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## **Serving Homebound Seniors: In-Home Senior Farmers' Market Nutrition Program Enrollment and Fresh Fruit and Vegetable Home Delivery for Homebound Seniors in Central New Jersey**

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*Low-income, homebound seniors may encounter affordability and accessibility-related barriers to consuming enough fresh fruits and vegetables (FV). This paper describes a two-stage pilot intervention to improve fresh FV affordability and access for home-delivered meal (HDM) program clients in Central New Jersey. The first stage of the intervention offered in-home Senior Farmers' Market Nutrition Program (SFMNP) enrollment assistance to low-income HDM program clients, with 13 clients successfully enrolling in SFMNP. The second stage of the intervention offered fresh FV home deliveries to all 64 HDM program clients at no cost to clients. We sourced fresh FV from a farmers' market run in partnership with a Cooperative Extension program affiliated with a large public research university. We carried out a post-intervention evaluation by conducting semi-structured interviews with 17 clients. Interviews addressed themes of farmers' market access, SFMNP awareness, perceived changes to FV intake, and home delivery satisfaction. Evaluation results suggest that this short-term pilot intervention was well-received and effective in reducing barriers to FV access and affordability for a vulnerable senior population.*

*Keywords:* seniors, homebound, low-income, Senior Farmers' Market Nutrition Program, farmers' markets, intervention studies

### **Introduction**

Consuming adequate amounts of fruits and vegetables (FV) may aid in preventing or managing chronic disease and promoting quality of life (Institute of Medicine, 2012; Van Duyn & Pivonka, 2000), yet certain populations like seniors may face distinctive social, economic, and health-related barriers to adequate FV consumption (Nicklett & Kadell, 2013). Although seniors generally consume more FV, on average, compared to younger adults (Nicklett & Kadell, 2013), national estimates suggest room for improvement, with 18-32% of adults 65 years and older consuming FV less than once daily in 2017 (Centers for Disease Control and Prevention, 2019). Low-income and functionally impaired seniors who are homebound particularly may experience

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challenges in affording and accessing FV (Nicklett & Kadell, 2013), making these sub-populations priority targets for intervention. This paper describes a two-stage pilot intervention that used university, Cooperative Extension, and community resources to address barriers to fresh FV consumption for low-income, homebound seniors participating in a home-delivered meal (HDM) program in Central New Jersey. The intervention's first stage focused on fresh FV affordability by offering in-home enrollment assistance for a federal nutrition assistance program called the Senior Farmers' Market Nutrition Program (SFMNP), while the second stage focused on accessibility by providing home-delivered fresh FV.

### **Literature Review**

Affordability and accessibility are distinct dimensions of food access (Caspi et al., 2012), and issues related to these dimensions can intersect, creating complex barriers to adequate FV intake. Strategies to promote adequate FV consumption among seniors may target each dimension separately, or alternatively, may address overlapping affordability and accessibility-related challenges that low-income, homebound seniors face.

Regarding efforts focused on affordability, a variety of publicly funded programs are available to assist seniors in purchasing and consuming nutritious foods, with the SFMNP being the only program to focus squarely on FV (Gergerich et al., 2015). Administered by the United States Department of Agriculture (USDA), SFMNP provides \$20-\$50 in vouchers to participants 60 years and older with income at or below 185% of the Federal Poverty Level (USDA Food and Nutrition Service, 2019). Participants redeem vouchers for fresh FV at authorized farmers' markets (FM) and other outlets. SFMNP distributed over \$20.9 million in benefits to 838,190 participants in fiscal year 2018 (USDA Food and Nutrition Service, 2019).

State and local agencies are responsible for enrolling eligible seniors, with this process typically taking place at public locations like senior centers or common areas of senior housing buildings. Seniors may designate a proxy to act on their behalf and apply for and redeem benefits (Senior Farmers' Market Nutrition Program, 2018). For seniors who are unable to leave their homes due to functional impairments, the option to assign a proxy may make SFMNP enrollment and participation feasible. The extent to which prospective applicants use this option is unknown.

Evaluations of SFMNP demonstrate that the program supports FV purchasing and intentions to consume more FV (McCormack et al., 2010; O'Dare Wilson, 2017; Webber et al., 1995). Most evaluations, however, have not considered SFMNP's potential role in improving these outcomes among low-income seniors who face accessibility-related challenges due to impaired mobility. Exploring SFMNP's role in mitigating FV affordability related challenges for homebound seniors is therefore warranted.

