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HEALTHY EATING and SAVVY SAVING:

**An Evaluation of Action for Boston Community
Development's Food Dollars Program
For Low-Income Elders**

By

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Executive Summary

This report is an evaluation of an innovative community-based intervention – the Food Dollars Program. Funded by the AARP Foundation, this program was designed and delivered by Action for Boston Community Development (ABCD) and their Elder Services staff in order to promote healthy eating and reduce food and economic insecurity among low-income elders in Boston. The impetus for creating this program arose from the challenges many low-income individuals face in purchasing and consuming healthy foods from the five food groups as recommended by the US Department of Agriculture (USDA) in their ChooseMyPlate model of healthy eating.¹ The Food Dollars curriculum combines information about good nutrition with information about financial literacy. The hypothesis is that it is possible to improve healthy eating in adults who are age 50 and older and for them to stretch limited food budgets *if* they are provided with knowledge about nutrition, healthy eating, shopping and cooking habits AND information about good money management skills, senior discounts, food resources, and benefit programs.

During 2012, ABCD delivered the Food Dollars Program to over one hundred adults age 50 and older who were predominantly African American and Latino/Hispanic and lived in one of four Boston neighborhoods: Dorchester, Jamaica Plain, Mattapan and Roxbury. The program was evaluated by a team from the Heller School for Social Policy at Brandeis University, and the findings of that evaluation can be found in a report entitled “An Apple a Day: Promoting Healthy Eating and Reducing Food Insecurity Among Low-Income Elders.”² Subsequent to the 2012 evaluation of the Food Dollars Program, ABCD revised and enhanced the Food Dollars curriculum, particularly in the area of financial literacy. They partnered again with the Heller School for Social Policy and Management at Brandeis to conduct an evaluation of the 2013 program.

This report summarizes the extent to which the 2013 Food Dollars program produced positive outcomes for low-income participants who completed both a pre-class interview and a post-class interview. The evaluation focuses on measuring the outcomes for two key goals: Goal #1) Increasing nutrition knowledge and encouraging the healthy eating habits of participants, including shopping, cooking and food consumption, and discouraging unhealthy eating; and Goal #2) Enhancing the financial literacy of participants by giving them new money management skills, information about discount and benefit programs, and new ways to save money in order to buy more healthy food on a limited budget.

*As in 2012, the evaluation found that the Food Dollars Program is making a positive difference in the lives of low-income adults age 50 and older. Key findings from the 2013 evaluation follow:*³

- Completion Rate: ABCD offered the Food Dollars program to a total of thirteen groups in 2013: for the eight groups that were evaluated, 111 adults 50 years and older enrolled and 92 individuals completed the program,⁴ producing an impressive completion rate of 82.8%.

- Food Insecurity Scores: In the eight groups that were evaluated, enrollees were asked a series of questions designed by the USDA to measure food insecurity.⁵ Using pre- and post-class data, the Food Insecurity Scores for those who completed the course decreased from 1.6 to 1.1, a statistically significant decline.
- Reasons for Food Insecurity: Although the overall food insecurity scores were relatively low, among those that are food insecure, many participants within the group of completers face difficult challenges. For example, on the pre-class survey, 43.2% reported they worried about running out of food, 32.8% that they were buying unhealthy food because that was all they can afford, 29.8% were skimping on other bills, and 23.8% were cutting the size of their meals, or skipped meals in order to save money.
- Impact on Reasons for Food Insecurity: There were marked declines in the size of these vulnerable sub-groups for those who completed the Food Dollars program: there were 10.4% fewer elders worried about running out of food; there were 13.4% fewer elders buying unhealthy food; there were 6% fewer elders skimping on buying food to pay other bills; and 10.5% fewer elders cutting the size of their meals or skipping meals.
- Health Status of Enrollees: Beyond the challenges of food insecurity, participants in the Food Dollars program are also vulnerable due to nutrition-related diseases – 80.6% reported they have heart disease; 67.2% reported they have osteoporosis; 59.7% reported they have diabetes; 37.3% reported they have hypertension/high blood pressure; and 34.3% reported they have high cholesterol.
- Increase in Ability to Shop for Healthy Food: The evaluation team constructed a “Healthy Shopper” score (0/10) that tracked the purchase of foods from the five food groups required for good nutrition and the lack of purchase of unhealthy foods. There was a statistically significant rise in the mean Healthy Shopping scores from 7.1 before the classes to 7.9 after the classes, and a 16% increase in those who scored in the 8-10 range.
- Increase in Healthy Meal Preparation and Cooking: Among program completers who responded to questions about their cooking habits, the use of deep fat frying as a cooking method dropped 12% after the classes. While most participants were using healthy cooking oils before the classes, there was a small increase in the use of olive oil and/or canola oil after the classes.
- Increase in the Consumption of Healthy Food: More completers are eating fresh fruits daily (+8.1%) and some increased the number of times a day they eat fresh fruit each day. Although the intake of fresh vegetables once a day remained virtually the same, the number of completers who eat vegetables twice a day has increased (+6%).
- Decrease in the Consumption of Unhealthy Food: The number of completers who seldom or never eat sweets, like cakes, pies and cookies, increased by 16%, the

number of completers who seldom or never eat ice cream increased by 18.5%, and the number of completers who seldom or never eat chips and other kinds of “junk food” increased by almost 30%.

- Increase in Four Key Financial Management Skills: There was an increase among completers of those making lists of the foods they needed before grocery shopping from half of the group (49.2%) before the classes to three quarters of the group (76.1%) after the classes. There was also an increase of financially prudent practices such as buying items on sale (+12 percentage points), using coupons when they shopped (+16 percentage points), and saving grocery receipts (+13 percentage points).
- Increased Knowledge of Food Assistance Program: The classes contained information about ten food assistance programs that provide either free or discounted food. Using pre- and post-class data, there was an increase in the percent of completers knowing about each of the programs. The biggest increases were for Congregate Meal Programs (+31%), the Farmer Market Coupon Program (+30%) and Boston Bounty Bucks (+27%).
- Increased Use of SNAP (Supplemental Nutritional Assistance Program) but challenges in providing assistance to those who want to enroll or renew: SNAP is different from other food assistance programs – rather than providing free or discounted food, it provides additional dollars to spend on food for those who are eligible. The percent of completers using SNAP rose from 44.8% before the classes to 58.2% after the classes. However, of those who expressed interest in assistance with enrolling or renewing their SNAP benefit (26 enrollees), only 10 individuals sought assistance from ABCD.
- Knowledge of Discounts for Utilities and Transportation: There was increased knowledge of a number of programs that could save enrollees money. Knowledge of programs that address heating costs and transportation costs show the greatest increases.
- Classroom Experience: The completers overwhelmingly reported a very positive experience taking the Food Dollars classes. A large majority (77-90%) gave top ratings on such issues as teachers encouraging students to ask questions, the information being clearly presented, and teachers encouraging student participation. In addition, 51% fully accomplished their first SMART Goal.
- Course Evaluation: 95.4% of completers said they would recommend the Food Dollars Program to a family member or friend. 44.7% said their ability to save money on food increased “a lot” after taking the Food Dollars program, while 64% said their ability to buy more healthy food “increased a lot” or “increased a little.”

Overall in 2013, older adults who completed the Food Dollars Program achieved Goal One outcomes by improving their healthy eating practices, and achieved Goal Two outcomes by enhancing their financial literacy skills and thereby increasing the amount of money they have available to buy healthy food.

Goal One: Completers improved their healthy eating practices, particularly in shopping and eating foods from the five food groups included in the USDA's ChooseMyPlate recommendations. The peer-to-peer support in the weekly SMART Goal exercises proved to be an effective method for making changes in individual level behavior, almost 70% reported these exercise were "very useful" and 15% said they were "mainly useful."

Goal Two: Completers improved their financial literacy in a number of areas and exceeded results from 2012. There were positive gains in four financial management skills related to healthy shopping: for example, 16% more completers used coupons after the class than before. The classes were very effective in improving enrollees' knowledge of food assistance programs, utility discount programs and transportation discount programs. With these new skills and increased knowledge, the ability of completers to save money and have more money to spend on healthy food was enhanced.

ABCD's commitment to addressing the health and nutrition needs of low-income elders bodes well for Food Dollars program enrollees in the future. As ABCD prepares to expand the geographic reach of the program, this evaluation concludes with a set of recommendations and next steps to aid that process:

Four Recommendations:

- Review site selection: Target the most food insecure adults age 50 and older.
- Strengthen recruitment: Spend more time during the intake process to determine individual needs of enrollees.
- Strengthen work on use of assistance programs and benefit programs: This is particularly needed in the area of SNAP enrollment and renewal.
- Expand use of healthy eating programs: Encourage knowledge of and participation in less well known food programs, such as urban community gardens where people can grow their own food, and Community Supported Agriculture (CSAs) programs that allow use of SNAP cards, both of which can increase access to fresh produce.

Three Next Steps:

- Provide additional support to elders with nutrition-related chronic diseases: Partner with federally qualified community health centers to serve older adults with diseases such as diabetes, high blood pressure, and heart disease, and consider limited revisions to the curriculum to more fully address the healthy eating needs of these enrollees.
- Increase attention to sustainability of positive outcomes: Create more "Good Life Healthy Living Clubs" and other types of peer-to-peer networks for support for Food Dollars graduates.
- Coalition building and public policy: Link aging service agencies, anti-hunger non-profits and health care providers to work together on public policy issues. The existing SNAP Coalition in Massachusetts is a great model of this type of cross-sector collaboration.

I. INTRODUCTION

This report is an evaluation of a community-based intervention – the Food Dollars Program – designed and delivered by Action for Boston Community Development (ABCD) to promote healthy eating and reduce food insecurity and economic insecurity among low-income African American and Latino/Hispanic elders. In this report we will be using the term “adults 50+” rather than “elders” when referring to the enrollees in the program, as this was the age cohort targeted for delivery of the Food Dollars program.

What does it mean to be a food insecure, low-income, adult 50+? What are their lived experiences? What are their stories?⁶

Marta is a native of Puerto Rico in her 70s. For more than 25 years she has lived in Roxbury. Marta came to Boston when she was younger in search of better financial opportunities, but was only able to find low-wage jobs, mainly within the maintenance sector. A few years ago Marta was diagnosed with rheumatoid arthritis and since then hasn't been able to perform many routine physical activities, including cooking and grocery shopping. Marta reports that getting to the supermarket, no matter how far or close it is from her house, is a struggle because she is unable to carry the bags on her own and pulling a cart becomes more and more difficult, especially during the winter. For these reasons, along with a small monthly check from Social Security, Marta relies on the food she is able to get through the community centers where she goes for health screenings and recreational activities. Nutrition-wise, she considers her diet as “very unhealthy” and does not know how to change her eating habits because she says that fruit, meat and vegetables are always the most expensive things to buy, as well as the heaviest to carry. Marta's story reflects the challenges of eating healthy food while having physical disabilities and a limited income.

Dorothy is an African American woman in her 80s. She lives in the South End neighborhood of Boston where she has lived for many years. Once she retired, she no longer had the income to pay rent for her basement apartment in a five-story brownstone and moved into a rooming house. With very limited dollars to spend on healthy food, she eats her lunch every day at a congregate meal program provided by a multi-service center serving low-income residents of the South End. When asked about her eating habits, there were considerable differences between the nutritional value of the food she ate in the lunch program and the nutritional value of rest of her meals. When asked why, she explained that she does not have any cooking facilities in her rooming house and has to rely on fried and fatty foods from nearby fast food restaurants for most of her meals. Dorothy's story – and those of others interviewed – shows how economic insecurity often creates particular challenges for low-income people who want to eat healthy foods.

These two stories reflect the kinds of challenges the evaluation team heard from low-income elders living in the neighborhoods of Dorchester, Jamaica Plain, Roxbury and the South End. The six-week Food Dollars Program provides an innovative solution to addressing and

ameliorating these problems for adults 50+ in Boston. Before assessing the impact of a specific intervention in a large urban area, definitions of some basic terms are needed.

Food Insecurity: Background and Definitions

Much of the research on hunger and food insecurity centers on the importance of good nutrition for children and young families. While this population certainly has a critical need in terms of nutrition for growth and development, older adults often face similar food insecurity concerns and are less likely than other age groups to access public assistance programs that may provide food aid.⁷ In particular, low-income adults ages 50-59 experience the greatest food insecurity, as they are unlikely to be eligible for assistance programs that aid families with young children, and they are also ineligible for programs that help older adults, such as Social Security, Medicare, and the Older American Act (OAA) Nutrition Program.⁸ Additionally, many adults 50+ who might be eligible for food assistance programs, such as the Supplemental Nutrition Assistance Program (SNAP) do not know if they are eligible or how to access such aid. Only one in three elders 65+ who is eligible receives SNAP (Supplemental Nutrition Assistance Program).⁹

Estimates indicate that the incidence of food insecurity across the U.S. has risen in recent years. A 2011 AARP report shows that between 2007 and 2009, food insecurity rose 63% for those ages 40-49, 37% for ages 50-59, and 26% for ages 60 and older; these data translate to roughly 1-in-11 older adults being food insecure as of 2009.¹⁰ Certain racial and ethnic minorities, including African American and Latino/Hispanic adults experience food insecurity at higher rates than their white peers.

In Massachusetts, food insecurity continues to increase, with 2010 rates suggesting that more than 1-in-10 Massachusetts families are food insecure.¹¹ Those individuals living in the low-income neighborhoods of large cities, like Boston, are also more likely to be food insecure.¹² In 2013, even suburban communities outside of Boston, like Newton and Needham, are being affected. Local food pantries are struggling to meet increased demand throughout the greater Boston metropolitan area. Part of the reason for the increased demand has been cutbacks in the amount of food stamps – now called SNAP – available to families who have limited dollars for food to begin with. SNAP benefits were cut when the 2009 federal stimulus package expired in the fall of 2013. According to the Massachusetts Department of Transitional Assistance, between October and November 2013, households of one lost \$11 in their SNAP checks, households of two lost \$20, and larger households lost up to \$52 a month.¹³

Given that hunger is a critical problem in both domestic and international contexts, more than 200 separate definitions and 450 indicators for "food security" currently exist.¹⁴ Definitions and indicators typically examined at an individual intake level include: household caloric measure, variety of foods consumed, and household food insecurity coping methods.¹⁵ Despite varying units of analyses, these definitions and indicators share two common themes: access to food and ability to obtain food. Access to food refers to one's physical ability to get food. This may include having a food store near home; access to transportation to get to and from a food store; having a food store that stocks a full range of foods, including fresh meats, dairy, and produce; and other related items. Ability to obtain

food refers to one's economic buying power. This may include having enough cash to purchase needed food items on a weekly or monthly basis; having access to credit when cash is unavailable; and being able to buy food items at a fair price (i.e. not buying overpriced goods due to local issues of supply/demand that drive prices up). Considering these issues of accessing and obtaining food, U.S. Agency for International Development (USAID) defines food security as occurring, "When all people at all times have both physical and economic access to sufficient food to meet their dietary needs for a productive and healthy life."¹⁶

Beyond these accessibility and affordability issues, some definitions have additional components. For example, the U.S. Department of Agriculture (USDA) states that food should be adequate for an "active, healthy life," and should include legal access to food, meaning that theft, scavenging, and other desperate measures for obtaining food do not define secure food status.¹⁷ The USDA also separates food insecurity and hunger into several categories in which "low security" means an inability to access or obtain food, and "very low security" indicates a lack of food defined by skipping meals and going hungry on a regular basis.

