

Measuring Effects of Mobile Markets on Healthy Food Choices
Report of Focus Group Results
Arcadia Mobile Market, Washington, DC
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Project Overview

To expand marketing of agricultural products, the US Department of Agriculture (USDA) Agricultural Marketing Service (AMS) funds mobile produce markets in low-income food deserts where access to fresh produce is limited. The purpose of this research project is to (1) understand who does and who does not use mobile markets and why and (2) investigate whether mobile produce markets facilitate healthy food choices in those communities, and if so, how. The focus group study involves four mobile produce markets. At each site, two focus groups are conducted: one with food shoppers who use the mobile markets and one with those who do not. The research questions include: why do people use or not use the mobile market? What factors facilitate or impede use? How does the presence of a mobile food market affect food access and choices? Are there spillover effects on food choices at other venues?

Study Site in Washington, DC

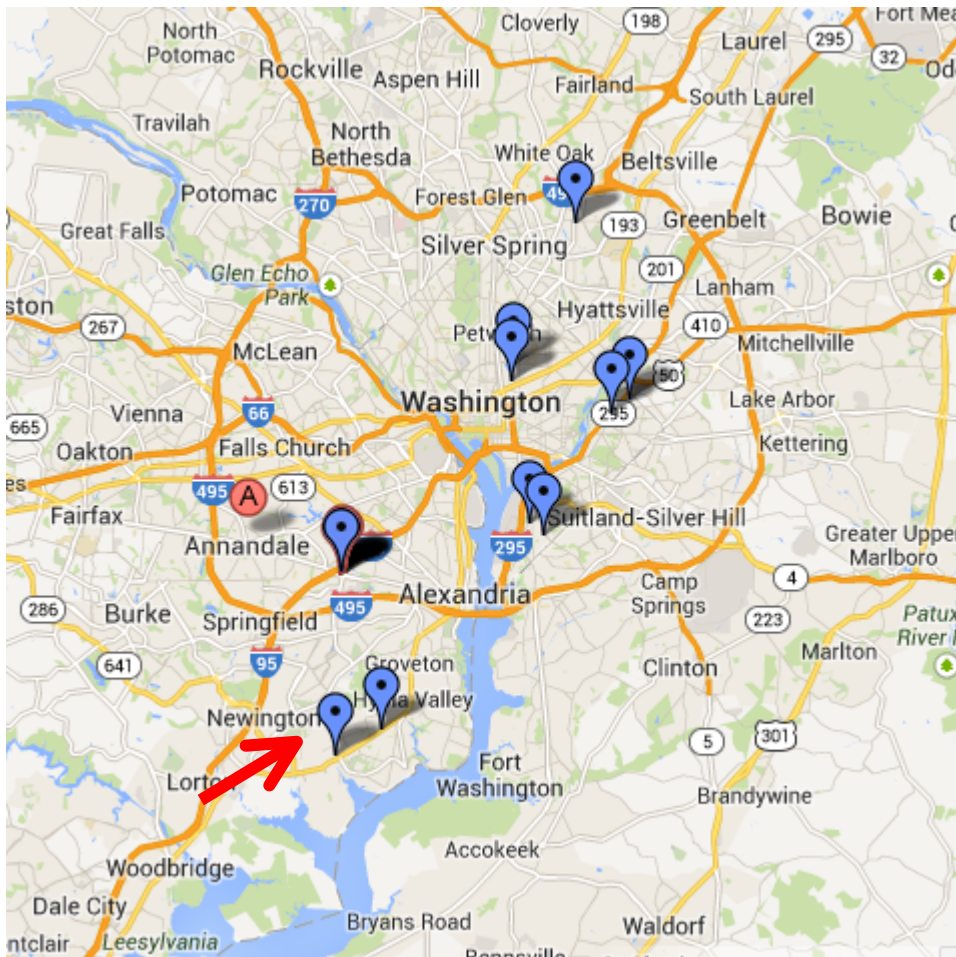
Arcadia is a non-profit organization dedicated to creating a more equitable and sustainable local food system in the DC area. They run a mobile market and operate a one-acre farm located near Mt. Vernon, VA (Figure 1). The farm provides fresh produce for their mobile market and space for children's gardening education programs. The association with a farm allows Arcadia's Mobile Market to accept WIC and Seniors Farmers Market Nutrition Program (FMNP) checks. Arcadia has also raised funds to support a "Bonus Bucks" incentive program for SNAP, WIC and Senior FMNP benefits. This substantially increases the food budget for fresh foods of many of their low-income customers.

