**

Both objective and subjective measures could be used to evaluate the success of partnerships to ensure they are mutually beneficial and are positively impacting the surrounding community. Key store metrics such as sales figures, tonnage of produce sold, and customer traffic will objectively inform store personnel of the partnership's impact. Additionally, store employees can ask patrons their opinions of FFVP promotions, and school staff members can listen to feedback from students. Results or changes should be shared among partners to determine program success and areas for improvement.

#### Limitations

This project has a few limitations. The research was conducted in one city, Phoenix, limiting the generalizability of the study. Schools and grocery stores located in rural areas may have identified very different issues and barriers for creating and implementing such a partnership. Additionally, only schools from five school districts were represented in the sample, and only districts that participated in the FFVP and SNAP-Ed through the MCDPH were eligible for inclusion. Further, in schools, a variety of staff members are responsible for coordinating the FFVP. It is possible that we did not capture an adequate variety and number of FFVP personnel to achieve representative views of everyone involved in the organization, preparation and distribution of the FFVP. Finally, kitchen managers' views of the FFVP were markedly different from those of teachers. Therefore, teachers should have been included as a separate group with a unique set of interview questions that were more specific to the teaching environment.

# **Next steps**

All parties that would be involved in a partnership between schools and grocery stores expressed interest and enthusiasm about developing a PPP for cross-promoting fruits and vegetables. Many retailers indicated they were ready to begin immediately. The missing piece is someone to initiate and organize the partnership, a role that fits the purpose and mission of the SNAP-Ed program, which aims to use policy, systems, and environmental changes to promote healthy eating. The Maricopa County SNAP-Ed program is uniquely suited to serve as a liaison between grocery stores and schools in implementation of a partnership and to help disseminate the information to parents. Based on the findings of the current project, we recommend that SNAP-Ed take the following next steps:

- 1. Create a clearly defined partnership goal.
- 2. Initiate a pilot program with one of the schools that has been part of the current project and its closest grocery store.

- 3. Organize a meeting with district and school level FFVP personnel and retail store and produce managers. Include the school principal and superintendent, if necessary, and, if possible, include one teacher in addition to other school level FFVP personnel.
- 4. Establish the roles of all involved parties, including:
  - a. How/when the school FFVP schedule will be communicated to stores.
  - b. Types of in-store promotions that will be used; who will be responsible for creating and funding those promotions.
  - c. How the partnership will be communicated and promoted in schools and to parents.
- 5. Determine the optimal method and timing of communication for all involved parties.
- 6. Maintain ongoing communication among partners and troubleshoot issues as they arise.
- 7. Based on outcomes after a school year of piloting the program, develop a tool kit for schools and grocery stores to use in establishing their own partnerships.