Regarding efforts focused on accessibility, home delivery options can address mobility and transportation issues that may impede access to fresh, healthy foods for certain seniors (Alsnih &

Hensher, 2003; Cvitkovich & Wister, 2001). Online grocery shopping and home delivery is one emerging option that has demonstrated some promise in alleviating barriers to reaching brick-and-mortar stores (Jilcott Pitts et al., 2018). For those that also have low income; however, the cost of delivery fees may be prohibitive (Jilcott Pitts et al., 2018). HDM programs provide another option and are designed to target homebound seniors who are at nutritional risk for various reasons, including limited financial resources (Sahyoun & Vaudin, 2014). Several studies indicate that receiving HDM has contributed to improved intake of certain micronutrients and a variety of FV (Sahyoun & Vaudin, 2014). Despite their high nutritional quality, HDM alone may not provide participants with the quantity of FV needed to achieve adequate daily consumption. Delivering additional FV to supplement HDM at no extra cost to participants may be a useful approach for addressing this gap.

A few previous initiatives have taken this approach to address both affordability and accessibility by using SFMNP benefits to fund fresh FV home deliveries for homebound seniors. A Seattle-based intervention offered home deliveries to 480 HDM program clients through a USDA-funded pilot program (Johnson et al., 2004). A similar intervention in Northeast Georgia distributed SFMNP vouchers and offered fresh FV home deliveries to 585 HDM program clients (Sinnott et al., 2009). Evaluations of these interventions found that home deliveries contributed to increased FV intake (Johnson et al., 2004; Sinnott et al., 2009; Smith et al., 2003). The interventions also were well-received, with participants enjoying the variety and quality of home-delivered items and reporting high satisfaction with home deliveries (Sinnott et al., 2009; Smith et al., 2003).