Taking into account the large array of options for considering food security, Brandeis evaluators chose a definition that is based on a broad understanding of food insecurity that serves to include a range of low-income individuals as food insecure. We started with the USDA's commonly used baseline definition:

Food security for a household means access by all members at all times to enough food for an active, healthy life. Food security includes at a minimum:

- *The ready availability of nutritionally adequate and safe foods.*
- *Assured ability to acquire acceptable foods in socially acceptable ways (that is, without resorting to emergency food supplies, scavenging, stealing, or other coping strategies).¹⁸*

This definition addresses the key aspects of physical access and economic ability to obtain food, while adding sufficient detail to define what type of food is included ("nutritionally adequate and safe") and what type of access is accepted (legal and ongoing, rather than emergency and illicit food access).

As for indicators, multiple studies use the USDA food security scale that is included in the Current Population Survey (CPS), an annual and nationally representative dataset of information concerning demographics and living conditions of Americans. This list of 18 indicators is collectively termed the Core Food Security Module (CFSM).¹⁹ Yet, a recent study calls into question the USDA measures, arguing that the levels to qualify as food insecure are too strict and obscure certain types of food insecure groups. Currently USDA requires a minimum of three affirmative responses to the CFSM questions relating to food access and hunger. This measure leaves out those who respond affirmatively to only one or two questions, meaning these individuals who are intermittently food insecure, or have anxiety about becoming food insecure, remain unclassified.²⁰

The evaluation team used verbatim or slightly adapted eight of the USDA's indicators for defining food insecurity for the adults 50+ who enrolled in the Food Dollars program. (See Appendix A) USDA questions directly pertaining to children were omitted for purposes of the evaluation. Since the USDA definition and indicators have been used widely, including in a recent AARP study, an adaptation focused on the issues the Food Dollars classes address seemed to be most appropriate for purposes of this evaluation. Using the USDA formal definition, with an added component of food use, allowed for use of this limited group of the USDA indicators to identify individuals who enroll in the Food Dollars program and are fairly described as food insecure. Scoring is based on the model devised by Ziliak and Gunderson,²¹ which qualifies individuals as food insecure even if they answer affirmatively to only one of the questions, rather than the original USDA model that required three affirmative responses.²²

Economic Insecurity: Background and Definitions

Economic insecurity, like food insecurity, has been defined in many different ways. One method is captured in the Economic Security Index (ESI) that “measures the share of households that lose at least one-quarter of their available resources from one year to the next and lack the liquid financial wealth to make up for these losses by spending down their assets.”²³ The most recent report in 2012 showed that approximately one in five households nationwide is economically insecure. Further, every contiguous state (excluding Alaska and Hawaii) has experienced a rise in economic insecurity since 2009 –with New Hampshire's being the lowest and Mississippi's being the highest.²⁴ Drops in ESI are disproportionately higher in areas where there are high rates of poverty and unemployment. In addition, significant drops are associated with areas that have high percentages of workers with no college degree and a high concentration of African American residents. The relationship between drops in ESI and Latinos/Hispanics is less clear because only a small number of states have large Latino/Hispanic populations, but these states do have higher levels of economic insecurity than states where the Latino/Hispanic population is low.²⁵

Another way of defining economic insecurity combines lost income with other aspects. In this approach, “economic insecurity describes the risk of economic loss faced by workers and households as they encounter the unpredictable events of social life.”²⁶ This definition is based on four-part framework: 1) a focus on households, not individual workers; 2) a focus on income volatility and the threat of downward mobility; 3) adverse events, such as unemployment or serious illness; and 4) how adverse events are mitigated by government benefit programs or informal family support. While this framework seems more useful than the ESI framework because it considers issues other than income loss per se, particularly the impact of serious illness, both definitions seem of limited utility for measuring economic insecurity among elders, many of whose yearly incomes are fixed as they are no longer workers with paid employment.

There are several research institutions that address the economic insecurity of elders and have created tools – indexes – to measure different levels of economic insecurity: these are particularly useful for this evaluation. One index was developed by the Gerontology Institute at the University of Massachusetts-Boston in collaboration with a non-profit organization, Wider Opportunities for Women (WOW). It is called the National Elder

Economic Security Standard Index, and is often referred to simply as the “Elder Index.”²⁷ It measures the income elders need to live modestly in specific communities throughout the United States. The Elder Index challenges the way the federal government measures poverty because it calculates the actual costs of housing, food transportation, personal items and health care state by state. The creators of this index found that, “With a median budget shortfall of more than \$10,000 annually, elders in Massachusetts appear to be the most economically insecure, followed by older adults in Washington, DC, New York, Hawaii, and Connecticut.”²⁸

Another economic insecurity index was developed by the Institute for Assets and Social Policy (IASP) at Brandeis University. It is called the Senior Financial Security Index (SFSI).²⁹ The SFSI is based on five factors: retirement assets, household budget, health care expenses, home equity, and housing costs. A study by the IASP found that between 2004 and 2008, the number of elders who were financially insecure increased by one-third, rising from 27% to 36%. In looking at the hardest hit senior households – those headed by single women or people of color – 50% were considered economically insecure in 2008. A 2011 report, taking into account the impact of the recent recession, finds that older Americans are struggling to meet their most basic expenses and also explains that the proposed cuts to Social Security and Medicare are dire.³⁰

For the purposes of this evaluation, we used a basic definition of economic security developed by the aforementioned groups that study elders, which can be summed up as, “Economic security means having the income and/or financial assets (liquid, investments or home equity) to meet the basic necessities of adequate food, shelter, clothing and medical expenses.” In order to measure economic insecurity/security for Food Dollars enrollees, we used elements of both the SFSI and the EESS. However, we were constrained in making precise measurements because we did not have access to monthly household income figures. This is something that ABCD asks for on their intake forms, but which most elders in their programs opt not to fill out, and this was the case with the Food Dollars enrollees.

The Evaluation Team decided not to ask people for their exact household income, given their reluctance and the low reliability of self-reported income data. Instead the team developed an economic insecurity score with five elements: 1) Do you live in public/subsidized housing (that is, not a homeowner, does not pay market rent)?; 2) Do you live on a fixed income with no additional income from a former employer, such as a pension or 401K?; 3) Do you live on a fixed income with no personal savings?; 4) Do you receive Medicare (or Medicaid/MassHealth), but have no Medigap policy to cover uncovered medical expenses?; and 5) Do you receive any regular financial support from family? A “yes” to each of the first four questions was scored with one point, and the last question was scored one point for a “no” response. Those adults 50+ that had “5 points” were considered highly financially insecure, and those who scored “0” were considered financially secure, albeit at a modest level.

Food and Economic Insecurity: Boston Numbers in Brief

A review of statistics on income, race/ethnicity and food security/insecurity provides a picture of how adults 50+ are doing in the city of Boston. In 2010, Boston’s median

household income was \$49,081,³¹ but if we look at the neighborhoods in Boston with the highest concentration of African American and Latino/Hispanic households where the Food Dollars Program has been offered, such as Roxbury, Jamaica Plain, the South End and parts of Dorchester, the median household income was less than \$28,000. In contrast, in the neighborhoods of Hyde Park, Roslindale and West Roxbury, the median household income was \$61,000 and the majority of residents in these neighborhoods are white, non-Hispanic.³²

In terms of food insecurity, every four years the Greater Boston Food Bank conducts a study to track changes and current trends in Massachusetts with a focus on their service areas. In their most recent study (2010), they show that 38% of all households in Boston are food insecure (without hunger), and 33% of households with a senior 65 years or older are food insecure (without hunger). In Eastern Massachusetts, in 2009, 545,000 people sought food assistance: 44% had to choose between food and heat, 34% had to choose between food and rent, and 37% had to choose between food and medical care.³³

II. BACKGROUND: ABCD and the History of the Food Dollars Program

The Food Dollars curriculum was designed by the Elder Services Department of ABCD, Action for Boston Community Development, Inc. ABCD is the largest multi-service anti-poverty organization in New England. It was founded in 1961 as one of a number of Community Action Programs (CAPs) across the United States.³⁴ It offers programs that address the needs of individuals across the life span consistent with its three-fold mission to: strengthen and educate families; promote economic self-sufficiency by providing the tools and knowledge low-income families need to improve their situations; and build community by strengthening social ties among residents and connections between residents and local programs and services. In FY 2012, ABCD served over 87,000 low-income individuals and over 43,000 households with a broad range of programs that helped them to access school, work and other benefits needed to stabilize their families and move toward economic self-sufficiency. ABCD currently has fourteen Neighborhood Service Sites and 35 Head Start Centers, along with several other affiliated programs.

The mission of ABCD's Elder Services Department is to empower elders to live independently and with dignity, in their neighborhoods, by optimizing their health and well-being. Elder Services offers programs in all of ABCD's fourteen target neighborhoods. Three of their signature programs include: the federally funded SHINE program which offers free information and counseling on Medicare, Mass Health and other health insurance programs and benefits; the Foster Grandparents Program which matches low-income adults 55 years and older with children in child care centers, hospitals, and Head Start programs for 20 hours each week; and neighborhood-based services to assist older adults to age in place and secure needed government benefits and programs. All Foster Grandparents receive training and support as they work to positively impact children's socio-emotional well-being, learning and social skills. Foster Grandparent opportunities are available in a number of neighborhoods in Boston and Quincy and in a variety of languages.

In addition, ABCD ran a pilot program during 2013 called the "Good Life Healthy Living Club" in a neighborhood center in Jamaica Plain. Funded by the Tufts Health Plan

Foundation, the club is designed to be a member-run program for adults 50+ to promote active aging. This is done through health and nutrition workshops, art classes, walking and exercise classes, and the Food Dollars Program. Officers and members of the Club help recruit new members for the group, and members decide what activities they would like and when they should be held.

The Food Dollars Program grew out of ABCD's concern that some existing healthy aging and nutrition programs – while useful in providing health information – were not always sensitive to the income constraints many adults 50+ face. In the area of healthy eating, there was a particular concern that promoting the need to eat more fresh fruits and vegetables regularly, for example, without confronting the cost of these items, was not going to be successful among low-income adults 50+. Buying fresh, high quality foods in the food groups needed to have good nutrition can be very expensive and very challenging on a fixed income and low budget. None of the existing evidence-based healthy eating curricula seemed to be targeted to the food insecure; rather they were designed to be taught to adults 50+ across all income levels.

ABCD developed the Food Dollars Program, with guidance from and review by expert nutritionists and financial/government benefits educators.³⁵ The curriculum combines information on healthy eating and nutrition, on the one hand, with information to reduce expenses, maximize income and enhance financial literacy, on the other. The goal is to teach adults 50+ about budgeting, and the government benefits available to them, while encouraging them to sign up for those benefits and discounts for which they are eligible. In this way, adults 50+ enrolled in the Food Dollars Program would be able to increase their healthy eating practices and reduce their food insecurity – the key goal of the program. In other words, by “stretching” their food dollars, they would have a greater percent of their income, albeit limited, to spend on purchasing healthy food than they did before the classes.

It is important to note that several other initiatives exist that have attempted to do pieces of what the Food Dollars Program is designed to do. For example, the Bank of America Charitable Foundation has worked with the National Council on Aging (NCOA) to help educate elders about financial issues and managing their money. These two groups collaborated to develop “Savvy Saving Seniors™” toolkits and distributed them to senior centers and economic security centers in Boston, Houston, and upstate New York.³⁶ The toolkits teach older adults how to budget, avoid scams, and apply for benefits that can help them remain healthy and independent, but the tool kits do not address healthy eating or any health issues. Another example is the “Cooking Matters” curriculum funded by the ConAgra Foods Foundation and developed by Share Our Strength, a national non-profit that works to end hunger. This curriculum focuses on low-income families with children who live and eat at home. It teaches parents shopping and cooking methods for preparing nutritious, affordable meals. While there is some attention given to planning and budgeting, there is not a full-fledged financial literacy component to this curriculum, nor is it designed to target older adults.³⁷

In sum, the Food Dollars Program is a unique curriculum that combines information about nutrition and healthy eating with a skill-building approach to enhancing financial literacy and

specifically targets adults 50+. In 2013 ABCD continued to focus on delivering the Food Dollars Program to African American and Latino/Hispanic adults 50+ in inner city Boston neighborhoods, and this report will address the impact of the program on enrollees who were presumed to be both food insecure and economically insecure.

Piloting the Food Dollars Curriculum

The initial curriculum was designed from 2009 to 2011 and piloted in eight sites over the two-year period reaching a total of 80 adults 50 years and older.³⁸ The first set of classes was evaluated by asking students to complete paper questionnaires at the beginning and end of the course. The “Pre-Program Survey” had a small number of questions, half devoted to demographic data, and half pertaining to nutrition knowledge and eating practices. The “Post-Program Survey,” handed out and collected by the trainer on the last day of the course, had ten knowledge questions with statements such as, “I understand the nutritional guidelines described in the Food Pyramid” to which the students could answer “completely,” or “partially,” or “not at all.” While some useful information was gathered from these surveys, the administration of the surveys by the trainers themselves, timing of the second survey at the end of the last class, and the limited scope of the questions, was insufficient to calculate the impact of the classes. This created the need for a more formal, structured evaluation designed by trained outside evaluators.

The key lessons learned by ABCD staff from these pilots – drawn from organizing the first eight classes and the experience of teaching the first version of the curriculum – included the need for: 1) culturally appropriate instructional materials to reflect the varied food choices and practices of participants; 2) input from nutrition, financial and government benefits experts; 3) class content and evaluation tools appropriate to low-literacy populations; and 4) recruitment of participants through a collaborative effort among ABCD staff, ABCD neighborhood site staff, elder advocates and key community organizations. These lessons, along with findings from the 2012 evaluation conducted by the Heller School at Brandeis University, were brought to bear on the delivery of the Food Dollars Program in 2013.

III. PROCESS & IMPLEMENTATION: Bringing the Food Dollars Program to Low-Income Elders in 2013

Overview of Partners’ Activities

With support from the AARP Foundation, ABCD partnered with researchers at the Heller School for Social Policy and Management at Brandeis University during 2012 and 2013. AARP’s funding of this community-university partnership catalyzed three key developments: focusing the Food Dollars Program on specific 50+ minority populations in specific low-income Boston neighborhoods; strengthening the curriculum of the Food Dollars Program; and systematically evaluating the Food Dollars Program to show its effectiveness and movement toward an evidence-informed healthy aging program.³⁹

At the beginning of 2013, ABCD staff and the Brandeis evaluation team met to analyze the results of the first evaluation report, including the ABCD-Brandeis relationship, in order to understand what worked well and what did not and make improvements for the Year Two Food Dollars Program.