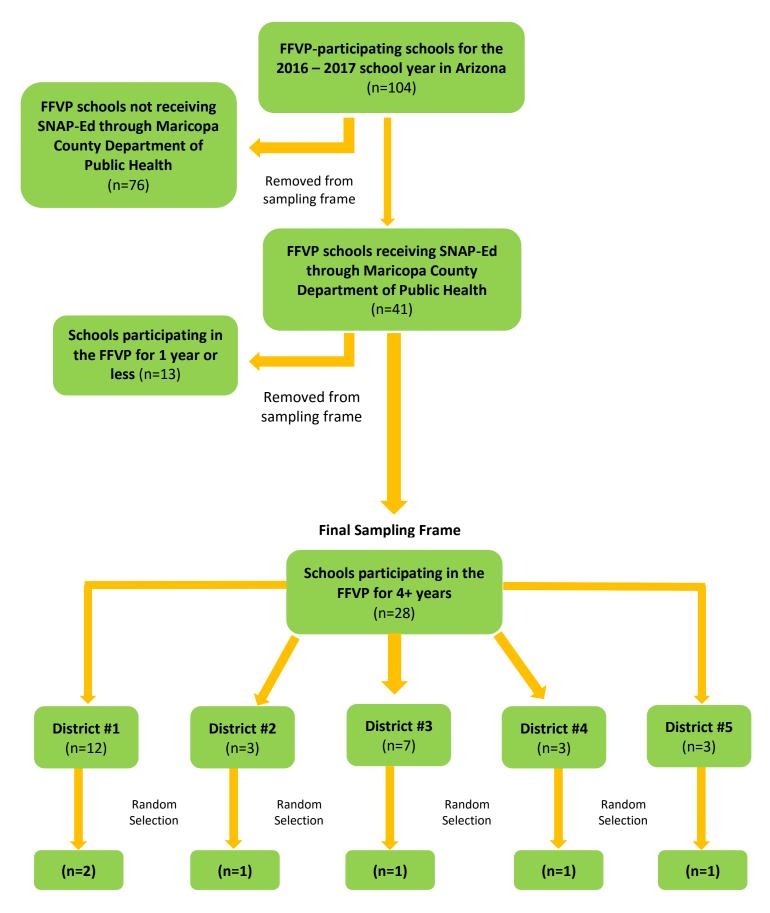
#### **REFERENCES**

- 1. US Department of Health and Human Services. Scientific Report of the 2015 Dietary Guidelines Advisory Committee. Washington (DC): USDA and US Department of Health and Human Services. <a href="http://health.gov/dietaryguidelines/2015-scientific-report/PDFs/Scientific-Report-of-the-2015-Dietary-Guidelines-Advisory-Committee.pdf">http://health.gov/dietaryguidelines/2015-scientific-report/PDFs/Scientific-Report-of-the-2015-Dietary-Guidelines-Advisory-Committee.pdf</a>. Accessed August 17, 2015.
- 2. Jamelske E, Bica LA, McCarty DJ, Meinen A. Preliminary findings from an evaluation of the USDA fresh fruit and vegetable program in Wisconsin schools. *Wis Med J.* 2008;107(5):225.
- 3. US Department of Agriculture. Fresh Fruit and Vegetable Program: A Handbook for Schools. 2010; <a href="http://www.fns.usda.gov/sites/default/files/handbook.pdf">http://www.fns.usda.gov/sites/default/files/handbook.pdf</a>. Accessed August 17, 2015.
- 4. US Department of Agriculture. Supplemental Nutrition Assistance Program Education Plan Guideance FY 2017. 2015; <a href="https://snaped.fns.usda.gov/sites/default/files/uploads/Final FY 2017 SNAP-Ed Plan">https://snaped.fns.usda.gov/sites/default/files/uploads/Final FY 2017 SNAP-Ed Plan</a> Guidance 04-04-2016.pdf.
- 5. Buzby J, Guthrie J, Kantor LS. Evaluation of the USDA Fruit and Vegetable Pilot Program: Report to Congress. Food Assistance & Nutrition Research Program: United States Department of Agriculture; 2012-08-29T17:23:01 2003.
- 6. Jamelske EM, Bica LA. Impact of the USDA Fresh Fruit and Vegetable Program on Children's Consumption. *J Child Nutr Manag.* 2012;36(1):n1.
- 7. Olsho L, Klerman J, Bartlett S, Castellanos-Brown K. Evaluation of the Fresh Fruit and Vegetable Program (FFVP): Interim Evaluation Report. Office of Research and Analysis 2011; <a href="http://www.fns.usda.gov/sites/default/files/FFVPInterim\_Summary.pdf">http://www.fns.usda.gov/sites/default/files/FFVPInterim\_Summary.pdf</a>. Accessed November 23, 2015.
- 8. Olsho LE, Klerman JA, Ritchie L, Wakimoto P, Webb KL, Bartlett S. Increasing Child Fruit and Vegetable Intake: Findings from the US Department of Agriculture Fresh Fruit and Vegetable Program. *J Acad Nutr Diet*. 2015(115):1283-1290.
- 9. Ohri-Vachaspati P, Dachenhaus E, Green J, et al. Can school food programs have a reach beyond schools? American Public Health Assocaition's Annual Meeting and Expo; October 29 November 2, 2016; Denver, CO. Abstract 359073.
- 10. Bradlee ML, Singer MR, Qureshi MM, Moore LL. Food group intake and central obesity among children and adolescents in the Third National Health and Nutrition Examination Survey (NHANES III). *Public Health Nutr.* 2010;13(06):797-805.
- 11. Cullen KW, Baranowski T, Klesges LM, et al. Anthropometric, Parental, and Psychosocial Correlates of Dietary Intake of African-American Girls. *Obes Res.* 2004;12(S9):20S-31S.
- 12. Roseman MG, Yeung WK, Nickelsen J. Examination of weight status and dietary behaviors of middle school students in Kentucky. *J Am Diet Assoc.* 2007;107(7):1139-1145.
- 13. Moore LL, Singer MR, Bradlee ML, et al. Intake of fruits, vegetables, and dairy products in early childhood and subsequent blood pressure change. *Epidemiology (Cambridge, Mass)*. 2005;16(1):4-11.