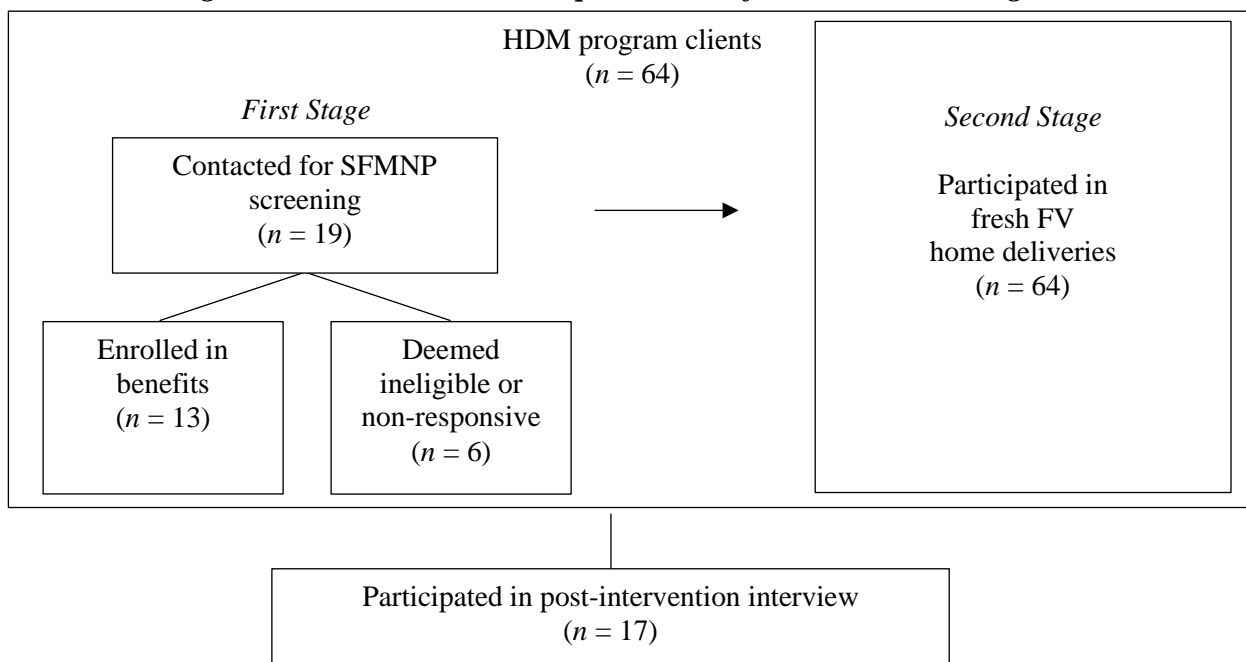
### **Current Study**

We implemented a two-stage pilot intervention in Central New Jersey to connect 64 HDM program clients to fresh FV sourced from a local FM. As in prior interventions, SFMNP benefits funded fresh FV for homebound seniors with low income. Unlike previous interventions, we carried out in-home SFMNP enrollment assistance for a subset of HDM program clients during the intervention's first stage. We also used community-based and Cooperative Extension resources to offer free home-delivered FV to all HDM program clients, regardless of SFMNP participation during the intervention's second stage. Specific aims for a post-intervention evaluation were: (a) to understand pre-intervention experiences of FM access, (b) to assess post-intervention SFMNP awareness, (c) to examine the intervention's influence on FV intake, and (d) to assess clients' satisfaction with the overall intervention and with quality and variety of home-delivered fresh FV.

The first stage of the intervention focused on providing in-home SFMNP enrollment for 13 of the 64 HDM program clients. This part of the intervention was conducted in cooperation with county officials and eliminated the typical requirement of registering for SFMNP at a public location. The HDM program director provided us with a list of 19 clients who were potentially

income-eligible for SFMNP. We screened these clients via telephone by asking about self-reported income. If clients were income-eligible and expressed interest in enrollment, we conducted in-home enrollment visits. During these visits, we completed the SFMNP application and viewed proof of identity and income in accordance with county officials' instructions.

**Figure 1. Activities and Participant Counts for Intervention Stages**



*Note.* HDM = home delivered meal; SFMNP = Senior Farmers' Market Nutrition Program; FV = fruit and vegetable

We submitted SFMNP applications for 13 clients, with six other clients being either ineligible or unresponsive to screening attempts. County officials approved all submitted applications and provided us with SFMNP voucher packets to distribute. Each packet contained four \$5 vouchers. During in-home distribution, we explained that vouchers could be redeemed for upcoming fresh FV home deliveries through the HDM program or could be used independently. All SFMNP-registered clients chose home deliveries. This stage of the intervention occurred between May and June 2014 and was fully completed before starting the intervention's second stage.

The second stage of the intervention focused on providing four bi-weekly home deliveries of fresh FV for all 64 HDM program clients. This part of the intervention was conducted in collaboration with a local community FM that operates with corporate and Cooperative Extension funding. The FM had existing authorization to accept SFMNP vouchers, which were used to cover fresh FV costs for the 13 clients who took part in the intervention's first stage. The FM covered costs for all non-SFMNP participants. We informed all HDM program clients about fresh FV home deliveries via telephone and flyer. We explained that items would be delivered

along with usual HDM program deliveries and that clients could opt out of home deliveries, although no clients did.

Communication materials also noted that specific items could change, depending on within-season changes in FV availability. We worked with one FM vendor and selected items that were easy to eat and prepare. Across all home deliveries, items included bananas, blueberries, broccoli, cherries, kirby cucumbers, grapes, grape tomatoes, nectarines, peaches, peas, and summer squash. Given recommendations from an investigator involved in a similar study, we offered more fruits than vegetables (M. Podrabsky, personal communication, May 22, 2014). Each bag contained 4-10.5 servings of fruit and 1.5-8.5 servings of vegetables for a total of 8-15.5 FV servings worth \$7, with \$5 of the content being locally grown per SFMNP regulations.

FM staff and volunteers packaged individual fresh FV bags one day before delivery. In addition to the fresh FV, bags contained preparation tips, nutrition information, and feedback forms, all using large print. We stored bags overnight in a commercial refrigerator at the HDM program office. On delivery days, HDM program volunteers delivered bags with regular meals. Volunteers retrieved vouchers from the 13 SFMNP participants. Undelivered bags were distributed to volunteers. This stage of the intervention occurred between June and August 2014.

### **Methods**

We conducted an evaluation by interviewing a sample of intervention participants. One-on-one semi-structured interviews occurred in August 2014 between the intervention's final week and two weeks post-intervention.