The following is a chronology of ABCD's work related to the Food Dollars program under the AARP grant during the 2013 calendar year. It includes all work done by ABCD staff during that period, not just activities relevant to the Food Dollars classes that were evaluated:

- January-March: Curriculum Development and Community Outreach. The nutrition component of the Food Dollars program was revised based on review and input from a Nutrition Committee. The financial component of the Food Dollars curriculum was revised based on the Brandeis 2012 evaluation, and the ABCD staff's experience with teaching the program during 2012. ABCD added several new components aimed at providing additional information about benefits, like SNAP, and other programs. During this time period, ABCD also reached out to 28 community organizations to promote the Food Dollars Program. The revised curriculum was translated into Spanish, and a Handbook of information covering topics taught in the 2012 program was updated and translated into Spanish. ABCD staff taught one class in Spanish.
- April-June: Outreach, Information Sessions and Teaching. ABCD continued to reach out to a number of community organizations to establish sites in selected neighborhoods for offering the classes. ABCD staff conducted Information Sessions and taught five classes, four in English and one in Spanish. ABCD's college interns collected information for neighborhood maps for South Boston and the South End showing food and other local resources.⁴⁰
- July-September: Recruitment and Teaching the Food Dollars Classes. New handouts were created by a dietician who was recommended to ABCD by the chair of the Nutrition Committee. These handouts included healthier substitutions for commonly eaten and high sodium foods, as well as tips for eating and shopping for one person. In addition, recipes specific to African American and Latino/Hispanic populations were modified to include healthier ingredients. ABCD staff continued to collaborate with community partners to host Information sessions and recruit adults 50+ for the Food Dollars classes. Two bilingual staff members taught four 6-week sessions in four neighborhoods – two in Spanish and two in English. Classes from April through September were held in Roxbury, Dorchester, South End and Jamaica Plain and in ABCD's main building in downtown Boston. Eight out of thirteen sessions were evaluated. An Advisory Council met to discuss expanding delivery of the Food Dollars Program into new neighborhoods in Boston and planning a second city-wide forum on Elders and Hunger in 2014.
- October-December: Teaching and Conference Planning. ABCD staff taught two additional Food Dollars classes, one in Spanish and one in English. ABCD collaborated with their evaluation partner, [another AARP grantee at Boston Medical Center,] and other community partners to organize a multi-sector "Forum to Eliminate Hunger" to be held in January 2014.

During the 2013 grant period, ABCD's evaluation partner, the Heller School at Brandeis University, conducted the following set of activities:

- January-March: Revised evaluation design and instruments. A three-person Evaluation Team (including one faculty member, one doctoral student research assistant, and one master's level research assistant) reviewed the three-part evaluation design. They revised instruments for pre-class and post-class interviews for use with all Food Dollars enrollees. All revised instruments were translated into Spanish and were reviewed by ABCD bilingual staff for translation accuracy and cultural competence. (See Appendix C for a description of the evaluation design and statistical methods used.)
- April-June: IRB Approval, Recruitment and Interviewing. All revised interview protocols were submitted to the Brandeis Institutional Review Board's (IRB) Committee for the Protection of Human Subjects. In May 2013 the instruments were approved and the time period for conducting the evaluation was extended. The evaluation team attended Information Sessions in the South End, Roxbury and Jamaica Plain, and, once IRB approval was received, conducted four sets of pre-class interviews, three in English and one in Spanish.
- July-September: Continued Interviewing and Data Collection. Members of the Evaluation Team continued to attend Information Sessions, conducted four sets of pre-class interviews and began post-class interviews at five sites. The leader of the Evaluation Team attended a planning meeting about a second annual public forum on Elders and Hunger for January 2014.
- October-December: Interviewing completion, data analysis and report preparation. The evaluation team completed the post-class interviews. A limited number of telephone interviews were conducted with staff of community partner organizations. Entry of pre-and post-class interview data into S was completed, and data analysis was conducted using that program.⁴¹ The evaluation team began drafting a final report based largely on data from the pre- and post-class interviews from sixty-seven participants in eight Food Dollars classes.
- January 2014: Key findings from the evaluation report were presented at a public forum on Elders and Hunger in Boston. The evaluation report was completed, reviewed by ABCD staff, and finalized by the evaluators.

The evaluation was designed to collect pre- and post-class data on individual enrollee's nutrition knowledge, healthy eating habits/behavior and unhealthy eating habits/behavior, which included the frequency of their consumption of healthier foods and what portion of their meals typically aligned with ChooseMyPlate. This evaluation was not designed to study measurable nutrition outcomes, as would be done in a formal nutrition research study. The Nutrition Committee contributed valuable input to this portion of the evaluation and helped to delineate the parameters of the evaluation related to nutrition outcomes. (See Appendix C for membership of the Nutrition Committees)

Building Community Partnerships

A crucial piece of implementing the Food Dollars Program was the creation of partnerships between ABCD and a number of community-based organizations. ABCD's staff reached out to a number of potential community partners, twenty-eight in total. These included non-profit agencies, such as community health centers, multi-service community centers, unemployment centers, and churches.

From this outreach effort, thirteen community groups agreed to have Information Sessions at their sites. Brandeis then evaluated eight groups of participants at six of these sites. Table 1 summarizes some characteristics of these sites.

Site Number	Location	Type of Non-Profit	Elder Programs	Food-related Programs
Site 1	South End	Multi-service Center	Yes	Yes
Site 2	Roxbury	Multi-service Center	Yes	No
Site 3	Dorchester	Youth development	Yes	No
Site 4	Roxbury	Civil Rights, Education, Job training & placement	Yes	No
Site 5	Jamaica Plain	Health Center	Yes	Yes
Site 6	Downtown Boston	Anti-poverty Agency	Yes	Yes

As part of the process evaluation, the Evaluation team conducted telephone interviews that included both closed and open-ended questions with a limited number of the site partners. These community partners provided valuable information about the process of partnership building and the neighborhoods in which they work. Those who were interviewed stated they were given “adequate opportunities for input.” They reported giving input on the venue, and the roles and responsibilities in publicizing the Information Session, and in recruiting participants for the Food Dollars Program. This part of the partnership seemed to go well and there was genuine collaboration between ABCD staff and community site staff in making elders aware of the Food Dollars classes. However, there was limited discussion about whether there was food or economic insecurity among the elders each community partner served, rather there was an assumption that this was the case. There was also limited discussion about whether there were food resources or programs near the site. This information was collected for one neighborhood, but only after the program has been taught. Community partners identified the main strengths of the program as improving understanding of nutrition and healthy eating. Improved financial literacy and improved access to financial benefits were not mentioned as strengths, although it is possible that those who completed the program simply did not discuss this with staff at the community sites.

Outreach and Recruitment Process

ABCD intentionally recruited low-income adults who were 50 years of age or older, were either African American or Latino/Hispanic, and lived in one of four Boston neighborhoods. While the age limit and neighborhood criteria did not pose problems, a staff member at one community partner organization said that she was uncomfortable with the restriction of the program to African American and Latino/Hispanic elders. She said she had low-income Caucasian elders who wanted to take the program and were turned away. She said this would have to change if she were to offer the Food Dollars Program again.

The method of recruitment followed three basic steps. First, an ABCD staff member would reach out, usually by phone, to a community-based organization in one of the targeted neighborhoods to see if there would be an interest in the Food Dollars Program. Second, if the organization expressed interest, an ABCD staff member would go to the site and have an in-person meeting with staff from the community partner organization to discuss the purpose of the Food Dollars program and give an overview of the curriculum. The hosting organizations were asked to suggest an appropriate venue

for an Information Session, how to get the word out to elders about the classes, and how to encourage their clients to attend the Information Session to learn more. Finally, the Food Dollars Program was publicized to adults 50+ by giving fliers to individuals, posting fliers in public places, and by word of mouth.

Each Information Sessions followed a similar format. The staff member from ABCD would make a short presentation, and ask for questions. Either a member of the Evaluation Team or an ABCD staffer let residents know about the pre- and post-class interview process. Whoever spoke about the interviews emphasized that participation was voluntary and all information would be confidential and securely stored. Then residents were asked for their questions and comments. A healthy snack, usually fresh fruit, was served. After this, ABCD Intake Forms were distributed. Sometimes ADCDE staff circulated among the attendees to help them fill out the forms, but sometimes they did not, which resulted in some intake forms being incomplete. Some demographic data from the intake forms was shared with the Evaluation Team for this report. When an attendee had completed the intake form, a member of the evaluation team or an ABCD staff member asked each elder if she/he would feel comfortable being interviewed and, if so, which time slot on an interview sign-up sheet would be most convenient.⁴² The pre-class interviews were usually held during the week after the Information Session and before the week that the classes started, while post-class interviews were conducted 2-4 weeks after the last class.

Neighborhood Context

Boston has twenty-seven neighborhoods and ABCD chose four of them for delivery of the Food Dollars Program in 2013: Dorchester; Jamaica Plain; the South End; and Roxbury. These are all neighborhoods with significant diversity, as well as differing degrees of food and economic insecurity. Table 2 shows some of the key demographic variables across these four neighborhoods related to the age cohorts and racial/ethnic groups.

Neighborhood	Total population	50-59 years	60-69 years	70-79 years	80+ years	African American	Latino/ Hispanic	House holds with 65+
Dorchester	144,235	11.8%	7.8%	3.9%	2.3%	46.3%	17.0%	20.9%
Jamaica Plain	18,738	10.4%	8.0%	4.3%	3.2%	15.8%	22.0%	17.7%
South End	24,577	11.9%	8.9%	4.5%	2.2%	12.5%	13.3%	16.1%
Roxbury	22,250	11.7%	7.5%	3.9%	2.1%	57.0%	27.5%	20.6%
Source: 2010 Census and City of Boston, Department of Housing and Neighborhood Development								

In addition to these demographic profiles, some effort was made to understand the characteristics and food resources of the four neighborhoods where the Food Dollars classes were taught. This was of less utility in 2013 than it had been in 2012, because there was not always alignment between the site where enrollees took the classes and the neighborhoods in which they lived; many enrollees took classes in one neighborhood and lived in another.

Looking at selected neighborhoods in Boston, it is interesting to see the current levels of food pantry use. (See Appendix E.) The number of clients in these neighborhoods declined slightly

(3%) between 2012 and 2013.⁴³ This may be due to variance in agency reporting and is not necessarily representative of a true decline in Boston food pantry clients. Overall, in the service area covered by the Greater Boston Food Bank, food pantries reported seeing an average of 2% more clients per month in 2013 versus 2012.

IV. MEASURING IMPACT: Does the Food Dollars Program Make a Difference?

Beyond documenting the recruitment and implementation process, the primary question this report addresses is, “Did the Food Dollars Program have a positive impact on those adults 50+ who completed the course?” There were two goals or impact areas: 1) increased healthy eating and 2) enhanced financial literacy. The evaluation also assessed where positive outcomes are strong and where they are weak, as well as some explanations and suggestions for improvement in weak areas. It should be noted that the overall sample size dropped from 97 enrollees who had pre-class interviews, to 78 of those enrollees who completed the class, and finally to 67 of the 78 completers who also participated in post-class interviews.⁴⁴

The following section is organized to assess impact in a number of specific areas from participation and completion rates to issues directly addressed in the Food Dollars curriculum. These include basic elements of what constitutes good nutrition and healthy eating as well as selected aspects of financial literacy. The following section (V.) addresses larger issues, such as food insecurity and economic insecurity, with the understanding that these are national, systemic issues that cannot be impacted fully by one curriculum offered in one city.

Participation, Retention and Demographics: From Enrollment to Completion

In order to provide a context for the data collected during the pre-class and post-class interviews, a summary of how many adults 50+ participated overall from May to November is needed. In total, one hundred eleven (111) adults 50+ were enrolled in the Food Dollars Program; this number covers eight sites. For the purpose of this report, an “enrollee” is someone who attended an Information Session and completed an intake form with an ABCD staff member. We define the term “completers” as those who attended four or more classes and received make-up sessions – usually on the phone with one of the teachers – and handouts for the classes they missed. Although, anecdotally some completers who only attended four or five classes reported in the post-class interview that they had not participated in any kind of make-up session. The number of elders that completed the 6-week course was ninety-two (92). Not all of the 92 completers had pre-class interviews, so they were not eligible to have post-class interviews and become part of the evaluation process.

Table 3 shows the total number of adults 50+ enrolled in the Food Dollars Program in the eight classes evaluated by Brandeis University and the number completing the program. Although the retention rate overall was quite high (82.75%), retention varied by site and ranged from 61% to 100%. Two of the four sites with the highest rates of participation are part of the Foster Grandparents Program run by ABCD, so it is not surprising that a high number of those individuals would complete the program, given their longstanding ties to ABCD and its Elder Services staff.

The lower rates of participation at some sites may be due to the fact that other courses and workshops on nutrition and healthy eating had been offered recently, or in one site were going on at

the same time as the Food Dollars program. Other reasons offered by the site coordinators of the community partner organizations include that the timing of the classes conflicted with medical appointments or that the elders themselves think they don't need the class. One person said that some elders do not want to be perceived as needing assistance with food and/or not being knowledgeable about what constitutes good nutrition and healthy eating. Further research is needed to explain more definitively the lower completion rates at some sites.

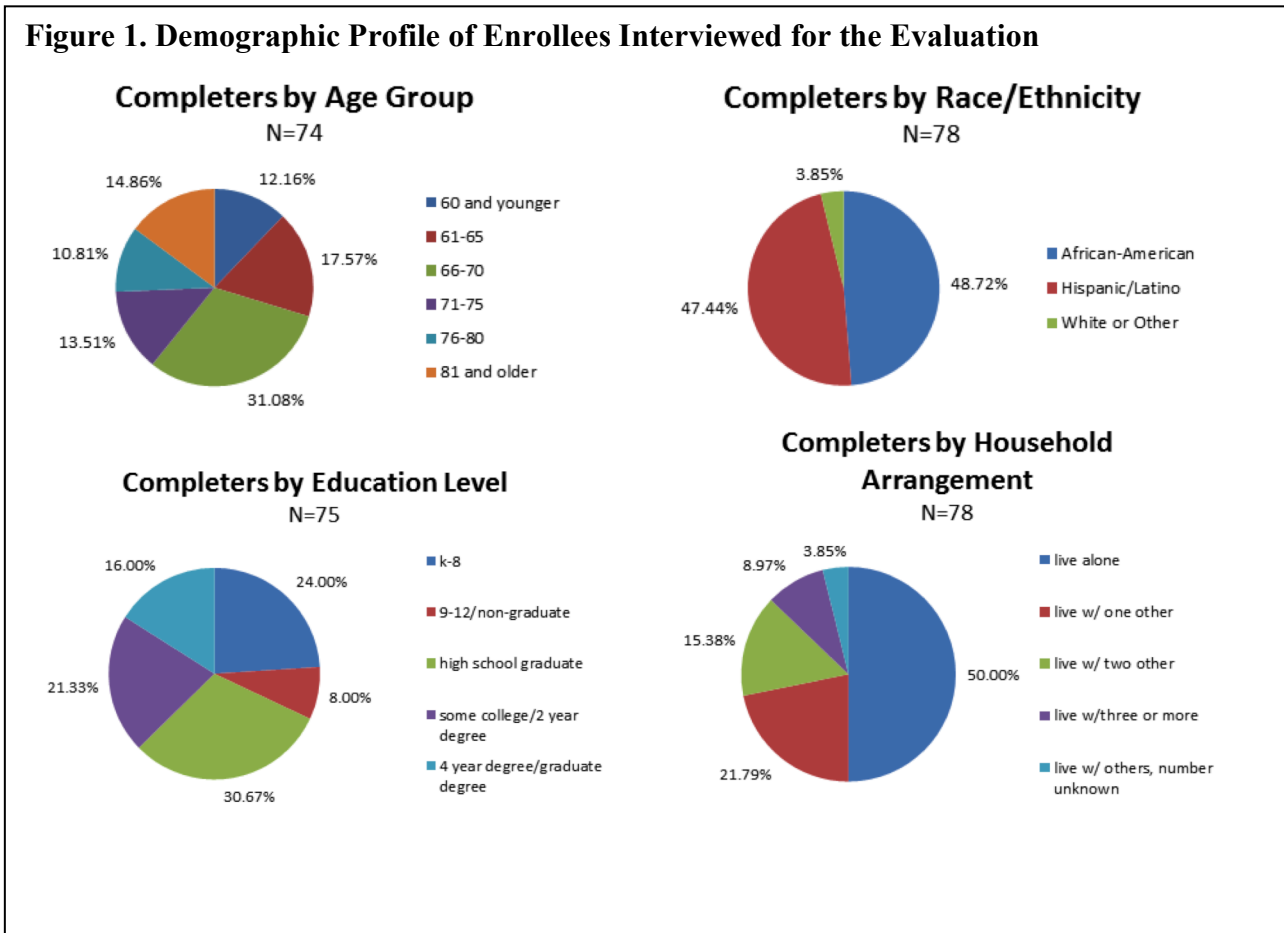
Class Number	Number Enrolled	Completers	Completion Rate
Class 1	15	10	66.6
Class 2	13	9	69.2
Class 3	13	8	61.5
Class 4	14	11	78.5
Class 5	11	11	100.0
Class 6*	17	16	94.1
Class 7*	16	15	93.7
Class 8*	12	12	100.0
Total	111	92	
Average Completion Rate =			82.8
*Class was taught in Spanish			

In terms of the overall completion rate, 82% is considered a robust number for this kind of community-based training program.⁴⁵ These findings across sites suggest that a variety of pre-existing social ties among enrollees could also have been a factor in boosting retention. Nevertheless, there seem to be a number of adults 50+ who “dropped out” after a few classes and never returned. All participants were called weekly by ABCD staff whether they attended the previous class or not, but not all of them answered the phone or returned messages. More research should be conducted on the non-completers who attended one to three classes and never returned, and the reasons they give for not completing the Food Dollars program.