- 14. Prentice A, Schoenmakers I, Ann Laskey M, de Bono S, Ginty F, Goldberg GR. Symposium on 'Nutrition and health in children and adolescents' Session 1: Nutrition in growth and development Nutrition and bone growth and development. *Proc Nutr Soc.* 2006;65(04):348-360.
- 15. Lin B-H. Diet quality usually varies by income status. *Amber Waves.* 2005;3(4):4–5.
- 16. Lorson BA, Melgar-Quinonez HR, Taylor CA. Correlates of fruit and vegetable intakes in US children. *J Am Diet Assoc.* 2009;109(3):474-478.
- 17. Birch LL, Fisher JO. Development of eating behaviors among children and adolescents. *Pediatrics*. 1998;101(Supplement 2):539-549.
- 18. Moore LL, Singer MR, Bradlee ML, Daniels SR. Adolescent dietary intakes predict cardiometabolic risk clustering. *European Journal of Nutrition*. 2015:1-8.
- 19. Ferlie E, Lynn L, Pollitt C. The Oxford Handbook of Public Management. New York: Oxford University Press, Inc.; 2005.
- 20. Healthy People and Communities Steering Committee. Discussion Paper: Public-Private Partnerships with the Food Industry. 2013. Accessed January 11, 2017.
- 21. Nishtar S. Public private 'partnerships' in health a global call to action. *Health Research Policy and Systems*. 2004;2:5-5.
- 22. Produce for Better Health Foundation and Centers for Disease Control and Prevention. Fruits and Veggies More Matters. <a href="http://www.fruitsandveggiesmorematters.org/">http://www.fruitsandveggiesmorematters.org/</a>. Accessed November 3, 2016.
- 23. Chef Ann Foundation. Let's Move Salad Bars to Schools. http://www.saladbars2schools.org/about-us/. Accessed July 21, 2016.
- 24. United States Department of Agriculture. Fresh Fruit and Vegetable Program. 2013; <a href="http://www.fns.usda.gov/sites/default/files/FFVPFactSheet.pdf">http://www.fns.usda.gov/sites/default/files/FFVPFactSheet.pdf</a>. Accessed August 17, 2015.
- 25. Arizona Department of Education. Fresh Fruit and Vegetable Program. 2016; http://www.azed.gov/health-nutrition/fresh-fruit-program/. Accessed August 1, 2016.
- 26. Ohri-Vachaspati P. Parental perception of the nutritional quality of school meals and its association with students' school lunch participation. *Appetite*. 2014;74:44-47.
- 27. Bartlett S, Olsho L, Klerman J, et al. Evaluation of the fresh fruit and vegetable program (FFVP): final evaluation report. Prepared by Abt Associates under contract no. AG-3198-D-09-0053. Alexandria, VA: US Department of Agriculture, Food and Nutrition Service; 2013.
- 28. Dachenhaus E. Associations between Fresh Fruit and Vegetable Program Participation and Students' Home Food Environment and Faimly Food Shopping Practices: A Student's Perspective. [master's thesis]. *Phoenix, AZ: Arizona State University.* 2015.
- 29. Mollner K. Associations between Fresh Fruit and Vegetable Program Participants and Students' Home Food Environment and Family Food Shopping Practices. [master's thesis]. *Phoenix, AZ: Arizona State University.* 2015.
- 30. Pimenta E. Personal Communication with Ellen Pimental, School Foods Director Arizona Phoenix, AZ 2014.
- 31. Concannon K. Personal Communication with USDA Undersecretary Kevin Concannon. Phoenix, AZ 2014.

# **APPENDICES**

Appendix A: Selection of FFVP-Participating Schools to Serve as Study Location



Store Code:	Date (MM/DD/YY):   _ _
-------------	------------------------

#### **Appendix B: Retail Managers Interview Guide**

# FFVP Interview Guide Retail store/produce managers

Λ \	/erba	l con	cont
A. \	/erba	ı con	ısenı

Thank you for joining us today; we appreciate the time and effort you are making to participate in today's interview. My name is \_\_\_\_\_ and I am part of a research study being conducted by researchers at Arizona State University. The purpose of this interview is to learn about your opinions and ideas about how grocery stores can work with schools to promote the sales of fruits and vegetables in stores through the use of school food programs.

As a reminder, this interview is confidential. Throughout the discussion, you will only be called by your first name to keep your identity confidential. Neither your name nor the store name will ever be associated with any of your answers. Your answers will be combined with all of the other store owners'/managers' responses. The results of this study will be used in reports, presentations, or publications but your name will never be known. Your participation is completely voluntary and you can stop the interview or decide not to answer any question for any reason; there are no right or wrong answers. You must be 18 years or older to participate. If you agree to participate, you will receive a \$25 cash incentive as a token of our appreciation. Should we proceed with the interview? (If YES, continue).

I also want you to know that \_\_\_\_\_ is here to take notes on our discussion today. I would also like to record our interview. The purpose of the recording is to help the note taker in case there is a response that they do not fully capture. The recording will not be shared with anyone and again all of your responses are confidential. Are you okay with having the interview audio-recorded? (If YES, proceed with the interview; if NO, still proceed with the interview; instruct the note taker to state when they need more time to capture a response and briefly pause before proceeding to the next question during the interview).

If you have any questions or concerns about the study, or are dissatisfied at any time with any aspect of this study, you may contact the Chair of the Human Subjects Institutional Review Board, through the ASU Office of Research Integrity and Assurance, at (480) 965-6788. (Show participant study information sheet and point out IRB and study contact information at the bottom). Great, let's get started.

Turn on tape recorder, state the date, your name and store ID number.

Store Code:	Date (MM/DD/YY):	L I		I	
-------------	------------------	-----	--	---	--

This interview is organized into two parts. Part 1 will be a brief oral survey where we are looking to gather some basic information about your position and awareness of school food programs. Then we will transition to Part 2 where we will ask you some more open-ended questions about your ideas and perceptions about fruits and vegetable promotion strategies.

# **B.** Oral Survey

- 1. Can you each tell us a little about your position at <name of grocery store>?
- 2. How long have you been in your position?
- 3. How long have you been with the company?

#### Awareness of the FFVP

Great, thanks for sharing. Now I'm going to shift gears and ask some questions about schools around your store and school meal programs within those schools.