The mobile market operates seasonally (May through October) to accommodate the Washington, DC-area growing season. It serves nine stops: six in Washington, DC, two in Northern Virginia, and one in Adelphi, MD, stopping at each site once a week for two to three hours. The stops were chosen because the surrounding neighborhoods have the highest number of supported school lunches and SNAP card users in the DC area. The neighborhoods are predominantly low-income, minority communities.

Arcadia's Mobile Market is operated from a school bus that is painted bright green and features images of fruits and vegetables. The bus is fitted with a refrigeration system. Two staff operate the mobile market, and at the time we visited, one of the staff's adolescent son was with them. At each stop, the staff unloads the produce and arranges it outside the bus to allow for easy access. The display is attractive and inviting. In addition to fresh produce from Arcadia Farm,

there are other products from local producers: fruit, fresh eggs, bread, yoghurt, granola, milk, cheese and meats. The check out is a table with a scale and a cash register that accepts cash, debit cards, as well as SNAP, WIC and Senior FMNP checks, and Arcadia’s “Bonus Bucks” coupons associated with these nutrition programs.

Figure 1. Map of Arcadia’s Mobile Market sites with Arcadia Farm indicated by a red arrow



The site chosen for this research is Arcadia’s Mobile Market stop at The Overlook at Oxon Run, a high-rise housing complex for seniors and families located in Washington Highlands (Figure 2). This neighborhood is a USDA designated food desert in DC’s 8th Ward. While there is a small convenience store four blocks from the study site, full service grocery stores are at least a mile away. The apartment complex is located in neighborhood cluster 39, which includes Congress Heights, Bellevue, and Washington Highlands neighborhoods. Census tract data from 2010 indicates this census tract (98.01) is 97% African-American, with 88% of households headed by females, 38% of households below the poverty line, a 34% unemployment rate and an average household income of \$50,188. See Table 1 for a comparison to the DC average.

The Overlook at Oxon Run building is located within a gated, secured area; security access is required for people or vehicles to enter the grounds, as well as for use of the elevators. The first

seven floors are reserved for seniors and the upper seven floors are reserved for families. The seniors and family sections are managed separately. Indeed, the two sections have separate security access and elevators such that it is not possible for residents of one section to visit the floors of the other section with their own security cards.

Figure 2. Arcadia’s Mobile Market sites in DC with a red arrow indicating the study site at The Overlook at Oxon Run