Just as there is a difference between the number of enrollees (111) and the number of enrollees completing a pre-class survey (97), there is a difference between the number of enrollees who completed the course (92) and the number of “completers” who were interviewed both pre-class and post-class for the evaluation. As noted, 97 individuals enrolled in the Food Dollars classes completed a “pre-class interview” with a member of the Evaluation Team. Of the group that participated in the pre-class survey, 78 completed the program, but only 67 participated in the post-class interview. Using the 97 pre-class surveys, the youngest person to sign up for the class was 47 years old and the oldest was 94 years old. The mean age of an enrollee was 69.9 years. Limiting analysis to the 67 “completers” who also had post-class surveys the average age was virtually the same – 70 years of age. In terms of attendance patterns, half of the completers attended all six classes (49.2%), almost 40% attended five classes (38.8%) and a small percentage only attended 4 classes (9%). For those who did not attend all six classes, make-up sessions were offered on the phone, and most of those who missed a class were given handouts at the next class they attended. According to the post-class interviews, only 56% of those who missed 1 or 2 classes reported receiving a make-up session.⁴⁶ Looking at the completer group as a whole (that is, enrollees who

completed 4, 5 or 6 classes and had pre-and post-class interviews) there was no significant

Figure 1. Demographic Profile of Enrollees Interviewed for the Evaluation



relationship between completion and demographic variables.

The demographic characteristics of the 97 enrollees interviewed can be found in Appendix B. That Appendix also documents the extent of enrollees’ participation in the evaluation process, that is, enrollees who had only a pre-class interview and those who had both a pre and post-class interview. Figure 1 above focuses on the 78 completers, all of whom had pre-class interviews, but some of whom did not have post-class interviews.⁴⁷ The pie charts depict completers by age, race/ethnicity, level of education, and living arrangements (familial and non-familial).

Eighty-six percent of the completers were women, and the largest age group represented was 66-70 year olds. Completers were almost equally African American (48.72%) and Latino/Hispanic (47.44%); three completers identified as White/Other (3.85%). The educational level of completers was quite diverse. About one-third had either a high school diploma or GED, and slightly more than one-third (37.3%) had some college education also. Nevertheless, almost one-quarter of completers (24%) had less than a high school education.

The types of housing and household living arrangements were also diverse. In terms of type of housing, the largest share of completers (42%) lived in public housing, although almost one-quarter of completers (23%) owned their own home. One-fifth (20%) indicated that they lived with family

or friends. There was a relationship between race/ethnicity and housing type, with Latino/Hispanic completers being statistically significantly less likely to own their own homes ($p \leq 0.001$). In terms of living arrangements, the majority of completers live alone. The second most common living arrangement is two people. Only about one-quarter of completers lived with two or more people (excluding those who lived with others but did not provide a number).

Although the majority of completers (85.9%) reported that they lived on a fixed income, completers were almost evenly split between those who had income other than social security (51%) and those who did not have any income other than social security (49%). Latino/Hispanic completers were statistically significantly more likely to have social security as their sole source of income ($p \leq 0.01$).

Motivations and Aspirations

There were five major reasons that enrollees gave for signing up for the Food Dollars classes,⁴⁸ and some gave more than one reason. Each reason was counted, so the total number of responses exceeds the total of enrollees, and the results reflect how many times a reason was mentioned out of the total participants who gave any reasons. Table 4 lists the most frequently reported reasons for enrolling in the Food Dollars classes.

The top two reasons given were in the healthy eating area, enrollees spoke about wanting to know more about what food they should buy, how they should cook, what they should eat, and to generally improve their knowledge of good nutrition. This is understandable given that this aspect of the curriculum was emphasized in the Information Sessions.

Reason	Ranked Order
To learn how to eat or cook or shop for healthy food	#1
Improve my knowledge of nutrition and healthy eating generally	#2
Opportunity to learn something new/educational opportunity	#3
Improve my financial situation, knowledge of discounts & benefits	#4
Health improvement (general/specific)	#5

The third reason relates to a general interest in learning new things and is not topic specific. The fourth most popular reason centered on enrollees' interest in improving their financial situation. This group of enrollees expressed an interest in learning how to pay less for more groceries and there were many anecdotal comments about how expensive certain kinds of food are, such as fresh fish, fruits and vegetables.

The fifth most common reason given for taking the class, by a small but not negligible group, was to improve their health. Sometimes this was expressed in terms of weight loss, other times in terms of managing a specific nutrition-related chronic disease. As one woman said, "I have high blood pressure and I know I'm supposed to cut down on salt, [pause]... but sometimes I forget. This class is a good reminder."

Overcoming Barriers to Healthy Eating: Impact on Nutrition Knowledge

As part of the pre-class survey, enrollees were asked if, in the past year they had set personal goals in the following three areas: improved nutrition; making healthier food choices when shopping; and eating healthier food. Respondents could respond affirmatively to as many as they chose to. Forty-

six of the 78 completers (59%) identified “improved nutrition” as a goal in the past year, 47 (60.3%) identified making healthier choices when shopping; and 53 (68%) identified eating healthier foods. So approximately half to two thirds of enrollees stated they had healthy eating goals before enrolling in the Food Dollars program.

Respondents who identified one or more of these goals were then asked what *barriers* they faced in realizing them. The results in Table 5 combine suggested responses and spontaneous narrative responses, but these responses do not total 100%, as not all participants identified barriers. The most frequently cited barriers were lack of financial resources to buy healthy foods and lack of will power to eat healthy foods or refuse unhealthy foods. It is interesting to note that some enrollees said they had no barriers.

	Identified as a Barrier	
	Frequency	Percent
Not enough money to buy healthy food	15	19.2
No barriers	14	17.9
Self-control, will power, don't want to give up favorite foods	12	15.4
Lack of time and life stresses	7	9.0
Don't know how to cook with healthy ingredients	5	6.4

Although only one respondent identified the difficulty of getting groceries home from the grocery store as a barrier, a different picture emerged when respondents were asked, “Is transportation a problem in getting to the store you use most?” On the pre-class survey, of the 75 completers who answered this question, 13% said that transportation was a problem “always” or “most of the time” and 18.7% that transportation was “occasionally” a problem. In other words, almost a third of the enrollees cited transportation as a barrier to health eating. It was largely those respondents who relied on others for rides and/or took public transportation who found transportation for grocery shopping problematic. When asked to explain their problems with transportation, respondents were most likely to describe issues around coordinating with a person to provide them with a ride, public busses being delayed or overfull, and challenges with carrying home groceries when relying on public transportation.

Beyond the barriers that participants identified themselves, the evaluation team wanted to understand whether a lack of nutritional knowledge about what to buy was also a barrier. To test whether the nutritional knowledge of completers had improved after the classes – as distinct from their own daily eating practices – completers were asked a series of true/false questions related to some of the ChooseMyPlate food groups, cooking methods, and other aspects of good nutrition. The maximum score for this “nutritional quiz” was twenty-four. There was no change in the score on this quiz between the pre-class and post-class interviews. The average score was 19.8 both times. Although some individuals had increased scores, others did less well on the quiz after the classes.

The First Step to Healthy Eating: Impact on Grocery Shopping

To further understand the level of enrollees’ nutrition knowledge before and after they took the Food Dollars classes – and particularly how it was impacting their grocery shopping – we asked a

series of identical questions pre-class and post-class about what they bought on their “last big grocery shopping trip.” Specifying and narrowing the time frame would yield more accurate self-reported data than asking about their shopping in general throughout the year. For this evaluation, we created a composite score from their answers to questions about what they bought on their last big shopping trip. Enrollees were given 1 point for buying each of the following: fresh and/or frozen fruit; fresh and/or frozen vegetables; foods with whole grains; peanut butter and/or nuts, dried fruit or whole grain crackers; and foods containing protein, other than eggs but including beans. They were also awarded one point for NOT buying: soda; ice cream; sweets (pies, cakes, cookies); packaged snack foods; and whole fat dairy products. Thus, enrollees could get a high score of 10 and a low score of zero. We refer to this measure as their “Healthy Shopper” Score.⁴⁹ Then we asked the same set of questions about their grocery shopping 2-4 weeks after they finished the course.

Of those adults 50+ who completed the program, the average “Healthy Shopper” score for the group went from 7.3 before the classes to 7.8 after the classes showing a statistically significant positive change in behavior following completion of the Food Dollars classes ($p \leq 0.01$). In addition, there was an increase of 16 percentage points in the number of completers who had Healthy Shopper scores in the 8-10 range. This finding shows that the Food Dollars Program was impacting two important goals: the classes increased the nutritional knowledge of the completers as evidenced by the fact that they were buying more healthy food from the five key food groups that comprise the ChooseMyPlate and less unhealthy food. It also shows what kind of things the completers had in their refrigerators and cupboards, indicating that they were planning to eat more healthy food and less unhealthy food. It should be noted that this statistically significant change seems to have been driven largely by the Latino/Hispanic participants, whose mean pre-class Healthy Shopper Score was 7.8 and post-class was 8.5 ($p \leq 0.01$) compared to the non-Hispanic participants whose mean pre-class score was 6.9 and post-class was 7.3 (NS).

Enrollees’ nutritional knowledge and healthy shopping practices were also assessed by asking both before and after the classes about whether they read labels on the groceries they bought that were boxed and/or processed. During the classes, enrollees were taught to look for information on serving size, amount of salt, cholesterol, and other important dietary information. The data show that 62.7% of the completers read labels before the classes and 79.1% read labels after the class, a marked increase in shopping with nutritional value in mind.

The Second Step to Healthy Eating: Impact on Food Preparation and Cooking

When collecting data on cooking practices for the 2012 Evaluation, we found that only about one-third of adults 50+ cook five or more times per week.⁵⁰ Many enrollees reported that they cooked one or two dishes per week and then eat them for several days, so no data was collected in 2013 on cooking frequency.

Of greater interest than cooking frequency is whether completers use healthy cooking methods. Data were collected, for example, on the use of salt, and of “good” versus “bad” fats. As shown in Table 6 the impact of the Food Dollars was mixed in promoting healthy cooking practices. On the positive side, the use of deep-frying dropped markedly and the use of healthy oils increased by a small amount. On the negative side, the use of butter in cooking increased, the use of salt basically stayed the same, and the use of a low-sodium products or spice blend alternative decreased.

Cooking Methods	Percent of Respondents Reporting Change in Use		
	Pre-class	Post-class	Increase or Decrease/ Percent Change
Use of Butter (n=56)	42.9	49.2	+6.3/14.7
Use of low-sodium (n=27)	46.4	35.7	-10.7/23.1
Use of deep-frying (n=25)	45.5	33.3	-12.2/26.8
Use of olive oil (n=54)	89.3	91.2	+1.9/2.1

However, it is important to put these figures in context of the whole completer group (n=67). First of all, the number of enrollees who responded to the questions on cooking varied, from about a third of the sample to three-quarters of the sample. Second, there were questions for each cooking ingredient or cooking method about frequency of use and amount used. So, for example, although the Food Dollars curriculum discourages the use of butter in cooking, and the use of butter increased after the classes – not the hoped for outcome – less than half the sample (40%) was using butter at all, and of those who were cooking with butter, most used it only a few times a week.

The Third Step to Healthy Eating: Impact on Healthy Food and Drinking Water

In the pre- and post-class interviews, enrollees were asked several questions to determine whether their consumption of foods from the five food groups had changed. For each of the five food groups they were asked questions about whether they were eating foods from that group, and if so how frequently. We asked a second set of questions about average number of servings daily. In order to increase the likelihood of accurate answers, we carefully reviewed how much constitutes *one serving*, and asked only what they had eaten in the past week.

The following results show that positive changes in their healthy eating practices were more pronounced in certain food groups than others. The greatest change was in the consumption of fresh (or frozen) fruits and vegetables, and the lowest was in the consumption of whole grains and fiber. Based on solid pre- and post-class data, almost two thirds of completers increased their intake of fresh or frozen fruit, with an increase of 8 percentage points in the number of people eating fruit one a day and an increase of 3.4 percentage points in those eating fruit twice a day. There was a similar though not identical pattern with fresh or frozen vegetables. The percentage of completers eating vegetables twice a day went up 6 percentage points, although the percent of completers eating vegetables once a day stayed virtually the same.

Type of Food/Frequency of eating	Percentage of Respondents Reporting Change		
	Pre-class	Post-class	Increase or Decrease/ Percent Change
Fresh Fruits, 1x a day	35.8	43.9	+8.1/22.6
Fresh Fruits, 2 X a day	26.9	30.3	+3.4/12.6
Fresh Vegetables, 1x a day	52.2	50.7	-1.5/2.9
Fresh Vegetables, 2x a day	13.4	19.4	+6.0/44.8

There were two food groups in which gains were not realized, even though completers seem very aware of what the five food groups are and what they should be eating every day. The consumption of whole grains and fiber went down after the classes. The only caveat here is that sometimes people said they did eat whole grain bread, but when the interviewers pressed them to explain what exactly they bought, it was often a loaf of brown bread that contained processed grains not whole grains. The vast majority said they were not eating white bread – although most said they used to – and reported that they were eating “brown bread.” It seems that the process of identifying whole grain breads may need some additional attention in the Food Dollars curriculum in the future.

In terms of the consumption of protein, like chicken, meat, and fish, there was virtually no change between levels of consumption before and after the classes. One reason may be the cost of certain proteins. When asked, “What was one thing you wanted to buy on your last grocery shopping trip, but did not because it was too expensive,” most respondents mentioned seafood, particularly salmon and shrimp, and meat, particularly steaks. There is no question these are expensive items, and this may well explain the lack of change in protein consumption. However, in terms of consumption of dairy, there was significant positive change. Completers showed an increase in their consumption of low-fat products having been taught the difference between “good fats” and “bad fats.” The largest changes were in the areas of drinking low-fat milk and eating low-fat yogurt.