- 4. Do you know which elementary schools are located close to < name of grocery store>?
- 5. I'm going to read a list of school food programs offered at elementary schools, can you tell me if you have heard of each program I read? You can respond with a yes, no, or I don't know for each.
  - **a. School Lunch Program** Provides low-cost or free lunches to students attending public or non-profit private schools
  - **b. School Breakfast Program (SBP) -** Provides low-cost or free breakfast to students attending public or non-profit private schools
  - c. Fruit and Vegetable Snack Program also called Fresh Fruit and Vegetable Program (FFVP) This program aims to increase fruit and vegetable consumption in elementary school children. Schools with a high proportion of low-income students offer free fresh fruits and vegetables as snacks during the school day. These fresh fruit and vegetable snacks are offered at least twice a week to students
- 6. What have you heard about the Fruit and Vegetable Snack Program?
- 7. Do nearby schools ever purchase fresh fruits and vegetables from your store for their school programs?
- 8. (IF YES to Q7) Who do you work with at the school end for produce sales?
- 9. (IF YES to Q7) Which programs do schools use the produce they purchase from your store for?

Store Code:   Date	(MM/DD/YY):   _
--------------------	-----------------

#### C. Semi-Structured Interview

These questions will be an expansion of some of the questions we covered in the survey. They focus mostly on your perceptions and ideas.

- 1. First, can you describe for us your typical customer base at your store?
- 2. When you hear children making request for food items when they shop with their parents, what sorts of items do you hear children request at your store?
- 3. When school is in session, how, if at all, do fruit and vegetable purchases change?

# **Fruit and Vegetable Promotion Strategies**

- 4. How do you plan for what items will be promoted in your store and who all are involved in that decision?
- 5. What types of strategies do you <u>currently</u> use to promote fruits and vegetables in your store?
- 6. Which strategies, if any, are designed specifically to target children or families with children?
- 7. What types of strategies have you used in the past to promote fruits and vegetables in your store?
- 8. Did any of these strategies you used in the past specifically target children or families with children?
- 9. Which strategies have been the most effective at increasing fruit and vegetables sales?
- 10. Which strategies have been the least effective at increasing fruit and vegetables sales?
- 11. How do the profit margins for the produce department differ from the profit margins of other departments?

# **School Partnerships**

- 12. Can you please describe any types of partnerships that you <u>currently</u> have with nearby schools, such as grocery store tours or other types of promotions?
- 13. Can you please describe any types of partnerships you have had with schools in the past?

# Perceptions about partnerships with schools

14. Have you ever considered developing partnerships with nearby schools to support increased fruit and vegetable consumption among children?

Store Code:	Date (MM/DD/YY)	:	$ _{-} $	
-------------	-----------------	---	----------	--

- 15. We are exploring if schools and retailers would be interested in collaborating to promote the Fresh Fruit and Vegetable Program in order to increase fruit and vegetable consumption among children and their families. An example of such a partnership may be that schools would provide grocery stores with the schedule of fruits and vegetables being distributed through the FFVP during the week. Grocery stores would then stock and promote those fruit and vegetables items in stores during that period. Students would consume those fruit and vegetables at schools as part of the FFVP and would be informed that those fruit and vegetable items are available at local grocery stores nearby, along with any promotions the retailers have on the fruit and vegetable items. This is just an example of a possible partnership. We are interested in exploring other ideas as well.
  - i. What are your thoughts about this type of partnership?
  - ii. How do you think this type of partnerships would work?
    - 1. What would you need from schools to make this type of partnership work?
  - iii. How would you go about creating a partnership with nearby schools?
  - iv. What do you see as potential barriers to a partnership with nearby schools?
    - 1. What kind of staffing time would you need?
      - a. How would you manage extra staffing?
    - 2. What approval would you need from the corporate office?
      - a. How would you go about seeking such approval?
  - v. What type of resources would be required to cross-promote the FFVP produce items in your store?
    - 1. Do you have access to such resources?
    - 2. In terms of resources needed, what would be the most costly promotion strategy?
    - 3. What would be the least costly promotion strategy?
  - vi. How might a partnership with schools impact your store?
  - vii. What would be some strategies that schools could use to promote purchasing items that are part of the Fruit and Vegetable Snack Program at your store?
  - viii. How would you measure the impact of this type of partnership?
  - ix. What would motivate you to create such partnerships with nearby schools?
  - x. What are some other ideas you have about how these collaborations might work?

# Other questions

- 16. Can you describe what you do with the produce you cannot sell in the store?
- 17. What do you think about partnering with community nutrition organizations that could provide free in-store nutrition education and/or taste tests of featured items to further promote fruit and vegetable consumption among children and their families?

	Date (MM/DD/YY):	.
· <del></del>		
	<u> </u>	Date (MM/DD/YY):

#### D. Closing

Well, that brings us to the end of all my questions. If you could just give me a few minutes to make sure we captured everything we needed to.

Moderator checks with note taker to and list of questions to make sure everything has been asked and recorded properly.

Thank you for sharing your time and providing such valuable information. Our study team is extremely grateful for your participation in the study. Before I leave, is there anything else you would like to share with us today? Are there any questions you would like to ask us?

I have left you with my name and the study team's contact information. If you think of something later that you would like to add to what was discussed today OR if you have a question that you'd like to ask us, please feel free to contact us. Your name will not be connected with any answers or comments you have given today or may give in the future.