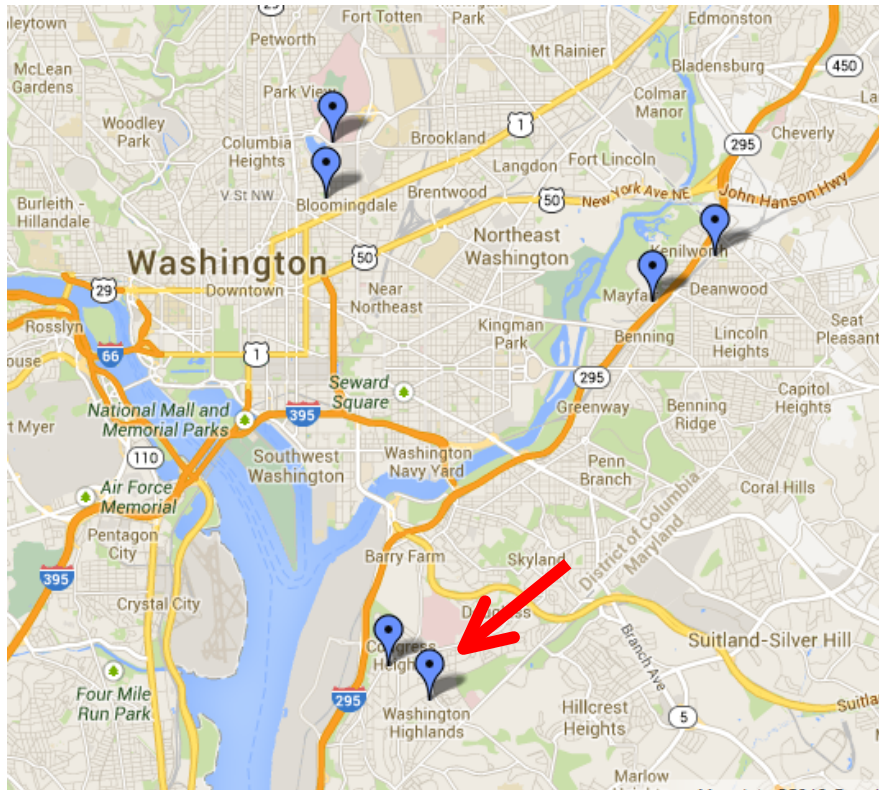


Table 1: Study site census tract data compared to DC tracts, 2010 (Neighborhood Info DC, n.d.)

Variable	Tract 98.01	All DC tracts
Black	97%	51%
White	0.7%	35%
Hispanic	1.7%	9.1%
Asian/Pacific Islander	0.3%	4.2%
Female Headed Households ^a	88%	53%
Poverty rate ^a	38%	18%
Unemployed ^a	34%	9%
Household Income ^a	\$50,188	\$117,645

^a Data from 2005-09.

Focus Group Recruitment and Process

Focus groups are particularly useful for understanding why people do what they do. They involve asking a series of open-ended questions to a group of individuals. It should be noted that given their small size, focus groups are not representative of the larger population; however, they do provide in-depth perspectives of individuals. In addition, they allow probing answers and asking follow-up questions.

For this study, two groups of participants were recruited: those who shop at Arcadia's Mobile Market and those who do not. Both shoppers and non-shoppers were recruited from the Overlook at Oxon Run with the help of the senior housing coordinator who informed the senior residents about the study and posted flyers. Snowball recruiting was also used; both groups of participants were encouraged to pass on information about the focus groups to people they knew. The researchers screened all participants to ensure they were 18 or older and food shoppers.

Both focus groups were conducted in a community room at the Overlook at Oxon Run housing site on Tuesday, July 2nd, 2013. The shoppers' group was run between 10 AM – 12 PM, the non-shoppers' group between 2-4 PM. All participants were African-American. The moderator reviewed the informed consent protocol with participants by explaining the purpose of the study, their role in it, the risks and benefits, and also provided contact information, asked for permission to record and quote the participants anonymously, and finally asked for oral consent to proceed. The participants then filled out a short survey asking about their fruit and vegetables shopping habits and consumption as well as household demographic information and incidence of food-related diseases. Participants were assigned a participant number so that survey and focus group responses could be linked while protecting anonymity. Each focus group session was recorded and consisted of asking each participant to respond to a set of open-ended questions. A graduate assistant took notes so that the professionally transcribed recordings could be annotated.

Focus group participants were asked to describe a typical meal, their meal preparation goals, where they shopped and in particular where they shopped for produce. Participants who shopped at Arcadia's Mobile Market (shoppers) were asked about their experiences: when and how they heard about the market, how often they shopped there and what they bought, whether these foods were available to them elsewhere, whether their meals or food choices elsewhere had changed since shopping there and how, what improvements they would recommend, the reputation of the market, and recommendations to encourage others to use it, as well as to eat more produce.