	Pre-Class	Post-Class	Increase or Decrease/ Percent Change
Milk (n=55)			
Skim or Low Fat	76.4%	81.4%	+5.0/6.5
Whole Fat	23.6%	18.6%	-5.0/21.2
Yogurt (n=43)*			
Non- or Low Fat	65.1%	73.5%	+8.4/12.9
Whole Fat	39.5%	34.7%	-4.8/12.2
* Percent columns total more than 100% as some individuals reported eating BOTH reduced fat and whole fat varieties of yogurt			

The classes also emphasized that being healthy is not just about eating food from the five food groups in ChooseMyPlate, but also about drinking enough water. In water consumption, the USDA recommends that people drink at least eight glasses of water a day as part of their healthy eating practices. Completers were asked to estimate how much they drank before the classes and again after the classes.⁵¹ Table 9 shows that, although improvements are modest, there are fewer people drinking 1 to 3 glasses of water a day and more people drinking 6 to 8 glasses of water a day after the classes.

Glasses of Water Per Day	Pre-Class	Post-Class	Increase or Decrease/ Percent Change
1-3	32.3	28.4	-3.9/12.1
4-5	27.4	26.9	-0.5/2.0
6 or more	40.3	44.8	+4.5/11.0

Finally, there were encouraging developments in completers cutting back on their consumption of unhealthy foods, particularly what they ate for snacks in between meals or before bedtime. Although not all completers responded to the questions about snacks, of those who did (between 50-80% of the sample depending on the snack), the number of elders who seldom or never eat sweets, like cakes, pies and cookies, increased by 16 percentage point, the number of completers who seldom or never eat ice cream increased by 18.5 percentage points, and there was about a 30 percentage points increase in the number of people who seldom or never eat chips or *Ritz Crackers* or *Cheez-It Crackers*. Also encouraging are the findings on the numbers of completers who increased their consumption of healthy snacks. For example, the number of completers who ate whole grain crackers once a day increased by 13%, and the number of completers who ate fresh or dried fruit for a snack a few times a week increased by 14%.

To understand how completers evaluated their own eating practices and habits overall, completers were asked to grade themselves in terms of how healthy they thought their diet was before they began the Food Dollars program and after they finished the program. Table 10 shows the results.

Grade	Pre-Class Percent	Post-Class Percent	Increase or Decrease/ Percent Change
A-Very Healthy	28.4	47.8	+19.4/68.4
B- Somewhat Healthy	37.3	40.3	+2.99/8.0
C- Average	22.39	10.45	-11.94/53.3
D- Somewhat Unhealthy	10.45	1.49	-8.96/85.7
F- Very Unhealthy	1.49	0	-1.49/100

Looking at the completer group, most respondents gave themselves a B or C grade before the classes, meaning they saw their eating habits as being in the average or somewhat healthy range. After the classes ended, 47.8% of completers gave themselves an “A” for “very healthy” – a substantial increase (19.4 points) over the pre-class grade for the top category. In addition, only 20% of completers gave themselves a “C,” a marked decrease (12 points) over the pre-class grade for the average category. Looking at the completers as a whole, there is a clear overall shift toward healthy eating as 87% of the group graded themselves as having a very or somewhat healthy diet and just over 10 percent graded themselves as having an average to poor diet. This self-assessment corresponds to other pre-post healthy eating measures.

The following table shows pre- and post-class self-assigned "healthy eating scores," for all completers, looking separately African American completers, and Latino/Hispanic completers. The decrease in scores (with 1 being the highest) is noteworthy across the board, but especially so for Latino/Hispanic participants. In other words, considering participants' perceptions of how healthy their diets are, the Food Dollars program appears to have the largest impact on Latino/Hispanic participants.

Survey	All Completers (n=67)	African American Completers (n=34)	Latino/Hispanic Completers (n=30)
Pre-Class	2.1	2.2	2.1
Post-Class	1.6	1.8	1.4

Respondents who completed the Food Dollars class and participated in the post-class interviews were asked the following open-ended question: “Thinking of the new things you learned in the Food Dollars classes, what was the most useful?” The evaluation team coded these narrative responses into categories, with the 8 items listed in Table 12 below being those that were identified most frequently. Sixty-five of the completers identified one or more items as “most useful” so the total number of responses exceeds the total number of completers and the percentages listed are of the 65 completers who identified one or more items.

Item	Frequency	Percent
Learning about healthy eating and/or how to put it into practice	17	26.2
About available programs (specific or general)	16	24.6
"Everything"	14	21.5
Reading labels - understanding what is in food	11	16.9
How to shop smarter	10	15.4
Using goals	4	12.2
To exercise	4	12.2

The top two items identified as most useful included both aspects of healthy eating and aspects of financial knowledge. Participants seem most interested in programs to help them reduce recurring expenses. This suggests that the pairing of information about healthy eating with information about financial management is an effective strategy. This is particularly encouraging as it was the financial literacy component that underwent the most significant revisions following the 2012 evaluation.

Impact on Financial Literacy: Money Management and Saving

As previously noted, the financial literacy aspects of the Food Dollars curriculum received significant revisions prior to the start of the 2013 classes. Financial literacy is a key component of what the ABCD’s Elder Services Department is trying to achieve in serving this population of low-income adults 50+. It is understood that short-term, or even long-term, courses will not change individual economic status from low-income individuals to middle/moderate income individuals. Rather, the approach is to make participants in the Food Dollars program aware of – and utilize – the resources and benefits they are eligible for on the basis of their age and low-income status.

There were three major ways that the Food Dollars program tried to improve the financial literacy of participants. The first was to teach a series of financial management skills that included preparing a monthly budget and/or a food budget, preparing a shopping list before shopping, using coupons and buying items on sale, and saving grocery receipts to increase awareness of food purchases and food costs.

Although some of those who enrolled in the Food Dollars class had been managing their money and food budgets well, some had not, and the program produced some substantial gains. For example, the money management skill of making a grocery list before shopping – so as to avoid buying unnecessary or unhealthy products – was used by half the group (49.2%) before the classes, and

three quarters of the group (76.1%) after the classes, a 26 point increase. Similarly, almost half the class was saving and reading grocery receipts, and there was a 14 point increase in those who adopted that practice after the classes. The greatest change, was in the practice of using coupons: only 30% of the completers were using coupons before the class, and well over half the completers were using coupons after the taking the program as shown in Table 13.

Financial Skill	Pre-Class	Post-Class	Increase/Percent Change
Makes Grocery List	49.2	76.1	+26.9/54.7
Buys Items on Sale	70.2	82.1	+11.9/16.9
Uses Coupons	29.9	46.2	+16.3/54.5
Saves Receipts	46.2	59.7	+13.5/29.2

There is evidence that there were changes in tracking weekly and monthly food expenses, although to differing extents. For example, some described their pre-class practice of meandering through all the middle aisles of their grocery store and picking up things they did not really need and/or were unhealthy. In the Food Dollars classes enrollees were taught to focus their shopping in the outer aisles of their grocery store, as those aisles contain most of what they need for healthy eating. A number of completers commented anecdotally that they never understood that grocery stores were organized in this manner. All of these factors taken together comprise a savings strategy that helps to keep adults 50+ away from foods with little nutritional value and high cost.

Impact on Financial Literacy: Awareness and Use of Food Assistance Programs

Another way that enrollees were taught to “stretch” their food dollars was to make them aware of a number of community-based food assistance programs and encourage them to use those programs. These types of programs fall into four major categories: 1) getting money for buying groceries at supermarket rates through SNAP (Supplemental Nutrition Assistance Program); 2) getting highly discounted food through \$2 grocery bag programs that are delivered directly to public housing buildings, churches and other venues; 3) getting free groceries through local food banks and food pantries; and 4) participating in free meal programs, such as congregate meals available Monday through Fridays at various community sites, or Meals on Wheels, delivered to the homes of frail elders. Table 14 shows that knowledge of these programs had increased across the board after the Food Dollars classes. (Note: some adults 50+ used more than one of these programs.)

As Table 14 demonstrates, there was an increase in knowledge of community-based food resources in every category. There were particularly strong increases in knowledge, in the 25-30 percentage point range, for four food assistance program areas, the largest increase in knowledge being knowledge of the congregate meal programs. This is a promising outcome because these meals are often free of charge, and if more people used these programs they would save money on one meal a day, potentially resulting in cumulative monthly saving in food costs. Although about 60% of participants were aware of the \$2 bag program prior to classes, over 85% knew about this program after the class. This is a 41% increase in the number of participants who are aware of the program.

Table 14. Knowledge of Food Assistance Programs (n=67)			
	Pre-Class Percent	Post-Class Percent	Percentage Point Increase
Food Pantry	59.7	62.7	+3.0
Brown Bag Program (Free)	29.9	47.8	+17.9
\$2 Bag Program	61.2	86.6	+25.4
Congregate/Community Meals	34.3	65.7	+31.4
Boston Bounty Bucks	3.0	29.9	+26.9
Farmer's Market	73.1	86.6	+13.5
Farmer Market Coupon Program	35.8	65.7	+29.9
Farms to Family	7.5	22.4	+14.9
Community Garden	44.8	68.7	+23.9
Soup Kitchen	34.3	50.7	+16.4

The increases were less dramatic in term of increased use of these food assistance programs. There were marked increases for three programs: the use of two programs almost doubled – the \$2 Bag Program (26.9% to 50.7% - an 88% increase) and the Farmer’s Market Coupon Program (11.9% to 22.4% - also an 88% increase). However, those percentages show that the Farmer’s Market Coupon Program is still very underutilized, with just over a 20% of completers using it. This may be because people do not know that SNAP dollars can be used at Farmer’s Markets or because Farmer’s Markets are still relatively new in inner-city neighborhoods and many adults 50+ are not used to doing grocery shopping there. In either case, more Food Dollars class time being spent on explaining the newer food assistance programs – such as Farmer’s Markets, Community Gardens and Farms to Family, a CSA program (Community Supported Agriculture) – would be beneficial as they all provide access to nutritionally important fruits and vegetables. Participation in neighborhood community gardens is potentially one of the most beneficial food assistance programs because the food that is grown and harvested is free – except for the cost of buy seeds at the start of the growing season – AND the opportunities for exercise and social interaction are plentiful. All three of these benefits are not only consistent with the goal of healthy eating, but also ABCD’s and AARP’s overarching goal of healthy aging.

In 2013 ABCD put much more emphasis on SNAP in the Food Dollars curriculum. Staff not only taught about SNAP during class time, but also offered to meet with Food Dollars participants after the program to help graduates apply for SNAP, renew their SNAP benefit, or increase the amount of their SNAP benefit. There was a high level of knowledge about SNAP – 95.5% of the completers already knew about it before the classes and a little over half of the enrollees had used SNAP in the past. There was an increase in the use of SNAP between the pre- and post-class interviews, but that only includes eight individuals. This number is consistent with the number who were actually counseled by ABCD staff: of that group, three participants received SNAP after the program; two participants were denied SNAP after applying; and three participants still had SNAP applications pending – a total of eight people.⁵² Completers were asked in the pre-class interview, “Would you like assistance with SNAP?” Twenty-six individuals, almost 40% of the class, said “yes.” In other words, there was a lack of correspondence between the number of completers who said they wanted assistance with SNAP and the number who actually sought it. Perhaps the reason for this gap is due to the fact that this was the first time that ABCD staff offered this service to Food Dollars

participants. Perhaps there is some stigma attached to seeking this benefit. Hopefully next year, as the Food Dollars Program continues and moves into new neighborhoods, the method for SNAP application assistance can be refined and more of those who asked for assistance can be served. Clearly this is an area of need among those who take the Food Dollars classes.

Financial Literacy: Non-Food Discounts and Benefit Programs

The third approach to increasing financial literacy among adults 50+ was to teach enrollees about programs that could save them money related to their housing and utility expenses, transportation, and medical expenses.⁵³ Completers were asked about a number programs related to their housing expenses, particularly heating cost, which can be burdensome for those who do not live in subsidized housing where heat and electricity cost are included in the rent. Their responses are summarized in Table 15.

Table 15. Knowledge of Discount Utilities Programs (n=67)			
	Pre-Class Percent	Post-Class Percent	Percentage Point Increase
ABCD Fuel Assistance	83.6	83.6	0
LIHEAP	49.3	73.1	+23.8
Discount Heat/Electric Rates	56.7	74.6	+17.9
Arrearage management (NStar & National Grid)	19.4	47.8	+28.4
SAFELINK	77.6	80.6	+3.0
LifeLine & LinkUp	38.8	53.7	+14.9
Senior Cable TV Rates	41.8	58.2	+16.4
Circuit Breaker Tax Credit	17.9	32.8	+14.9

As Table 15 shows, some of these programs were already well known to enrollees in the Food Dollars Program, particularly ABCD's Fuel Assistance Program and SAFELINK cellphones. However, there were some programs of which very few participants were aware before the classes and many more remembered learning about after the classes. The greatest awareness gains were for the Arrearage Management Programs offered by NStar and National Grid, programs that help people who are behind in paying their heat and electric bills. Only about 20% of the completers had heard about the program before the classes, whereas almost half of completers reported they are now knowledgeable about the program, an increase of over 145%.

Enrollees were also asked what they had learned about programs that provide information about health insurance or assist those on Medicare with saving money on medical expenses. Their responses are summarized in Table 16. To provide some context for understanding these findings, there are two important issues to clarify. One is that a high percent of completers had one or more nutrition related diseases: 80% report having heart disease; two thirds of the group report having osteoporosis, a deterioration of bone density; 60% report having diabetes; and a little over a third of the group reported having high cholesterol and/or high blood pressure. The second is that 40 of the 67 completers (59.7%) reported having Medicare/Medicaid/MassHealth but no private Medigap insurance to cover expenses not covered by these programs.

	Pre-Class Percent	Post-Class Percent	Percentage Point Increase
Mayor's Health Line	26.9	47.8	+20.9
Extra Help Program	6.0	31.3	+25.3
Health Safety Net	23.9	37.3	+13.4
Medical Hardship Waiver Program	6.0	31.3	+25.3
SHINE	29.9	68.7	+36.8

On the positive side, two programs that help with medical expenses were virtually unheard of before completers took the Food Dollars classes – the Extra Help Program and the Medical Hardship Waiver – and over 4 times as many completers knew about each of these programs after the classes as had known about them before. On the other hand, this still means that less than one third of the completer group had any level of knowledge of these programs after the classes.

The number of completers who reported learning about SHINE, a resource line that provides free information and counseling about health insurance issues, was high. Less than a third of the completer group had heard of SHINE before the classes, and over two thirds reported they were knowledgeable about SHINE after the classes; this was an over 100% increase. However, the percentage of completers who had used SHINE, or were planning to use SHINE after the classes, was very low, only 3%.

Given that a large majority of enrollees have nutrition-related diseases (92.1% have one or more conditions that require prescription medications), and that almost one-third (30%) were paying for some kind of Medicare supplemental insurance, there are many enrollees with recurring medical expenses who could benefit from these medical savings and discount programs, as well as health insurance information. These findings imply a need to explain these health-related programs, and their potential financial benefits in greater detail. In addition, the reality of how difficult it is for someone on a fixed income to incur any additional medical expenses, and the large number of completers in that situation, also speaks to the need to more thoroughly explain these programs in the Food Dollars classes.