As a gesture of our appreciation for your participation, we have a \$25 cash incentive for each of you. Thank you so much again!

Store Code:		Date (MM/DD/YY):		1 1
otore coue.	l	Date (111111, DD) 111,1	ı ı	-!!

#### **Appendix C: District FFVP Interview Guide**

# FFVP Interview Guide District FFVP personnel: The primary FFVP contact for each school district

Λ 1		consent
Δ.	verna	i conseni

Thank you so much for joining us today; we really appreciate you taking the time to participate in today's interview. As you know, my name is \_\_\_\_\_ and I am part of a research study being conducted by researchers at Arizona State University. The purpose of this interview is to learn about your opinions and ideas about the Fresh Fruit and Vegetable Program and strategies for expanding the reach of the program to nearby grocery stores.

As a reminder, this interview is confidential. Throughout the discussion, you will only be called by your first name to keep your identity confidential. Neither your name nor the name of the school district will be associated with any of your answers. Your answers will be combined with responses from participants from other schools and districts. The results of this study will be used in reports, presentations, or publications but your name will never be known. Your participation is completely voluntary and you can stop the interview or decide not to answer any question for any reason; there are no right or wrong answers. You must be 18 years or older to participate. If you agree to participate, you will receive a \$25 gift card as a token of our appreciation. Should we proceed with the interview? (*If YES, continue*).

I also want you to know that \_\_\_\_\_ is here to take notes on our discussion today. She/he will take notes during our conversation, but will not participate. I would also like to record our interview. The purpose of the recording is to help the note taker in case there is a response that they do not fully capture. The recording will not be shared with anyone and again all of your responses are confidential. Are you okay with having the interview audio-recorded?" (If YES, proceed with the interview; if NO, still proceed with the interview; instruct the note taker to state when they need more time to capture a response and briefly pause before proceeding to the next question during the interview).

If you have any questions or concerns about the study, or are dissatisfied at any time with any aspect of this study, you may contact Chair of the Human Subjects Institutional Review Board, through the ASU Office of Research Integrity and Assurance, at (480) 965-6788. (Show participant study information sheet and point out IRB and study contact information at the bottom). Great, let's get started.

Offer participant water.

Turn on tape recorder, state the date, your name and District ID number.

Store Code:	Date (MM/DD/YY):
-------------	------------------

# **Current efforts to promote fruits and vegetables**

- 1. What strategies do elementary schools in your district <u>currently</u> use to promote fruit and vegetable consumption?
- 2. What strategies have schools in your district used in the <u>past</u> to promote fruit and vegetable consumption?
- 3. (If past strategies mentioned (Q1) are not currently being offered (response from Q2) then ask):

I heard you say that \_\_\_\_\_strategy (strategies) was used in the past but is not currently being used for fruit and vegetable consumption. Can you describe some of the reasons that schools in your district are not continuing to use this as a strategy?

- 4. Which strategies, in your opinion, are the most effective for promoting fruit and vegetable consumption to elementary school kids in your district?
- 5. Which strategies, in your opinion, are the least effective in promoting fruit and vegetable consumption to elementary school kids in your district?
- 6. Tell me how the Fresh Fruit and Vegetable Program is typically carried out in schools in your district.
- 7. How does the implementation of the FFVP vary among elementary schools participating in the FFVP in your district?
- 8. How does the implementation of the FFVP differ by grade levels within schools?
- 9. Describe the level of support or buy-in that school administrators, such as principals or other staff members, and teachers have for the FFVP?
- 10. Can you describe types of educational activities, if any, that teachers incorporate around the FFVP in their classrooms?
- 11. Can you describe any instances where someone at the district or at the school level had to shop at a nearby grocery store for produce items if you were, for example, running low on certain fruit and vegetable items for the FFVP?
- 12. How do you think left over produce from the FFVP could be used?
- 13. How is the Maricopa County SNAP-Ed program used to promote fruits and vegetables within elementary schools?
- 14. How does SNAP-Ed work with the Fresh Fruit and Vegetable Program?

Store Code:	Date (MM/DD/YY):	.	.	
-------------	------------------	---	---	--

15. How aware do you think parents in your district are about school food programs offered in schools in your district?

### Perceptions about partnerships with retailers

Now I'm going to ask you some questions about grocery store partnerships.