Participants who did not shop there (non-shoppers) were asked whether they believed they ate enough fresh produce and whether they would prefer having more fresh produce available, what they knew about the market, whether the location and timing was convenient for them, why they did not shop there, the reputation of the market, suggestions for encouraging people to shop there and to eat more produce. The recordings of the two focus groups were professionally transcribed, checked for accuracy by the researcher and graduate student, and annotated. All names were replaced with numbers to protect the participants' anonymity.

Focus Group Results

Comparison of Shoppers and Non-shoppers

There were 12 participants in the shoppers group and 11 in the non-shoppers group. However, despite being screened, three of the non-shoppers indicated in the focus group that they had shopped at Arcadia's Mobile Market (two regularly, one shopped there only twice) and therefore the participant's responses were added to those of shoppers, yielding 15 shoppers and eight non-shoppers.

We do not have information about household income; however, about half of each group use a SNAP card (seven shoppers, three non-shoppers; no significant difference at $P > 0.05$). This implies that there is no significant difference in household income between the two groups. The proportion of SNAP card recipients corresponds to the 2010 census tract data which indicates 53% of the population in tract 98.01 receives food stamps as compared to 20% of DC's population (Neighborhood Info DC, n.d.). Nearly all (21 out of 23) of the participants were seniors. Nearly all of the participants lived alone; only one shopper lived with his three grandchildren and one non-shopper lived with another adult. None of the participants was employed; one participant said she volunteered 10+ hours/week. About half of the participants (ten shoppers, four non-shoppers; no significant difference between groups at $P > 0.05$) indicated they had food-related diseases. Examples include being overweight, having food allergies, type II diabetes or heart disease.

None of the participants ate enough fruits and vegetables based on the USDA guidelines (5-9 servings per day). Shoppers ate 2.9 servings per day, while non-shoppers ate 2.2 servings per day; however, the difference is not significant at $P > 0.05$. The lack of fruits and vegetables is illustrated by the participants' descriptions of their last night dinners: nine shoppers and four non-shoppers mentioned vegetables (often salad or greens); the majority of the meals were carbohydrates, meats and fats. The two groups did not differ significantly in the number of times they go shopping every week: the shoppers went 2.9 times on average, while the non-shoppers go 1.7 times on average. Since all the participants live in the same building, they all live the same distance from Arcadia's Mobile Market stop (just in front of their building); however, their perception of distance from the nearest supermarket varies between 0.5 miles to 6 miles.

Despite the small number of fruit and vegetables servings eaten, most participants thought they ate enough produce. Only seven shoppers and three non-shoppers believed they were not eating enough. However, some of those participants said they ate either enough vegetables or enough fruits, not both. Interestingly, a common reason the participants gave to explain their low fruits and vegetables consumption was lack of appetite and no motivation to cook; the participants specifically mentioned big meals they made in the past for their families and the difficulties in adjusting to cook for one. This is reflected by their responses to a survey question about enjoyment of cooking: only nine shoppers and two non-shoppers enjoyed cooking, two shoppers and five non-shoppers enjoyed cooking sometimes, and two shoppers never enjoyed cooking. Other reasons given to explain low fruits and vegetables consumption include price (four) and not enjoying the taste (two). The participants were clearly aware of the connection between diet and health; three participants said they were limiting their fruit intake because they had high blood sugar, two participants said they were cautious about food because of high blood pressure, and one participant discussed her need for Vitamin K due to taking Coumadin.

Arcadia Shopper Results

While there is no significant difference between the two groups, on average, shoppers consumed slightly more fruits and vegetables than non-shoppers and the majority of them enjoyed cooking. When discussing their goals with regards to meal preparation, the majority of the participants mentioned a health-related goal including: appropriate nutrition, balance, or listening to their bodies. Three participants indicated that having an appetite was important; this is tied to their lack of motivation to cook due to being alone and loss of interest in meals. Two participants stressed the importance of taste, one was concerned with time and one mentioned having breakfast was very important to her.