#### **Recruitment and Data Collection**

We recruited 17 clients from a final sampling frame of 48 HDM program clients. The initial sampling frame included 64 individuals. From this initial frame, we excluded those who were (a) away from home during the recruitment period (eight individuals excluded), (b) non-English speakers (two individuals excluded), or (c) otherwise unavailable according to the HDM program director due to program withdrawal or cognitive impairment (six individuals excluded). The sample size met recommendations for qualitative sample extensiveness (Sobal, 2001).

One investigator called clients listed in the sampling frame, placing at least three follow-up calls as needed. During the call, the investigator reminded potential respondents about the FV home deliveries and invited them to participate in an interview about their experience with the intervention. If clients were willing to participate, interviews were conducted immediately over the telephone when possible. Clients also had the option to schedule a follow-up appointment for a telephone or in-home interview. For one telephone interview, a client's spouse served as a proxy due to the client's hearing difficulties.

We collected data using a semi-structured interview guide (Appendix), adapted from an interview guide used to evaluate the Seattle-based intervention discussed above (Smith et al., 2004). Topics included past FM exposure, awareness of SFMNP, and perceptions of the intervention. We administered the Behavioral Risk Factor Surveillance System (BRFSS) six-item FV module to assess the frequency of FV intake in the past week (Centers for Disease Control and Prevention, 2013). For current SFMNP participants, the interview guide included questions about in-home enrollment and voucher redemption. We also captured demographic information for all respondents. Interviews were audio-recorded and lasted 10-25 minutes.

### Interview Sample

We interviewed approximately 27% of the HDM program clientele. We obtained demographic information on all HDM program clients from the program director to understand whether the interview sample reflected the broader client population. Compared to all clients, interview participants were younger, more likely to be male, and more likely to live in poverty (Table 1). Race, ethnicity, and household size either were assessed differently or were not available in the administrative records, so we could not directly compare the interview sample to all clients on these characteristics. However, the interview sample was diverse in terms of race and ethnicity, and a majority of interview participants lived in one-person households.

**Table 1. Demographic Characteristics of Home-Delivered Meal Program Clients and Interview Sample**

Characteristic	All Clients ( <i>n</i> = 66 <sup>a</sup> )	Interview Sample ( <i>n</i> = 17)
Age, years	76 (61, 96)	Median (range) <sup>b</sup> 72 (62, 88)
Female	0.64 (41)	Proportion ( <i>n</i> ) <sup>b</sup> 0.59 (10)
Race/ethnicity		
Non-Hispanic black	0.47 (31)	0.38 (6)
Non-Hispanic white	0.38 (25)	0.25 (4)
Hispanic	0.15 (10)	0.00 (0)
Two or more races	---	0.25 (4)
Some other race	---	0.13 (2)
Household size		
1 person	---	0.80 (12)
2 people	---	0.20 (3)
Income ≤ Federal Poverty Level	0.25 (16)	0.46 (6)

<sup>a</sup> When administrative record review occurred, partially complete records were available for 66 clients. Complete administrative records were available for 63 of 64 clients who participated in the intervention.

<sup>b</sup> Medians and proportions were estimated based on non-missing data. Age information was available for 63 of 66 clients and 16 of 17 interview participants. Gender information was available for 64 of 66 clients and all interview participants. Race and ethnicity information was available for 66 clients and 16 of 17 interview participants. Household size was unavailable for all clients and was available for 15 of 17 interview participants. Self-reported income information was available for 64 of 66 clients and 13 of 17 interview participants.

## Data Analysis

We used thematic analysis to analyze open-ended responses and computed descriptive statistics to summarize closed-ended responses. To conduct the thematic analysis, we followed a multi-phase process that involved transcribing the interview recordings, generating and applying codes, and developing themes (Braun & Clarke, 2006). The codebook primarily included deductive codes that were based on topics covered by interview questions. The first author and a research assistant independently coded one transcript, and the first author reviewed both versions to assess consistency in coding. No major discrepancies in coding emerged, but we revised the codebook by broadening certain codes and clarifying their definitions. Using the revised codebook, the research assistant applied codes to the remaining transcripts. The first author reviewed all coded responses to define and name themes.