- 16. Are any schools in your district <u>currently</u> partnering with any local grocery stores for school food programs or activities, such as grocery store tours or promotions?
- 17. Are you aware of any partnerships that have existed in the <u>past</u> between schools in the district and local grocery stores for school food programs or activities?
- 18. Have you ever considered developing partnerships with nearby grocery stores to support increased fruit and vegetable consumption among elementary school children in your district?
- 19. We are exploring if schools and retailers would be interested in collaborating to promote the Fresh Fruit and Vegetable Program in order to increase fruit and vegetable consumption among children and their families. An example of such a partnership may be that schools would provide grocery stores with the schedule of fruits and vegetables being distributed through the FFVP during the week. Grocery stores would then stock and promote those fruit and vegetables items in stores during that period. Students would consume those fruit and vegetables at schools as part of the FFVP and would be informed that those fruit and vegetable items are available at local grocery stores nearby, along with any promotions the retailers have on the fruit and vegetable items. This is just an example of a possible partnership. We are interested in exploring other ideas as well.
  - a. What are your thoughts about this type of partnership?
  - b. How do you think this type of partnerships would work?
    - i. What would you need from a retailer to make this type of partnership work?
  - c. How would you go about creating a partnership with nearby grocery stores?
  - d. What do you see as potential barriers to a partnership with nearby grocery stores?
    - i. What kind of staffing time would you need?
      - 1. How would you manage extra staffing?
    - ii. Would you need approval from school officials, such as the principal, superintendent, or school board?
      - 1. How would you go about seeking such approval?
    - iii. Would you need approval from the state or the USDA?
      - 1. How would you go about seeking such approval?
  - e. What kind of resources would be required for a partnership with grocery stores?
    - i. Do you have access to such resources?
  - f. How do you think this type of partnership would impact students?
    - i. What are other potential benefits to a partnership like this?
  - g. How would you measure the impact of this type of partnership?
  - h. What would motivate you to create such partnerships with nearby retailers?
  - i. What are some other ideas you have about how these collaborations might work?

Store Code:	Date (MM/DD/YY):     _
-------------	------------------------

- j. How do you think you could use the Maricopa County SNAP-Ed program to create linkages between schools and food retailers?
  - i. How do you feel about working with Maricopa County SNAP-Ed for this idea?
- 20. How would you describe your experience with the Fresh Fruit and Vegetable Program?
- 21. In your opinion, what types of support the can Maricopa County SNAP-Ed program provide to school food programs and local wellness policy efforts in your school district?

#### **B.** Closing

Well, that brings us to the end of all my questions. If you could just give me a few minutes to make sure we captured everything we needed to.

Moderator checks with note taker to and list of questions to make sure everything has been asked and recorded properly.

Would it be possible to get a copy of the FFVP schedule you are using for this school year?

Would it be possible to observe the FFVP program in some schools in your district?

If needed, would you be willing to let us interview additional FFVP staff members, from schools other than the ones we previously mentioned?

Thank you for sharing your time and providing such valuable information. Our study team is extremely grateful for your participation in the study. Before I leave, is there anything else you would like to share with us today? Are there any questions you would like to ask us?

I have left you with my name and the study team's contact information. If you think of something later that you would like to add to what was discussed today OR if you have a question that you'd like to ask us, please feel free to contact us. Your name will not be connected with any answers or comments you have given today or may give in the future.

As a gesture of our appreciation for your participation, we have a \$25 VISA gift card for you. Thank you so much again!

Store Code:	<u> </u>	Date (MM/DD/YY):   _	_
-------------	----------	----------------------	---

#### Appendix D: School FFVP Interview Guide

# FFVP Interview Guide School FFVP personnel: The primary FFVP contact for each school

Α 1	10060	
Α. Υ	verna	l consent

Thank you for joining us today; we appreciate the time and effort you are making to participate in today's interview. My name is \_\_\_\_\_ and I am part of a research study being conducted by researchers at Arizona State University. The purpose of this interview is to learn about your opinions and ideas about the Fresh Fruit and Vegetable Program and strategies for expanding the reach of the program to nearby grocery stores.

As a reminder, this interview is confidential. Throughout the discussion, you will only be called by your first name to keep your identity confidential. Neither your name nor the name of the school will be associated with any of your answers. Your answers will be combined with responses from participants from other schools and districts. The results of this study will be used in reports, presentations, or publications but your name will never be known. Your participation is completely voluntary and you can stop the interview or decide not to answer any question for any reason; there are no right or wrong answers. You must be 18 years or older to participate. If you agree to participate, you will receive a \$25 gift card as a token of our appreciation. Should we proceed with the interview? (*If YES*, continue).

I also want you to know that \_\_\_\_\_ is here to take notes on our discussion today. She/he will take notes during our conversation, but will not participate. I would also like to record our interview. The purpose of the recording is to help the note taker in case there is a response that they do not fully capture. The recording will not be shared with anyone and again all of your responses are confidential. Are you okay with having the interview audio-recorded?" (If YES, proceed with the interview; if NO, still proceed with the interview; instruct the note taker to state when they need more time to capture a response and briefly pause before proceeding to the next question during the interview).

If you have any questions or concerns about the study, or are dissatisfied at any time with any aspect of this study, you may contact Chair of the Human Subjects Institutional Review Board, through the ASU Office of Research Integrity and Assurance, at (480) 965-6788. (Show participant study information sheet and point out IRB and study contact information at the bottom). Great, let's get started.

Turn on tape recorder, state the date, your name and school ID number.

Store Code:		Date (MM/DD/YY):	
-------------	--	------------------	--

# **Current efforts to promote fruits and vegetables**

- 1. What strategies does your school <u>currently</u> use to promote fruit and vegetable consumption?
- 2. What strategies has your school used in the <u>past</u> to promote fruit and vegetable consumption?
- 3. (If past strategies mentioned (Q1) are not currently being offered (response from Q2) then ask):

I heard you say that \_\_\_\_\_strategy (strategies) was used in the past but is not currently being used for fruit and vegetable consumption. Can you describe some of the reasons that your school is not continuing to use this as a strategy?