Interestingly, none of the shoppers mentioned price in their answers. However, the theme of affordability was still present indirectly through their other answers: some participants felt they did not eat enough fruits and vegetables because it was more expensive; all the participants shopped at chain grocery stores mentioning getting good prices and using promotions and coupons. While the stores are too far for nearly all of the seniors to walk to, the majority of them indicated being able to get rides from friends and family, a convenient transportation system, or arrangements made with the store staff to deliver groceries. Despite this, four people mentioned how much they appreciated the convenience of having Arcadia's Mobile Market come to their building.

When talking about the mobile market, the participants indicated they appreciated the quality of the produce: four participants said it was really fresh, two praised the product quality, two indicated they tried new things because they looked so good, one participant believed the produce was more nutritious, and one was impressed by the variety. This was further emphasized when the participants discussed the superb quality of the products, telling each other stories about what they bought and how it made their meals more delicious, or how their grandchildren enjoyed the chocolate milk sold at the mobile market. However, besides appreciation for seasonal high quality products and thinking more about where their food comes from, the participants did not seem to make changes in their food-related behaviors off-season or when shopping elsewhere. In addition, one participant described the Arcadia staff as nice people who give advice about the products and three participants enjoyed the bus; they specifically said it was cute and it provided them with the farmers' market experience right at their building.

Affordability of the mobile market was an issue for most shoppers. Only three participants mentioned that shopping at the mobile market was within their budget. However, the participants generally agreed that at the beginning of each month they can shop there easily, but by the end of the month they do not have enough money to buy fruits and vegetables. Affordability and sensitivity to the timing of when customers' receive their income appear to be key factors to promote shopping at the Arcadia market.

While the majority of the participants thought that the mobile market was perfect as it was, two participants would like to see more variety, one participant would like the bus to come twice a week, one participant had issues with the time that it came and two participants thought that the best products sell out fast, which is inconvenient for those who prefer to come to the bus later.

Overall, the shoppers had a very positive impression of the mobile market and the staff and it was apparent that they enjoyed shopping there.

Arcadia Non-Shoppers Results

The non-shoppers ate fewer serving of fruits and vegetables than shoppers; however, the difference between the two groups was not significant at $P > 0.05$. Their small fruit and vegetables consumption was reflected in their responses to what was their major food goal: only one person mentioned vegetables in their answers. Two non-shoppers said vegetables were important to them, the rest were concerned with taste or flavor (three), two said they liked to eat everything, and one participant was cautious about salt intake.

Affordability was again an underlying theme; however, it was mostly mentioned indirectly. The non-shoppers obtained most of their food from national chain grocery stores and were looking for sales and used coupons. As with the shoppers, the non-shoppers were concerned with their health but cooking alone and enjoying unhealthy treats were obstacles.

All the participants had seen Arcadia's Mobile Market in front of the building; however, very few knew people who shopped there. In general, they really liked the idea of a mobile market, conveniently bringing them fresh produce. After the concept of the mobile market was explained, all the participants indicated they thought it was a great idea and that they would try to shop there; the perception of the mobile market was that it is convenient (two) and that the staff is professional (one). However, four participants suggested there might be an issue with timing: two participants wanted the bus to come earlier in the day and one participant said that by the end of the month she had no money to go and buy fruits and vegetables.

Common themes: Reminders needed and separation of seniors in families at the Overlook

There were two common themes in both groups: the need to remind residents that the bus was coming to the Overlook building and the lack of knowledge about the mobile market in the family part (upper floors) of the housing. With regards to the former issue, most of the participants mentioned forgetting that the bus comes on Monday, or thinking it came at the same time as last year. Given that they did most of their shopping over the weekend, several participants indicated that they would appreciate a reminder that the truck is coming, knowing what will be on the truck, and what the prices are the Friday before the truck comes so they can plan their weekend shopping accordingly. While the participants discussed having flyers around the building, they found them generally ineffective because people do not read them. One participant suggested people in the building might not be aware of the mobile market despite the flyers that had been posted. Suggestions for improving awareness of the mobile market included: word-of-mouth and having a buddy system or floor captains remind each other.