To compute descriptive statistics, we calculated response frequencies of closed-ended responses using Excel (version 14.3.6, Microsoft Corporation, Mountain View, CA). The authors' Institutional Review Board approved this study.

## Results

### FM Access and SFMNP Awareness

In terms of past FM exposure, over 80% of respondents reported having visited a FM at some point before the intervention (Table 2). Approximately one-third of respondents who reported previous exposure also mentioned challenges in visiting a FM currently due to impaired mobility. For instance, one respondent who served as a proxy stated, "We are kind of incapacitated...so we rarely travel far from the house" (proxy for 88-year-old male client). Another respondent noted that he was no longer the primary food shopper, stating, "Presently, I have a young lady who...does shopping at the grocery store. [I]t was a treat to have things from the farmers' market in this program" (74-year-old male client). Similar comments from other respondents suggested that the intervention increased access to FM items for many respondents.

**Table 2. Response Frequencies for Previous FM Visits and SFMNP Awareness**

	<i>n</i>	%
Previously visited FM		
Yes	14	82.4
No	3	17.6
Previously heard about SFMNP		
Yes	4	23.5
No	11	64.7
Not reported	2	11.8

*Note.* FM = farmers' market. SFMNP = Senior Farmers' Market Nutrition Program.

In terms of SFMNP awareness, few respondents were aware of the program by name (Table 2). Only one respondent had participated previously. We interviewed eight respondents who had



received in-home enrollment assistance through the intervention. Two of these respondents commented on the convenience of in-home enrollment assistance. One individual mentioned, “[I]t never worked out that I could be [at the senior center] when [enrollment] was supposed to be done....[In-home enrollment] worked out very well for me” (74-year-old male client).

### FV Intake

Some respondents demonstrated difficulty in responding to questions from the BRFSS FV module. Given the potential unreliability of responses to those questions, we focus on qualitative indicators related to FV intake.

In terms of intake of home-delivered fresh FV, a majority of respondents reported eating all or most of the items distributed as part of the intervention (Table 3). Two respondents reported eating half or none of either the fruits or vegetables due to food preferences or food preparation difficulties. Approximately one-quarter of respondents experienced challenges in preparation and consumption. Of the four respondents reporting challenges, three respondents had difficulties in preparing and eating the home-delivered vegetables. In contrast, just one respondent experienced challenges in preparing or eating the home-delivered fruit.

In terms of perceived changes to FV intake, most respondents reported an increase in usual FV consumption, especially with respect to fruit (Table 3). Perceived changes included increasing the quantity or variety of fruit consumed. For example, one respondent said, “I’m definitely sure [the intervention] made a big difference because I wasn’t used to eating that much fruit. I eat fruit, but not like that....I definitely have to start buying more fruit (63-year-old female client).”

**Table 3. Response Frequencies for Quantity of FV Consumed and Challenges to FV Intake**

	Fruits		Vegetables	
	<i>n</i>	%	<i>n</i>	%
Quantity of items consumed				
All or most	16	94.1	14	82.4
Half or little to none	1	5.9	2	11.8
Not reported	0	0.0	1	5.9
Reported changes to intake				
Yes	11	64.7	9	52.9
No	6	35.3	7	41.2
Not reported	0	0.0	1	5.9
	<b>Overall</b>			
	<i>n</i>		%	
Reported challenges in preparation or consumption				
Yes	4		23.5	
No	11		64.7	
Not reported	2		11.8	

*Note.* FV = fruits and vegetables

Some respondents reported no change in intake. Reasons included: (a) poor overall or oral health, (b) substitution of independently purchased FV with home-delivered items, and (c) short duration of the intervention.

### Program Satisfaction

Most respondents rated home-delivered fresh FV quality and variety as good, very good, or excellent (Table 4). A few respondents offered neutral ratings, and no respondents rated quality or variety poorly.