- 4. Which strategies, in your opinion, are the most effective for promoting fruit and vegetable consumption at your school?
- 5. Which strategies, in your opinion, are the least effective in promoting fruit and vegetable consumption at your school?
- 6. Tell me how the Fresh Fruit and Vegetable Program is typically carried out <name of school>?
- 7. How does the implementation of the FFVP vary among classrooms at your school?
- 8. How does the implementation of the FFVP differ by grade levels at your school?
- 9. Describe the level of support or buy-in that school administrators, such as the principal or other staff members, and teachers have for the FFVP?
- 10. Can you describe types of educational activities, if any, that teachers incorporate around the FFVP in their classrooms?
- 11. Can you describe any instances where someone at your school had to shop at a nearby grocery store for produce items if you were, for example, running low on certain fruit and vegetable items for the FFVP?
- 12. How do you think left over produce from the FFVP could be used?
- 13. How is the Maricopa County SNAP-Ed program used to promote fruits and vegetables at your school?
- 14. How does SNAP-Ed work with the Fresh Fruit and Vegetable Program at your school?
- 15. How aware do you think parents are about school food programs offered at your school?

itore Code:	Date (MM/DD/YY):     _	_
-------------	------------------------	---

# Perceptions about partnerships with retailers

Now I'm going to ask you some questions about grocery store partnerships.

- 16. Is <name of school> currently partnering with any local grocery stores for school food programs or activities, such as grocery store tours or promotions?
- 17. Are you aware of any partnerships that have existed in the <u>past</u> between <name of school> and local grocery stores for school food programs or activities?
- 18. Have you ever considered developing partnerships with nearby grocery stores to support increased fruit and vegetable consumption among elementary school children?
- 19. We are exploring if schools and retailers would be interested in collaborating to promote the Fresh Fruit and Vegetable Program in order to increase fruit and vegetable consumption among children and their families. An example of such a partnership may be that schools would provide grocery stores with the schedule of fruits and vegetables being distributed through the FFVP during the week. Grocery stores would then stock and promote those fruit and vegetables items in stores during that period. Students would consume those fruit and vegetables at schools as part of the FFVP and would be informed that those fruit and vegetable items are available at local grocery stores nearby, along with any promotions the retailers have on the fruit and vegetable items. This is just an example of a possible partnership. We are interested in exploring other ideas as well.
  - a. What are your thoughts about this type of partnership?
  - b. How do you think this type of partnerships would work?
    - i. What would you need from a retailer to make this type of partnership work?
  - c. How would you go about creating a partnership with nearby grocery stores?
  - d. What do you see as potential barriers to a partnership with nearby grocery stores?
    - i. What kind of staffing time would you need?
      - 1. How would you manage extra staffing?
    - ii. Would you need approval from school officials, such as the principal, superintendent, or school board?
      - 1. How would you go about seeking such approval?
    - iii. Would you need approval from the state or the USDA?
      - 1. How would you go about seeking such approval?
  - e. What kind of resources would be required for a partnership with grocery stores?
    - i. Do you have access to such resources?
  - f. How do you think this type of partnership would impact students?
    - i. What are other potential benefits to a partnership like this?
  - g. How would you measure the impact of this type of partnership?
  - h. What would motivate you to create such partnerships with nearby retailers?
  - i. What are some other ideas you have about how these collaborations might work?
  - j. How do you think you could use the Maricopa County SNAP-Ed program to create linkages between schools and food retailers?
    - i. How do you feel about working with Maricopa County SNAP-Ed for this idea?

Store Code:	Date (MM/DD/YY):  _			
-------------	---------------------	--	--	--

- 20. How would you describe your experience with the Fresh Fruit and Vegetable Program?
- 21. In your opinion, what types of support the can Maricopa County SNAP-Ed program provide to school food programs and local wellness policy efforts at your school?

### **B.** Closing

Well, that brings us to the end of all my questions. If you could just give me a few minutes to make sure we captured everything we needed to.

Moderator checks with note taker to and list of questions to make sure everything has been asked and recorded properly.

Would it be possible to observe the FFVP program at your school?

Thank you for sharing your time and providing such valuable information. Our study team is extremely grateful for your participation in the study. Before I leave, is there anything else you would like to share with us today? Are there any questions you would like to ask us?

I have left you with my name and the study team's contact information. If you think of something later that you would like to add to what was discussed today OR if you have a question that you'd like to ask us, please feel free to contact us. Your name will not be connected with any answers or comments you have given today or may give in the future.

As a gesture of our appreciation for your participation, we have a \$25 VISA gift card for you. Thank you so much again!

Store Code:	Date (MM/DD/YY):	ı	
Store Code:	Date (MIM/DD/TT): I		
		_ '	11

#### **Appendix E: Parent FFVP Interview Guide**

# FFVP Interview Guide Parent Focus Groups

#### A. Focus group instructions

As people enter, present them with consent form, have them read and sign it, and give them copy of the IRB letter for them to keep. Then offer refreshments.