It is important to realize that the two sections of the building (seniors and families) are managed separately and that a separate contact and outreach may be needed to attract families to the mobile market. Several participants mentioned that the two communities do not communicate well and do not know each other. It appeared that the residents of the family section do not know about the market, and if they have seen it, may think that it is only for seniors, since many programs at the Overlook are limited to seniors only. Some participants suggested that

information should be spread to the family part of the building and the market could have signs ‘All are welcome’ to ensure that everyone is aware that the market is for everyone.

Conclusion

While the results pertain to a small group of participants and thus cannot be generalized, the comments and suggestions of the participants revealed some useful recommendations and insights. We did not find any significant difference in the demographics, fruits and vegetable consumption or cooking habits. Prominent themes in both groups included: health concerns, difficulty cooking for one, appreciation of the market but forgetting about it, lack of communication between the family and senior floors of the building, and affordability.

The participants made it clear that their low fruit and vegetable intake was not due to lack of awareness about the importance of eating fruits and vegetables, rather it was due to insufficient money, particularly at the end of the month, and low motivation to prepare meals because they lived alone. Most of the participants commented that it is hard to have an appetite or be motivated to cook when one eats alone. Many told stories about cooking for large families in the past and how cooking for one person just does not seem worthwhile. Education about nutrition and the health benefits of fruits and vegetables might be misplaced in this situation, instead the focus should shift to facilitating an atmosphere where people in the building could come together to cook and socialize with each other. One possible model is Slow Food University of Wisconsin’s Family Dinner Night; a group of students wanting to learn to cook and share recipes using local foods initially met monthly to prepare dinner and eat together; this has grown to weekly dinners of 120 people (Slow Food UW, 2013). Given that the Overlook building has a community kitchen and dining facilities, it could accommodate a cooking night, which would bring back the large social dinners that the participants talked fondly about, while utilizing the produce from the mobile market.

The second issue that both shoppers and non-shoppers mentioned was raising awareness about the market. They found the system of flyers being posted in the elevators insufficient because they were not timely. Many participants mentioned that each floor has a floor captain, who is presumably responsible for social life of the floor. Floor captains could spread the word in a timely way. Other suggestions include personal flyers delivered on the Friday before that include products and prices so that residents can plan their weekend shopping, reminders on the day and time of the market, either by neighbors or floor captains, and a sign at the market that indicates that everyone is welcome. At one of our other study sites, it was recommended that a megaphone with a song play when the mobile market arrived.

In addition, the families in the higher parts of the building were not aware of the mobile market or did not know they could shop there. Given the separate management and programs, and physical separation of the two parts of the building, contact with the building needs to be treated as contact with two separate organizations.

There are many people in the building who are elderly and/or disabled, indeed we saw people in wheelchairs at the market. However, it may be difficult for all residents to come to the market. At another site that we studied, the staff accommodated the seniors by taking orders and bringing the groceries in, which was much appreciated and increased trust between the mobile market and

building residents. While this might not be feasible for the Arcadia staff to do, given the size of the building, different facilitation could be in place, such as neighbors helping each other.

All the participants really appreciated and liked the staff and the market or if they did not shop there, the idea of the market. However, residents may have difficulty affording the products, especially in the latter part of the month. Promotions and coupons at the end of the month could facilitate increased fruit and vegetable consumption of the residents and foster even greater trust and appreciation for the mobile market.

Sources:

Neighborhood Info DC (n.d.). DC 2010 Tract Profiles Tract 98.01 Accessed July 23, 2013
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