The third set of non-food discount programs reviewed in the evaluation pertained to transportation. Enrollees were asked both before and after the classes about different subsidized transportation programs, including whether they had learned about these programs in class, and whether they use these programs. Their responses are summarized in Table 17.

	Pre-Class Percent	Post-Class Percent	Percentage Point Increase
Senior Shuttle	70.1	85.1	+15.0
MBTA Senior/Disabled Pass	83.6	91.0	+7.4
Discount Taxi Coupons	29.9	80.6	+50.7
Kit Clark Van	44.8	61.2	+16.4
Friendship Works Med Escort	9.0	34.3	+25.3

A large majority of the enrollees in the Food Dollars program were familiar with these transportation programs before the classes, with the exception of Discount Taxi Coupons. Less than a third of completers had heard of this program before the classes, while 80% report knowledge of this program after the classes, an increase of well over 100%. Unfortunately, the findings on use of these transportation programs remained low after the classes, with the exception of the MBTA Senior Pass, where fewer completers reported using the Pass after the classes than before the classes. The low rates of usage are somewhat surprising, given that the knowledge of these transportation programs is quite high. These finding may indicate several things. First, some elders do not like to travel in taxis or vans that are designated specifically for the elderly. Second, more people used the MBTA and this seems to confirm dislike of age-segregated transportation, as elders can ride the MBTA with people of all ages. One of the positive impacts of the Food Dollars program is that while 37% of completers gave detailed information about their problems with transportation before the class, only 8.3% continued to cite transportation problems as a barrier to healthy eating after completing the class.

Financial Literacy Gains Through the Eyes of the Food Dollars Completers

Thus far we have presented gains in financial literacy using pre-class and post-class data to discern gains and losses – and we found mainly gains, especially in adopting financial saving strategies at the grocery store and in knowledge of food assistance programs and utility discount programs in the community. Another way to understand how much was learned is to see what the completers say about themselves. Completers were asked, both before and after the classes, to “grade” themselves as money managers. Table 18 represents how the completers graded themselves.

Grade	Pre-Class Percent	Post-Class Percent	Increase or Decrease/ Percent Change
Good Money Manager (A)	40.3	44.8	+4.5/11.2
Improving as Money Manager (B)	28.4	37.3	+8.9/31.3
Average to Poor (C,D,F)	31.4	17.9	-13.5/43.0

This table shows that more completers gave themselves an A or a B after the classes, and fewer completers gave themselves a C or below. One might say that the completers are “hard graders,” nevertheless these grades reflect their own sense of learning and accomplishment as Food Dollars graduates.

Classroom Experience

The adults 50 years and older who completed the Food Dollars program were very enthusiastic about the classes themselves. They were asked a series of questions during their post-class interviews about the clarity of the materials, the style of the teaching, and other aspects of the student experience in the classroom: responses were very positive overall, with the vast majority of students ranking most aspects of the classes in the top two categories – “Always” and Most of the Time.” Table 19 below summarizes these rankings.

Class Content/Class Atmosphere	Percent of Completers by Rating Category			
	Always	Most of Time	Sometimes	Never
Information presented clearly	85.07	11.94	2.99	0
Information useful to you	59.7	29.85	10.45	0
Able to ask questions	79.1	14.93	5.97	0
Questions were answered	77.61	20.9	1.49	0
Students encouraged to participate	89.55	8.96	1.49	0
Peer-to-peer support encouraged	70.15	17.91	7.46	2.99

The students were also asked to “grade” the quality of the handouts, as extensive time was put into preparing materials that the students could take home and keep for future reference. Half of the completers (34) reported the handouts were of “high quality” another 40% (27) that they were of “good quality, and less than 10% (6) that they were only “average.” These answers for the whole completer group held true among African American and Latino/Hispanic completers as well.

SMART Goals

As mentioned earlier, one of the most important methods used by the Food Dollars teachers was goal setting. That is, getting the elders to translate the knowledge they learned in class into their own daily routines of food shopping, cooking and eating. To assist enrollees in making the linkage between knowledge and practice, students were asked to set themselves weekly SMART Goals (Specific, Measurable, Achievable, Realistic and Time-bound) at the end of each class, and report on their progress at the beginning of the next class. This not only encouraged the individual students to take the process of change seriously, but also encouraged them to interact and offer each other support. In this way, those enrollees who said their goals were “fully” or “mostly” achieved could get positive affirmation from the group, and those who had not reached their goal could get encouragement to do better next time.

In the post-class interviews, completers were asked a general question about the SMART goal process, as well as some specific questions about their own progress. The students were very positive about the overall use of this method with 85% of completers rating the exercise as “very” or “mainly” useful. The respondents reported the results of their first health-related SMART goal exercise, as shown in Table 20. Almost 90% achieved this first SMART Goal, either fully or mostly.

Achievement Level	Percent of Completers
Fully	51.6
Mostly	37.5
Partly	7.8
Not at All	3.1

The most common reasons given for being successful in achieving SMART goals were knowledge and tools from the class (21 people), being mindful and paying attention to what one was eating or buying (14 people), and being motivated by or receiving the support from classmates (12 people). Among the most common reasons given for not achieving SMART goals was the lack of time or

focus to make the change, not liking to eat a particular “healthy food” that was being encouraged and having physical limitations.

The classes also used the method of SMART goals to help participants identify problems and set goals for financial literacy. Of the 47 who did, one third set goals around the use of sales, coupons or other kinds of discounts for food, about 20% set goals around saving grocery receipts after they shopped, another 20% set goals to apply for SNAP or use their existing SNAP benefits, and 15% set a general goal of saving money.

Table 21. Financial Literacy and SMART Goals, Post-Class (n=47)

SMART Goal	Frequency	Percent
Using sales, coupons, and discounts	16	34
Saving Grocery receipts	9	19
To apply for or use SNAP benefits	9	19
To save money	7	15
Other financial goals	6	13

Of the 47 completers who set one or more financial SMART goals, 45% reported they “fully achieved” their goal and 40% reported they “achieved most of it.” This is an impressive achievement by 85% of completers. Some individuals identified specific strategies they learned in class as the reasons they achieved the financial SMART goals they had set for themselves. These included shopping the perimeter of the grocery store, setting up direct deposit of social security checks to make it easier to save money, buying less food, and shopping less frequently to avoid spoilage and waste. Six people credited getting on SNAP, or starting to use SNAP benefits, as instrumental in being able to save money on food.

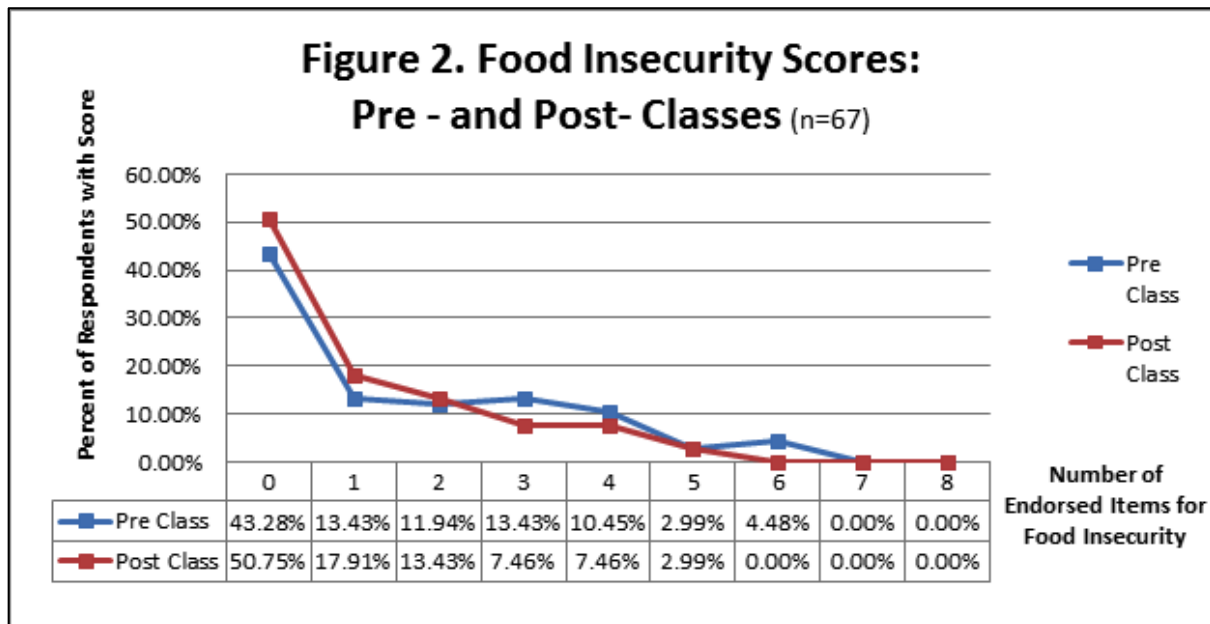
In sum, the high degree of enjoyment and learning in the Food Dollars Program was captured in the responses of enrollees to the question, “Would you recommend the Food Dollars Program to a family members, friend or neighbor?” to which 95.4% responded, “Yes.” This is a clear endorsement of the program from a pedagogical perspective, and points to the importance of doing these kinds of programs in a group setting where peer-to-peer support is encouraged. This endorsement also has the potential to help with future recruitment – perhaps graduates could become “Food Dollars Ambassadors” and help to spread the word about the program to other low-income elders in their neighborhoods.

Participants’ answer to the question, “Would you like to meet on an on-going basis with other adults 50+ to discuss topics covered in the Food Dollars classes?” also suggests the potential for such recruitment. Almost three quarters of the completers said “yes.” These responses indicate that ABCD’s pilot program to establish “Good Life Healthy Living Clubs” for low-income elders should be expanded. Involving Food Dollars graduates in these clubs could facilitate recruitment while sustaining the positive outcomes of the program.

V. SYSTEMIC ISSUES: Can Short-Term Community Trainings Impact Long-Term Issues?

Hunger and Food Insecurity: Before and After

The pre-class and post-class interviews provide a detailed look at the issue of food insecurity within the completer group. The evaluation team created a food insecurity score using enrollees' answers to eight of the USDA-developed food insecurity questions where the highest level of food insecurity was eight and the lowest was one, with zero indicating a lack of food insecurity.⁵⁴ In this scoring system, questions could be answered "always," "most of the time," "rarely" or "never." We coded "always" and "most of the time" as affirmative responses and "rarely" and "never" as negative. Although the USDA relies on affirmative responses to at least three questions to qualify as being "food insecure," a recent article suggested that an affirmative response to any question should qualify as indicating some degree of food insecurity.⁵⁵ The percentage of adults 50+ with each score is depicted in Figure 2.

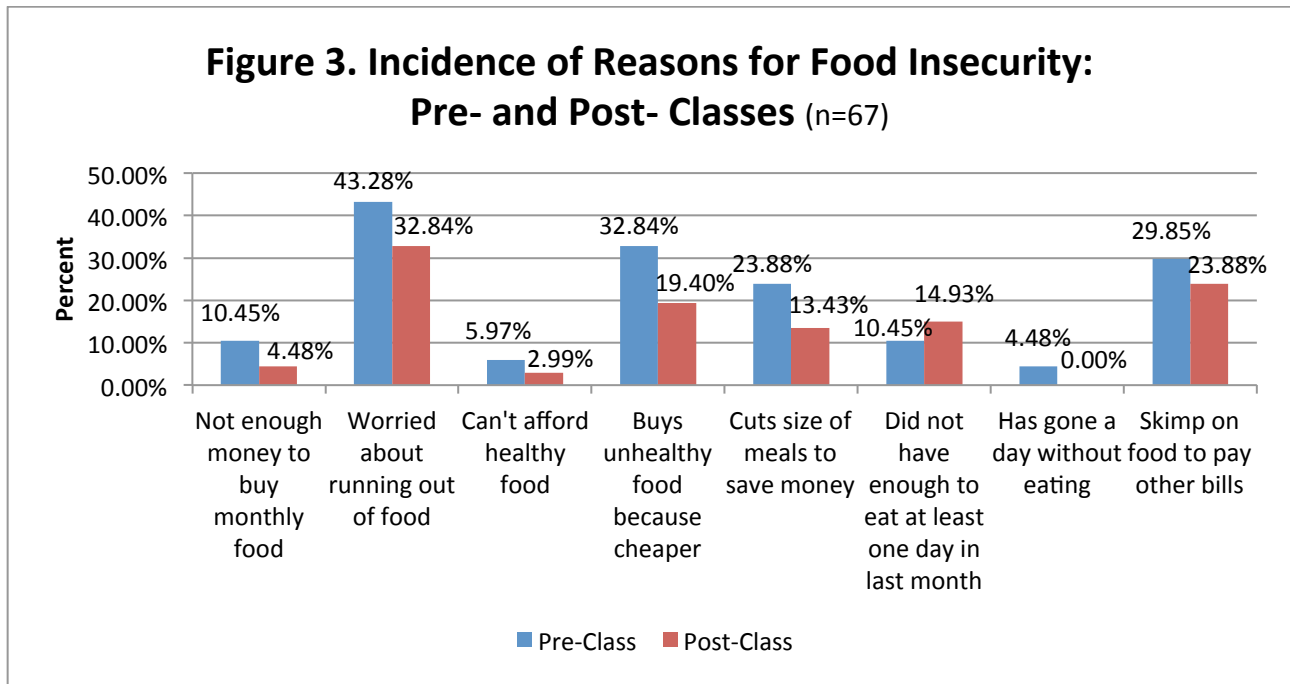


Before the classes, over half of the participants (56.8%) had some level of food insecurity. The pre-class average for the whole group was 1.6. After the classes, the average food insecurity score had dropped to 1.1 for entire completer group, a statistically significant decline ($p \leq 0.05$).

In addition, there was significant difference between the mean scores of African American and Latino/ Hispanic participants. Before the classes, African American participants had a mean food insecurity score of 1.0, while Latino/Hispanic participants had a mean food insecurity score of 2.1 ($p \leq 0.05$). There continued to be a statistically significant difference in the mean food insecurity scores between these two subgroups after the classes: African Americans had a post-class score of 0.6 and Latino/Hispanics had a post-class score of 1.6 ($p \leq 0.01$). Thus the overall drop in food insecurity reflects the decreased food insecurity experienced by the Latino/Hispanic completers, and shows that the Food Dollars program had a particularly beneficial impact on that group.

The low aggregate level of food insecurity is somewhat misleading. By looking at the reasons people gave as indications of their inability to buy healthy food on a regular basis, a different

picture emerges. Figure 3 summarizes both the reasons people gave for being food insecure and the difference between pre-class and post-class scores. This figure shows that a large portion of the completer group was experiencing food insecurity in four areas. Before the classes, 42.3% of the completer group was worried they would run out of food before the end of the month, that is before they got their next social security check. About one third of the group said that in the previous month they bought food they considered unhealthy because that was all they could afford to buy. Almost 30% reported they skimped on food purchases in the previous month due to bills, debts and other expenses. And almost a quarter (23.8%) reported that they cut the size of their meals or skipped meals to save money in the previous month. Although there were fewer elders experiencing these problems after the classes than before, 50% of the completers were still experiencing one or more reasons for being food insecure.