Welcome. I hope you've all had a chance to get some refreshments. Before we begin, please silence your cell phones.

Thank you for joining us today; we appreciate the time and effort you are making to participate in today's discussion. Tonight we will be talking about school food programs and shopping at nearby grocery stores.

My name is \_\_\_\_\_ and I will lead our discussion today. I am part of a research study being conducted by researchers at Arizona State University. I am here today because of my skills moderating discussion groups like this one. I'm looking forward to tonight's discussion.

I also want you to know that \_\_\_\_\_ is here to take notes on our discussion today.

The reason we asked you to be part of the group discussion is to learn about your opinions and ideas on this important topic of school food programs. Before we get started, I want to go over a few reminders:

- Please don't hesitate to speak up.
- There are no wrong answers. Your ideas are very important to us.
- You are encouraged to talk freely with others in this group. You don't need to talk only to me.
- Everything that you tell us today will be kept confidential.
- Please remember to use only your first name during our discussion today.
- We will be recording this session for accuracy. We will transcribe the audiotapes and combine all of your responses. Your first name will only be used for recoding and transcription purposes. It will not be connected with any answers or comments you provide in any of the reports.
- A summary report of the discussion will be made and shared with study investigators. Again, the report will not contain any information that could identify any participant.
- So we can hear each other clearly, I request that one person speak at a time. We value everyone's opinion and will make sure you get adequate time to express your thoughts.

Thanks so much for being here and agreeing to participate.

Turn on tape recorder, state the date, your name and name of school where focus group is being held.

Store Code:		Date (MM/DD/YY):   _	
-------------	--	----------------------	--

# Awareness of the Fresh Fruit and Vegetable Program

- 1. As some of you have indicated there are a variety of school food programs available at your child's school <name of school>. For example, your children may be participating in the school lunch or breakfast program. One such program offered by your child's school is the Fresh Fruit and Vegetable Snack program. Have you heard about the program from your child or their teachers?
- 2. Can you tell me what have you heard about the Fruit and Vegetable Snack Program also known as the Fresh Fruit and Vegetable Program?
- 3. How do you think the Fruit and Vegetable Snack Program affects what your child eats <u>at</u> school?
- 4. How do you think the Fruit and Vegetable Snack Program affects what your child eats at home?
- 5. What impact do you think the Fruit and Vegetable Snack Program has on your child's health? (or what impact do you think a fruit and vegetable snack program would have on your child's health?
- 6. Do you think the Fruit and Vegetable Snack Program is a good way to encourage children to eat more fruits and vegetables, why or why not?
- 7. When your child goes grocery shopping with you, how are they involved in the shopping process?

#### **Shopping prompts**

- 8. How do you use weekly store flyers when shopping?
- 9. What types of signs have you seen in the grocery store for promoting certain foods? And how do these signs influence what you purchase at the store?
- 10. We talked earlier about the Fruit and Vegetable Snack Program. How has your child's participation in this program influenced your food shopping, if any?
- 11. Have you experienced any instances when a store has run out of fruit or vegetable items that your child asked for?

Store Code:	Date (MM/DD/YY):	I .	1 1
Store Code:	Date (MIM/DD/33): 1	_ I	1 1
		_ '	

# Views on cross-promotion between schools and retail

- 12. What do you think about the idea of grocery stores near your child's school promoting the fruits or vegetables in the store that your children try at school as part of the Fruit and Vegetable Snack Program each week? For example, tagging fruits and vegetables in the grocery store that are part of the Fruit and Vegetable Snack Program, to let parents know which items students are getting at school? They could also advertise these items in weekly flyers, coupons, sales, in-store nutrition education activities.
- 13. In your opinion, what would be the best way for the school to let parents know about grocery stores that are promoting the Fruit and Vegetable Snack Program and fruits and vegetables?

### Likelihood of responding to cross-promotion

- 14. If the stores were to promote these specific fruits and vegetables (that your children try at school as part of the Fruit and Vegetable Snack Program), what would your likely response be if you saw promotions in the grocery store?
- 15. Which types of promotions would make you the most likely to purchase the fruit or vegetable being promoted?

#### **Awareness of SNAP-Ed**

16. How familiar are you with SNAP-Ed, the nutrition education program offered at < name of school>?

C C I -	D = 1 = /0.00 / 0.00	<b>\</b> I		- 1
Store Code:	Date (MM/DD/YY	):	ll.	

#### **B.** Closing

Well, that brings us to the end of all my questions. If you could just give me a few minutes to make sure we have everything ready for you.

Moderator checks with note taker to see if they have additional questions or comments. Check to make sure the demographic surveys have been collected.

Thank you for sharing your time and providing such valuable information. Our study team is extremely grateful for your participation in this study. Before I leave, is there anything else you would like to share with us today? Are there any questions you would like to ask us?

I have left you with my name and the study team's contact information. If you think of something later that you would like to add to what was discussed today OR if you have a question that you'd like to ask us, please feel free to contact us. Your name will not be connected with any answers or comments you have given today or may give in the future.

As a gesture of our appreciation for your participation, you will all receive a \$10 Walmart gift card. Thank you so much again!