**Table 4. Response Frequencies for Perceived FV Quality and Variety**

	Fruits		Vegetables	
	<i>n</i>	%	<i>n</i>	%
Perceived quality of items				
Very good or excellent	6	35.3	6	35.3
Good	9	52.9	8	47.1
Neutral	1	5.9	1	5.9
Not reported	1	5.9	2	11.8
Perceived variety of items				
Very good or excellent	6	35.3	3	17.6
Good	8	47.1	8	47.1
Neutral	1	5.9	1	5.9
Not reported	2	11.8	5	29.4

*Note.* FV = fruits and vegetables

Satisfaction with quality and variety may have factored into wanting to participate in fresh FV home deliveries again. When asked explicitly, all respondents stated they would participate in the intervention if offered in the future. Desire to continue participating may also have been related to experiences of improved food security during the intervention period. One respondent shared, “[The intervention] helped me out food-wise as far as blending things in that helped me extend my food situation...I’ll manage, but I’m going to miss [the intervention]” (66-year-old male client).

### Discussion

The research reported here described the implementation and evaluation of a two-stage pilot intervention to increase fresh FV affordability and accessibility for low-income, homebound seniors participating in an HDM program. To evaluate intervention effectiveness, we conducted semi-structured interviews with a sample of HDM program clients who either participated in both intervention stages or participated in just the intervention’s second stage involving home deliveries.

The evaluation aimed to understand pre-intervention experiences of FM access and post-intervention awareness of the SFMNP. Regarding FM access, many respondents mentioned previously having visited a FM but were currently experiencing challenges in physically

reaching these outlets. Fresh FV home deliveries allowed respondents to overcome some of these accessibility challenges, which was consistent with experiences of homebound participants of the previous FV home delivery intervention in Seattle (Smith et al., 2004). Regarding SFMNP awareness, the program had limited name recognition among the homebound seniors we interviewed. Given our mixed-income sample, it was unsurprising how many higher-income respondents were unaware of SFMNP, which targets low-income seniors. Lack of awareness is a known barrier to SFMNP participation (O'Dare Wilson, 2017). Additional research is required to understand whether this particular barrier is heightened among income-eligible seniors who cannot reach SFMNP enrollment sites due to disability.

The evaluation also aimed to examine the intervention's influence on FV intake. Most respondents reported no challenges in preparing and consuming the home-delivered FV, and a majority of respondents consumed all or most of the delivered items. Similar results were observed in Seattle, where all evaluation participants reported eating all or most of the FV they received (Smith et al., 2004). Most of the seniors we interviewed qualitatively reported a change in intake, especially with respect to fruit, which was in line with the intervention's provision of more fruit. Our qualitative findings about perceived changes to FV intake are somewhat supported by previous quantitative results. Homebound seniors in Seattle increased daily FV consumption by 1.3 servings (Johnson et al., 2004), while 80% of surveyed participants in Northeast Georgia reported increased FV consumption (Sinnott et al., 2009). Feedback from some respondents of the current study suggested that for changes to be more noticeable, home deliveries would need to include more items and would need to occur over a longer time period.

Finally, the evaluation aimed to assess clients' satisfaction with the intervention. Despite the short time frame, we observed strong satisfaction, which also was seen in the Seattle and Georgia home delivery interventions (Sinnott et al., 2009; Smith et al., 2003). Virtually all respondents we interviewed rated the fresh FV as good or better in quality and variety. Unanimous interest in continued program participation indicated strong program buy-in among respondents.

### **Limitations**

Some aspects of the intervention and evaluation limited our ability to assess improvements in FV intake. First, given the small size of the interview sample, evaluation results may not reflect the perspectives of all clients who participated in the intervention. Furthermore, our focus on a relatively narrow target population in a specific geographic area limits the generalizability of our findings. Second, the intervention provided a relatively small number of FV servings, which may not have permitted clients to achieve adequate FV intake on each day of the intervention period. Future efforts might build upon this pilot intervention by providing larger or more frequent home deliveries. Third, we experienced challenges in administering the BRFSS FV module, precluding us from quantitatively assessing FV intake. Although short instruments, such as the six-item module we attempted to administer, can provide valid dietary intake measures in older

populations, age-related issues like cognitive decline and hearing difficulties might make dietary assessment more complicated (McNeill et al., 2009; Volkert & Schrader, 2013). Screening for cognitive functioning and changing the mode of survey administration are some approaches that might help mitigate such challenges (Volkert & Schrader, 2013).

### Conclusions

Strategies to promote adequate FV intake among low-income, homebound seniors must address potentially overlapping affordability and accessibility barriers. We implemented and evaluated two strategies used in previous interventions connecting HDM program clients to SFMNP and local FM (Johnson et al., 2004; Sinnott et al., 2009; Smith et al., 2004). Our pilot intervention relied upon previously learned lessons and smoothly running partnerships.