Of critical importance is that the percentage of enrollees experiencing these indicators of food insecurity dropped after the Food Dollars program in seven out of eight categories. *This, along with the overall drop in the food insecurity score, provides important evidence of the positive impact of the Food Dollars Program.*

In terms of differences in the patterns of food insecurity among African Americans and Latinos/Hispanics some interesting patterns emerged. In the two areas where the most participants indicated food insecurity – “worrying about running out of food before the end of the month” and “buying unhealthy food because it was more affordable” – more Latino/Hispanic than African American participants answered affirmatively to these reasons. This is consistent with the findings on economic insecurity showing that more Latino/Hispanic participants relied solely on social security for income and were, in general, less financially secure.

Economic Insecurity: Before and After

The pre-and post-class interview data also provide a look at the extent of economic insecurity in this population of adults 50+. Similar to our approach for measuring food insecurity, we constructed a scoring system with five indicators in which a 5 represents a high level of economic insecurity, and 0 represents a low level of economic insecurity. The five indicators were:

- Lives in public or subsidized housing
- On a fixed income with no retirement income from former employer
- On a fixed income with no personal savings
- On Medicare/Medicaid/MassHealth with no Medigap insurance
- Does not receive any financial support from other family members

It should be noted that we did not ask people directly about the dollar amount of their monthly incomes because self-reported data on this topic are considered highly unreliable, and because we thought that a more indirect approach might be considered less invasive. We asked each enrollee whether her/his income was fixed or variable, and then asked him or her to name all the sources of their income. We asked some additional questions related to housing, financial assets and medical expenses. The mean economic insecurity score was 3.3 overall, with African American participants having a statistically significant ($p \leq 0.01$) lower mean score of 2.8 compared to Latinos/Hispanics, with a mean score of 3.8. Table 22 shows that over two-thirds of enrollees (48 out of 67, 71.6%) had an economic insecurity score of 3 or higher.

Score	Frequency	Percent	Cumulative Percent
0	1	1.5	1.5
1	10	14.9	16.4
2	8	11.9	28.4
3	10	14.9	43.3
4	22	32.8	76.1
5	16	23.9	100.0

Figure 4 provides another way of visualizing the data, and shows that more Latinos/Hispanics (26 out of 30, 86.7%) scored 3 or higher as compared to African Americans (19 out of 34, 55.9%).

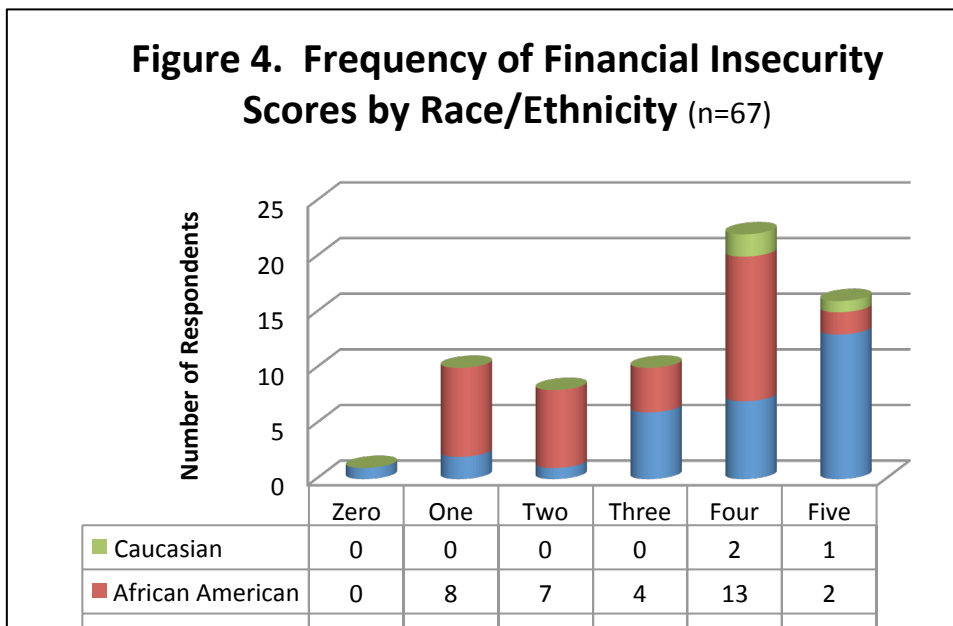
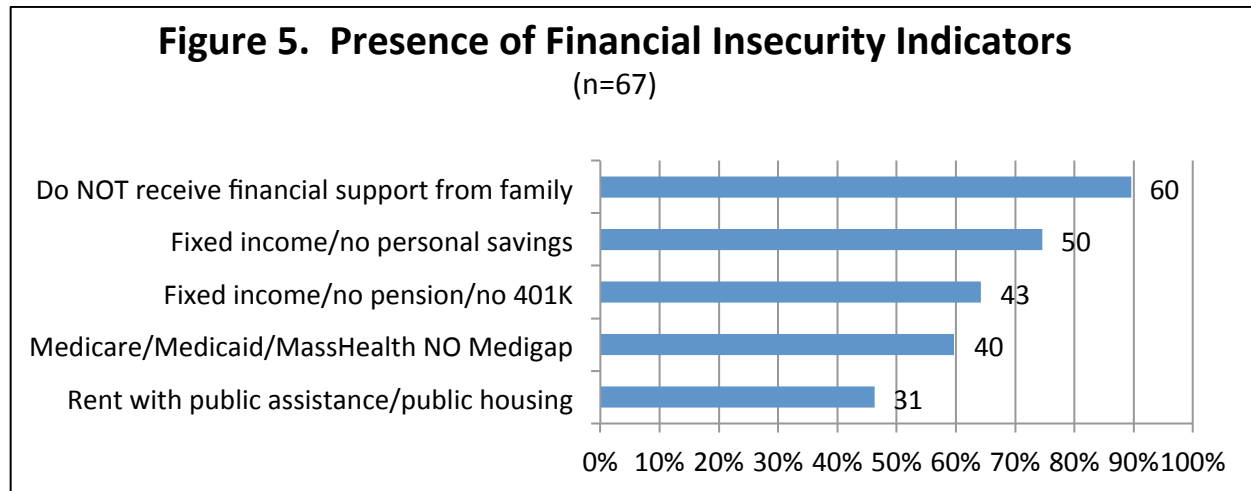


Figure 5 shows the reasons for economic insecurity among the completers. Three of the five indicators were most responsible for the majority of economic insecurity this group experienced. These three indicators include not receiving support from family, living on a fixed income without a pension or any payment from a former employer, and living on a fixed income with no personal savings.



A large majority of these elders (31 out of 67, 46%) live in public housing and/or receive some kind of housing subsidy, although the study sample included seven adults 50+ who rented at market rates (10.6%) and fifteen homeowners (22.7%). None of the elders changed their housing situation after the classes, although some reported changes in either income or expenses. Ten individuals (14.9%) indicated a change in income. For six of these individuals this was a general decrease in income or available money within the home, although one of the six specifically noted it was a reduction in SNAP and another reported that there was a recent loss of employment. Two additional participants were homeowners who noted that their decreased income was due to losing income from tenants.

Thirty-two completers indicated at the time of the post-class survey that although their income had not changed, their expenses – that is what they spend their income on – had changed. Approximately half (46.8%) of the responses about changes in expenses could be characterized as positive. For example, one person reported, “I save more in whatever I have to buy,” another said, “I am buying more with Food Stamps, less with cash.” The other responses referred to increasing expenses due to rising prices for basics like food and utilities. Some had new expenses, such as a recent move, grandchildren taking college classes, or just not having enough money for necessities each month.

In terms of debt, before the classes approximately half of the completers (47.8%) reported that they had some type of debt, and almost 15 % had debts related to medical expenses. After the classes the numbers in both categories of debt dropped (38.8% had some type of debt and 9.5% had medical debt). However, as noted earlier, under gains in financial literacy, there was an increase in knowledge of one type of program related to managing debt, the programs established by NStar and National Grid to manage arrearages. If these programs are used in the future, there may be some lessening of debt for these utilities.

Overall, in the areas of assets and income, Latino/Hispanic participants met more criteria representing risk for or actual financial insecurity. Latino/Hispanic Food Dollars completers were more likely to: live in public housing; be on MassHealth, Medicare or Medicaid without Medigap; to receive SNAP; and to have Social Security as their only source of income. On a positive note, Latino participants were less likely to have nonmedical debt (20% of Latino/Hispanic participants than African American participants (55.9%). These findings may be attributable to a variety of factors beyond the scope of the evaluation: further research is needed.⁵⁶

VI. EVALUATION FINDINGS: Goals and Outcomes

Goals and Outcomes: Summarizing the Impact of the Food Dollars Program

Based on the Logic Model ABCD staff and the Brandeis evaluation team developed in consultation with the AARP Foundation, two major goals were agreed upon. The following section summarizes the extent to which the Food Dollars Program completers made progress toward these goals.

Goal One – Increase Healthy Eating: Knowledge and Practice

The first component of Goal One was to help adults 50+ increase their knowledge of good nutrition and to understand the basic components of healthy eating. This was achieved, but with limited success. Reporting the results of a “nutrition knowledge quiz” in the post-class interviews showed that the average score for the quiz before the class was 19.8 and the average score for the quiz after the class was exactly the same, with a few individuals getting higher scores and a few getting lower scores. However, the percent of completers reading the labels on packaged goods when grocery shopping – a practice that requires a good deal of nutrition knowledge – increased: 60% of the completers read labels before the classes and 80% of the completers read labels after the classes.

The second component was to increase the ability of adults 50+ to know how to buy healthy food when grocery shopping. The most compelling evidence of success on this component is the rise in the “Healthy Shopper” Score after the classes. Post-class data show that 62.7% of the completer group had high scores – in the 8-10 range, whereas only 46% had scores in that range before the classes.

The third component of Goal One was to enhance the ability of adults 50+ to change some of their behaviors related to meal preparation, and to increase their use of healthy oils, healthy spices and healthy cooking methods. This goal was also achieved with mixed success. The best evidence that the classes had a positive impact on cooking ingredients and cooking methods are shown by the fact that there was a 12 percentage point decrease in the method of deep-frying and an increase in the use of healthy oils for cooking, like olive oil and canola oil. Unfortunately, there was a small increase in the use of butter, a “bad fat, when cooking, and a decrease in the use of low-sodium products. Notwithstanding these increases, data collected on the frequency and amount used suggest that the use of butter was limited and the use of low-sodium products occurred frequently.

The fourth component was to increase consumption of healthy foods. Respondents’ answers to multiple questions about healthy eating reflect the overall positive impact of the Food Dollar program. For example, there were increases in the consumption of fresh/frozen fruits and fresh/frozen vegetables. There were also increases in the consumption of low-fat dairy products,

particularly low-fat/non-fat milk and low-fat/non-fat yogurt. On the other hand, the consumptions of protein, like chicken, meat and fish, remained the same after the classes, and consumption of whole grains/fiber decreased after the classes. However, it is also important to look at the data about the SMART Goals exercises, as these provide data on changes that actually occurred during the six weeks of the program. It is interesting to note that a majority of the first SMART goals set by participants were focused specifically on eating more healthy food, drinking more water each day, and/or eating less unhealthy food. Almost 90% of completers “fully achieved” or “mostly achieved” their first SMART Goal, thus providing further evidence that the Food Dollars classes produce individual level behavioral change in healthy eating.

Finally, the completers were asked to “grade” themselves on how healthy their diets were both before and after the classes. The increase in the top two grades (A and B) – and the decrease in lower grades (C, D and F) – provides additional data supporting the finding that the Food Dollars classes positively impacted the goal of increased healthy eating.

Goal Two – Increase Financial Literacy: Skills for saving, knowledge of resources and use of programs and benefits.

The first component of Goal Two was to show growth in completers’ financial management skills. In this area the Food Dollars program produced many positive outcomes. The percentage of completers using money saving practices increased in four categories: making shopping lists before grocery shopping; saving grocery receipts; buying groceries that are on sale; and buying groceries at discount by using coupons. All four practices are helping completers save money and thus have additional dollars to spend on healthy food.

The second component was growth in knowledge of a variety of benefit and discount programs. Increased knowledge of these programs was quite high, particularly for some food assistance programs, utility discount programs and medical expense reduction programs. There are some programs, such as The Ride, SNAP (food stamps) and SHINE that were already familiar to many of the English language enrollees, so promoting awareness of these programs was not needed. However, increased awareness was needed among many Spanish language enrollees.

The third component was to increase the actual use of food assistance programs, discount programs and publicly subsidized benefit programs. Here results were mixed: participants reported limited changes in their use of these programs. In some cases, completers were already using these programs, and in other cases the completers had no immediate need for the program. The time between the last class and the post-class interview may be too limited to show change in use. Hopefully with such strong outcomes in increased knowledge, increased use will follow over time. Particularly important in the future will be getting more people who are eligible to enroll in SNAP.

ABCD staff made significant changes in the financial literacy sections of the curriculum for the 2013 classes, and the findings summarized above show greater financial literacy gains in 2013 as compared to 2012.

The Big Picture

It is important to reflect upon the Food Insecurity Scores and the Economic Insecurity Scores of Food Dollars graduates. Making any movement on either of these measures was more a hope than an expected outcome. *One of the most powerful findings of the evaluation – with solid pre-post data on eight USDA questions – is that the Food Insecurity Score for completers decreased in a measurable and statistically significant way.* This outcome is a significant achievement of the 2013 Food Dollars Program, particularly for Latino completers.

The cumulative effect of lack of economic opportunity cannot be resolved by a six-week training intervention. Because the economic insecurity of Food Dollars graduates is typically the result of a lifetime of limited educational, health and employment opportunities — and the 2012 evaluation revealed no change in economic insecurity after the classes — only pre-class data was collected on this issue in 2013. Nevertheless, the increased financial literacy described above shows that the Food Dollars Program provides a measurable and positive contribution toward moving this group of adults 50+ toward greater economic security. The improved grades on the “money manager” self-scoring exercise also reflect, at the very least, that there is an increased sense of competence in the area of saving money and managing personal finances.

It must also be noted that as a group, Latino/Hispanic completers were more food insecure and more economically insecure than African American completers. Nevertheless, Latino/Hispanic completers also had higher “healthy shopping” scores and higher healthy diet grades (based on self-grading) after the classes. There are many possible explanations for these differences among low-income elders, but these variations certainly suggest the need for additional research. We need more data to ascertain what kinds of interventions would be successful to meet the needs of this culturally and linguistically distinct population.

VII. FINAL REFLECTIONS: Recommendations and Next Steps

The major accomplishments of the Food Dollars Program are in the areas of improving the healthy eating habits of the adults 50+ who completed the course, including shopping for healthy food, using healthy methods and ingredients for cooking, and eating food as recommended by the USDA’s ChooseMyPlate. There were also significant accomplishments in the area of financial literacy, and these show that the revisions made to the curriculum for 2013 were effective in helping to more fully achieve goal two. Overall, the Food Dollars program is having a positive impact on those who completed the program, and the very positive evaluations that completers gave of their classroom experience also bodes well for the future of the program. As ABCD staff is about to expand the geographic reach of the program over the next two years, it is timely to ask, “How can this valuable program be improved?” However, it should be noted that all that has been accomplished to date was staffed by 1.5 FTEs, and any improvements will require more staff and other kinds of resources.