Cooperating with county officials allowed us to provide in-home SFMNP enrollment assistance and voucher redemption for low-income, homebound seniors who otherwise may not have accessed benefits. This partnership might serve as a model for expanding access to an important nutrition assistance program for seniors. Leveraging partnerships with a community FM, Cooperative Extension, and an HDM program allowed us to fund and deliver fresh FV directly to HDM program clients. Financial and human resources from these partnerships provided sustainability, allowing fresh FV home deliveries to continue past the intervention period.

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## Appendix

### Semi-Structured Interview Guide

#### Oral Explanation of Consent

I will be asking some questions about the produce home delivery program and your fruit and vegetable intake. We are interested in your experience with the program and would like to know how we can make it better. This interview will take about 30-45 minutes to complete. You may choose to skip any questions you do not wish to answer. You may also stop the interview at any time. If you stop the interview or skip questions, it will not affect your Meals on Wheels. I am not recording your name, so it will not be linked to your responses. Do you have any questions before we begin?

Are you willing to participate?

- Yes
- No

#### Farmers' Market Access

1. Have you ever been to a farmers' market?
2. Before receiving produce home deliveries, had you ever eaten produce from a farmers' market? It could have been produce you purchased or that someone, like a relative, friend, or neighbor, delivered to you.

#### Fruit and Vegetable Intake

These next questions are about the fruits and vegetables **you** ate or drank during the **past week**. Please think about all forms of fruits and vegetables, including cooked or raw, fresh, frozen, or canned. Please think about **all** meals, snacks, and food, including Meals on Wheels food, that you consumed at home or away from home.

3. During the past week, how many times did you drink **100% PURE fruit juices**? Do not include fruit-flavored drinks with added sugar or fruit juice you made at home and added sugar to. Only include 100% juice.
4. During the past week, not counting juice, how many times did you eat **fruit**? Count **fresh, frozen, or canned fruit**.
5. During the past week, how many times did you eat **cooked or canned beans**, such as refried, baked, black, garbanzo beans, beans in soup, soybeans, edamame, tofu, or lentils? Do NOT include long green beans.

6. During the past week, how many times did you eat **dark green vegetables**, for example, broccoli or dark leafy greens, including romaine, chard, collard greens, or spinach?
7. During the past week, how many times did you eat **orange-colored vegetables** such as sweet potatoes, pumpkin, winter squash, or carrots?
8. Not counting what you just reported, during the past week, about how many times did you eat **OTHER vegetables**? Examples of other vegetables include tomatoes, tomato juice or V-8 juice, corn, eggplant, peas, lettuce, cabbage, and white potatoes that are not fried, such as baked or mashed potatoes.

Now, I would like to learn about your experience with the produce home deliveries.

9. What did you think about the information communicated to you before the produce home deliveries began? (*Probe: Before the first delivery, I called either you or your emergency contact person. You may also have received an informational flyer one week before the first delivery.*)

### **Perceptions of and Satisfaction with Home Deliveries**

10. Did the deliveries come too frequently or too rarely?
  - Too rarely
  - Just right
  - Too frequently

Let's specifically talk about the **fruit** you received from the home deliveries.

11. What did you think about the quality of the **fruit** you received?
12. How about the variety of **fruit**?
13. Do you think receiving produce home deliveries changed anything about your **fruit** consumption?

*[If answer is affirmative]*

- Are you eating more or less **fruit** than you were before deliveries began?
- Were you able to eat different types of **fruit** you normally would not eat?



*[If answer is negative]*

- Does this mean you are eating about the same amount of **fruit** as you were before the program started?

14. How much of the delivered **fruit** were you able to eat?

- All or most
- Half
- Little to none

*If the answer to question 14 is half or little to none:*

15. What did you do with the remaining **fruit**?

16. Were there any specific reasons for not being able to eat the **fruit**?

*If not already mentioned in responses to questions 15 and 16:*

17. Did you have any difficulties or challenges in eating the **fruit**?

*[If answer is affirmative]*

- Did anyone able help you prepare the fruit so you could eat it? (*Probe: This could include helping you wash, cut, or peel.*)

Now, I'd like for us to focus on the **vegetables** you received from the home deliveries.

18. What did you think about the quality of the **vegetables** you received?

19. How about the variety of **vegetables**?

20. Do you think receiving produce home deliveries changed anything about your **vegetable** consumption?

*[If answer is affirmative]*

- Are you eating more or less **vegetables** than you were before deliveries began?
- Were you able to eat different types of **vegetables** you normally would not eat?

*[If answer is negative]*

- Does this mean you are eating about the same amount of **vegetables** as you were before the program started?

21. How much of the delivered **vegetables** were you able to eat?

- All or most
- Half
- Little to none

*If the answer to question 21 is half or little to none:*

22. What did you do with the remaining **vegetables**?

23. Were there any specific reasons for not being able to eat the **vegetables**?

*If not already mentioned in responses to questions 22 and 23:*

24. Did you have any difficulties or challenges in eating the **vegetables**?

*[If answer is affirmative]*

- Did anyone able help you prepare the **vegetables** so you could eat them? (*Probe: This could include helping you wash, cut, or peel.*)

25. Do you think receiving the produce deliveries changed anything about your health or your mood?

*[If answer is affirmative]*

- How so?

26. Did you find the preparation tips and recipes included in the bags helpful?

*[If answer is affirmative]*

- Were you able to use any of the information?
- Did you make any of the recipes?

*[If answer is negative]*

- Do you have any suggestions about what we could change to make the information more helpful?

27. Were there any fruits or vegetables included in the deliveries that you did not enjoy?

28. Were there any fruits or vegetables not included that you would have liked to receive?

29. Would you be interested in receiving produce home deliveries in the future?

30. Is there anything about the program you would like to see changed based on your experience this summer?

31. Do you have any other comments about the produce home delivery program?

### **Senior Farmers' Market Nutrition Program Awareness and Enrollment**

Now, I would like to ask some questions about the Senior Farmers' Market Nutrition Program (SFMNP). If you were participating in SFMNP this summer, I would like to learn about your experience with the application and voucher process.

32. Before this interview, had you ever heard of the Senior Farmers' Market Nutrition Program (SFMNP)?

*[If answer is affirmative]*

- Have you ever applied for SFMNP vouchers in the past?

*[If answer is affirmative]*

- Where did you apply for the vouchers?
- Can you please describe how the application process went?
- Did you register with a proxy? (*Probe: A proxy is someone who can use your vouchers at a farmers' market on your behalf.*)

*[If answer is negative]*

- Are there any reasons why you did not apply for the program even though you knew about it?
- Have you ever used SFMNP vouchers in the past?

*[If answer is affirmative]*

- How did you use your vouchers? For example, you could have gone to a farmers' market personally, or someone else could have used your vouchers for you.
- Were you able to use all of your vouchers during the season?

*[If answer is negative]*

- *If interviewee applied for vouchers:* Are there any reasons why you did not use your vouchers after applying for them?

33. If you applied for SFMNP this summer through Meals on Wheels, did you find the application process easy or difficult?

*[If respondent mentions difficulties]*

- What about the process was difficult?

34. Is there anything we could have done differently during the application process?

35. Did you use all of your vouchers for the home-delivered produce?

*[If answer is negative]*

- Did you use your vouchers elsewhere?

36. Did you have any issues with handing your vouchers to the Meals on Wheels volunteers?

### **Demographic Characteristics**

Finally, I have some general, personal questions for you.

37. For about how long have you been participating in Meals on Wheels?

38. In general, would you say your health is poor, fair, good, very good, or excellent?

- Poor
- Fair
- Good
- Very good
- Excellent

39. What is your age?

40. What is your gender?

41. Are you of Hispanic, Latino, or Spanish origin?

42. Which would you say is your race? *Please select one or more.*

- American Indian or Alaska Native
- Asian
- Black or African American
- Pacific Islander
- White
- Other \_\_\_\_\_

43. How many people do you consider to be part of your household? Please include anyone who lives with you **most** of the time.

- 1
- 2
- 3
- 4 or more

44. What is your total monthly income? Please include all sources of income, like Social Security, pensions, and retirement income.

- Less than \$970
- \$970 - \$1,800
- \$1,800 - \$3,000
- More than \$3,000
- I don't know
- I prefer not to answer

Thank you very much for your participation in this interview!