In the spirit of collaboration and with great respect for ABCD staff and what the Food Dollars program has accomplished to date, the evaluation team offers the following recommendations:

- 1. Target Population and Site Selection:** The adults 50+ who were recruited in 2013 have some level of food insecurity, but they are not among the most food insecure in Boston, and are less

food insecure than those who were part of the 2012 evaluation. Working with various non-profit anti-hunger organizations and city government departments, ABCD could identify those elders who need the Food Dollars program the most. As ABCD selects new sites and conducts outreach to new elders, they will have both the challenge of serving a more geographically dispersed population and – hopefully – the benefit of serving more elders in greater need of the Food Dollars Program. Two particular demographic groups that would benefit from new and more effective outreach efforts are men and Latinos/Hispanics of both genders.

2. **Methods of Recruitment**: ABCD’s methods of recruitment had both strengths and weaknesses. The strengths were evident in the number of elders who enrolled in and completed the classes: the retention rate is high for this type of community training program. However, the process of relationship building, with both community partners and the adults 50+ themselves, seemed rushed during many Information Sessions and during the days or weeks leading up to those introductory sessions. More investment of time in partnership building with other non-profits and a more personalized intake process – in which each elder’s situation and need for the program is more fully assessed – would improve retention and strengthen the positive outcomes.
3. **Strengthening Work on Use of Publicly Funded Benefits**: ABCD worked hard to enhance the 2013 Food Dollars program in this area, particularly focusing on SNAP enrollment and renewal, however the results were somewhat mixed. In the pre-class interview, 26 participants indicated they were interested in assistance with SNAP, but only 10 completers actually took advantage of the help that was offered. Some careful analysis of why this happened is needed to improve this part of the program in the future, because increasing the absolute number of dollars that low-income elders have for purchasing healthy food is the most powerful intervention for decreasing food insecurity and increasing healthy eating. ABCD is already exploring collaborating with other organizations to make the process of seeking help with SNAP applications available to more Food Dollars enrollees, and these kinds of partnerships holds promise for expanding SNAP use.
4. **Expanding Healthy Eating Resources and Program Use**: The current curriculum emphasizes a number of food assistance programs, but they are mostly for free or discounted meals and/or groceries, with the exception of SNAP. There are a number of other food resources that could be given more attention, particularly participation in community gardens, shopping at Farmer’s Markets and using CSA (Community Supported Agriculture) programs. These food resources are important for three reasons: 1) They provide local food that is “whole” and nutritionally healthy; 2) They support the local economy; and 3) The urban community garden movement is one that elders of many ages and abilities can participate in: it is also a volunteer opportunity that provides physical exercise and builds social connections. By producing food for themselves and their neighbors in community gardens, elders who become gardeners will help themselves and their neighborhood.

The Evaluation Team also has three suggestions for ABCD to consider as next steps when it expands the program in the years to come:

1. **Provide additional support to Food Dollars Enrollees with Nutrition-related Chronic Diseases**: Minorities in the U.S. have been shown to have poorer medical care overall and

poorer access to high quality health care resources and providers than Caucasians.⁵⁷ How these issues impact, and are impacted by, eating are complex issues, but we do know that minorities are disproportionately represented among those with nutrition-related chronic illnesses such as diabetes, high blood pressure and heart disease. ABCD should consider revisions to the healthy eating component of the Food Dollars curriculum to more fully address the healthy eating needs of these subgroups. Partnering with more federally qualified community health centers and working more closely with specialists in nutrition-related chronic diseases could yield new ideas for the curriculum and provide guidance to enrollees when setting their SMART goals.

2. **Sustainability and Peer-to-Peer Networks:** The impact of the Food Dollars program on its graduates was only measured 2-4 weeks after the last class. Follow up interviews conducted six months after the last class would help to determine the sustainability of positive outcomes. During 2013, ABCD staff piloted a neighborhood-based “Good Life Healthy Living Club” in Dorchester for Food Dollars graduates and others interested in healthy aging living nearby. If this pilot is successful, it can be expanded and replicated in other neighborhoods.
3. **Coalition Building and Public Policy:** Are healthy eating and food security for low-income elders the personal responsibility of individual elders? Or is this a public policy challenge for Boston, the Commonwealth of Massachusetts and the nation? We believe the answer is “yes” to both. ABCD is already working with aging service providers, anti-hunger non-profits and health care providers through the very effective statewide SNAP coalition. We encourage ABCD and all those organizations and individuals to create a coalition that can address SNAP and other hunger related issues for elders. As the leading anti-poverty agency in Boston, ABCD can continue to provide leadership and advocacy for low-income Bostonians who are food insecure. Food Dollars creates change on an individual level, and a multi-sector coalition can address change on a systemic level. Both are important and can complement one another: low-income elders in Boston deserve nothing less.

APPENDIX A:**US Department of Agriculture (USDA) Food Insecurity Indicator Questions**

(I/We) worried whether (my/our) food would run out before (I/we) got money to buy more.	Often true Sometimes true Never true
The food that (I/we) bought just didn't last, and (I/we) didn't have money to get more.	Often true Sometimes true Never true
(I/we) couldn't afford to eat balanced meals.	Often true Sometimes true Never true
(I/we) relied on only a few kinds of low-cost food because (I was/we were) running out of money to buy food.	Often true Sometimes true Never true
Did (you/you or other adults in your household) ever cut the size of your meals or skip meals because there wasn't enough money for food?	Yes No
Did you ever eat less than you felt you should because there wasn't enough money for food?	Yes No
How often did (you/you or other adults in your household) cut the size of your meals or skip meals because there wasn't enough money for food?	Almost Every Month Some, but not every month Only 1-2 Months
Were you ever hungry but didn't eat because you couldn't afford enough food?	Yes No
Did you lose weight because you didn't have enough money for food?	Yes No
Did (you/you or other adults in your household) ever not eat for a whole day because there wasn't enough money for food?	Yes No

Source:

<http://www.ers.usda.gov/topics/food-nutrition-assistance/food-security-in-the-us/measurement.aspx#survey>

APPENDIX B:**Demographic Profile of Food Dollars Participants Interviewed for the Evaluation**

	Enrollees with Pre-class Interview (n=97)	Completers with only Pre-class Interview (n=78)	Completers with Pre- and Post-class interviews (n=67)	Non-Completers with Pre-class Interview (n=19)
AGE	(n=91)	(n=74)	(n=64)	(n=17)
60 or younger	12.09	12.16	12.5	11.76
61-65	18.68	17.57	15.53	23.53
66-70	29.67	31.08	26.69	23.53
71-75	15.38	13.51	14.06	23.53
76-80	9.89	10.81	10.94	5.88
81 and older	14.29	14.86	17.19	11.76
RACE/ETHNICITY	(n=96)			(n=18)
African American	53.13	48.72	50.75	72.22
Latino/Hispanic	43.75	47.44	44.78	27.78
White or other	3.13	3.85	4.48	0
GENDER				
Male	20.62	14.1	13.43	47.37
Female	79.38	85.9	86.57	52.63
LIVING ARRANGEMENTS				
Live alone	54.64	50.0	44.78	73.68
Live with one other	20.62	21.79	23.88	15.79
Live with two other	14.43	15.38	17.91	10.53
Live with three or more	7.22	8.97	8.96	0.0
Live with others, number unknown	3.09	3.85	4.48	0.0
EDUCATION	(n=91)	(n=75)	(n=64)	(n=16)
K-8th grade	19.78	24.0	23.44	0.0
9-12/non-graduate	7.69	8.0	9.38	6.25
High School graduate	30.77	30.67	29.69	31.25
Some college/2 year degree	23.08	21.33	23.44	31.25
4 year degree/graduate degree	18.68	16.0	14.06	31.25

APPENDIX C:**Food Dollars Program Advisory Committees, 2013****Advisory Committee Members****Pat Baker**

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Massachusetts Law Reform Institute

Maria Infante

Director of Community Outreach
Project Bread

Allison Mulvaney

Dietitian Consultant
Food Dollars Program

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APPENDIX D:

Evaluation Design and Methodology

The Evaluation Team was composed of faculty and graduate-level research assistants from the Heller School for Social Policy and Management at Brandeis University and the Center for Women in Politics and Public Policy, a part of the John W. McCormack Graduate School of Policy and Global Studies at the University of Massachusetts Boston. The team designed a three-part evaluation to assess the impact of the Food Dollars program. The overall design can be termed a mixed methods approach with three elements: 1) Pre- and post-class interviews for gathering data from adults 50+ before and after they take Food Dollars classes; 2) a limited process evaluation to document and evaluate the strategies used by Action for Boston Community Development to recruit elders to the program, retain participants through the six-class sequence, and to use pedagogical methods that are interactive and empowering to the elders who participate; and 3) collection of secondary data on the neighborhood characteristics of the four communities in Boston where Food Dollars was taught in 2013.

Methods and Procedures

The pre- and post- evaluation of specific outcomes for those who enrolled in the Food Dollars classes was conducted from May through November. Basic demographic data on each enrollee were also collected by ABCD staff before the classes began, which is a part of their standard intake process. ABCD provided a letter stipulating that they were not collecting these data for research purposes, but only to have a database of who has enrolled in their programs, and made these data available to the Brandeis team solely for purposes of tracking demographics.

For the first phase of data collection, the pre-class survey tool⁵⁸ had a few questions to obtain more detailed demographic data, particularly about type of housing and living situation, followed by three main sections. The first section focused on the enrollees' food routines, such as food shopping, food preparation and food consumption, accompanied by questions to determine their level of food insecurity and pre-class nutrition knowledge. The second section focused on the enrollees' economic status, sources of income, knowledge about benefits for which they may be eligible, and knowledge of a variety of other benefits related to food such as Food Stamps (SNAP). The purpose of many of these questions was to determine their level of financial literacy in relation to maximizing their food dollars. The third section of the survey focused on enrollees' health and health care, including the presence of any diet-related acute or chronic diseases and their health insurance coverage or lack thereof. The pre-class survey was designed to create a baseline of information about enrollees' knowledge and practices related to nutrition, health, eating, and financial literacy.

The post-class survey tool also contained three main sections. Two of them were largely comparable to the first and second main sections of the pre-class survey, and obtained information about post-class food routines and post-class financial literacy. The third main section of the post-class survey was about the participants experience in the class, for purposes of evaluating the class process. Both the pre- and post- class survey also invited respondents to give themselves a "healthy diet" score and a "money manager" score. Both objective and subjective measures were used in order to provide a variety of culturally sensitive ways of determining improvements in healthy eating and overall food security.

The “process evaluation” included collecting data on the recruitment methods used, the number of elders who enrolled in each session, and the number of those who completed and did not complete the Food Dollars classes. In this part of the evaluation, the team also utilized the data collected in the section of the post-class survey in which participants rated the usefulness of the material presented to their situation, the extent to which new information was presented clearly, their view of opportunities for participation, and their level of satisfaction with the trainers’ teaching methods and ability to address their questions and concerns. The process evaluation also included telephone interviews with a few of the community partner organizations.

The collection of secondary data on the conditions in certain Boston communities where classes were held provided geographically specific data and neighborhood context, as it is important for the evaluation of outcomes from the Food Dollars Program to take community factors into account. This has been demonstrated in several previous studies.⁵⁹

The demographic information and pre- and post-class survey responses were entered in data analysis software (Stata 11.2) for analysis. Quantitative analyses included generation of univariate statistics on demographics and various pre- and post- survey measurements. For some questions, bivariate analyses were done to compare survey responses by demographic characteristics. This type of analysis was also used to compare pre- and post- measurements for the sample as a whole.

The methodology used has both strengths and weaknesses. On the one hand the report gives a full description and analysis of how the Food Dollars classes impacted enrollees on a broad range of outcomes related to nutrition knowledge, healthy cooking, shopping and eating practices, and selected aspects of enhanced financial literacy using pre-class and post-class data. On the other hand, some findings are based on self-reported data that places certain limitations on the reliability of the data. There are a number of statistically significant positive outcomes, but there are other findings that suggest, but do not conclusively prove, positive outcomes.

Members of the Evaluation Team

Ann Bookman, PhD, is Director of the Center for Women in Politics and Public Policy, John W. McCormack Graduate School of Policy and Global Studies and a Professor in the Department of Public Policy and Public Affairs, both at the University of Massachusetts Boston. She is also a Senior Research Scientist at the Heller School for Social Policy and Management at Brandeis University.

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Aileen Charleston is a Development Associate for Institutional Support at Oxfam America. She holds a dual Master’s in Sustainable International Development and Coexistence and Conflict from the Heller School for Social Policy and Management at Brandeis University.

Jessica Togli is Research Assistant at the Center for Women in Politics and Public Policy at the University of Massachusetts Boston. She holds a Master’s degree in Sport Studies from Miami University in Ohio.

APPENDIX E:**Food Insecurity by Food Pantry Use by Neighborhood***Compiled by the Greater Boston Food Bank***Food Pantry Distribution in Boston 2013**

Neighborhood	Clients*	Meals**
Allston/Brighton	3,476	212,343
Back Bay	128	9,205
Bay Village	76	7,221
Beacon Hill	9	513
Charlestown	1,525	259,749
Chinatown/Leather District	4,678	315,996
Dorchester	61,681	2,873,505
Downtown/Financial District	124	12,031
East Boston	2,442	126,976
Fenway/Kenmore	130	6,566
Hyde Park	15,726	454,959
Jamaica Plain	6,333	270,820
Mattapan	23,298	1,427,984
Mission Hill	1,168	69,058
North End	67	6,221
Roslindale	4,973	225,002
Roxbury	23,925	1,034,648
South Boston	15,923	343,106
South End	10,003	408,889
West End	280	3,774
West Roxbury	581	18,774
Boston (unknown neighborhood)	155,170	2,010,410
Total	331,716	10,097,750

* Number of clients as reported by GBFB partnered food pantries and other direct to client, grocery-style distribution partners. May contain duplication due to unique clients being served by multiple food pantries.

**Number of meals distributed estimated based on pounds distributed and client data obtained from GBFB partnered food pantries and other direct to client, grocery-style distribution partners.

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We thank Maggie Biscarr, our Program Officer at the AARP Foundation, for her support, her insights in to strengthening the Food Dollars program and the evaluation, and for connecting us to other grantees across the United States from whom we can learn.

We thank the Advisory Committee members who volunteered their time and contributed their expertise. We especially thank Shirley Chao, Director of Nutrition for the Executive Office of Elder Affairs for her thoughtful input during various stages of the evaluation process.

We thank all the community-based organizations, and their staff, for hosting the Food Dollars program at their sites (in alphabetical order). The staff helped publicize and recruit residents for the classes, and arranged interview space that provided privacy for interviewees. Their support was essential:

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 YMCA of Roxbury, Katherine Saunders

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Endnotes

¹ <http://www.choosemyplate.gov/food-groups/>

² Bookman, A., Leutz, W. and Bercaw, L. (2013). *An Apple A Day: Promoting Healthy Eating and Reducing Food Insecurity Among Low-Income Elders, An Evaluation of the Food Dollars Program*. Boston, MA; Action for Boston Community Development.

³ All findings, except for the completion rate, are based on a sample size of 67. This is the number of adults 50 years of age and older who not only completed the program, but also had both pre- and post-class interviews.

⁴ An “enrollee” is someone who came to an Information Session in their neighborhood and signed up to take the 6-week Food Dollars program. A “completer” is someone who attended all six classes, or attended four or five and had telephone “make up” sessions to cover material in the classes they missed.

⁵ This is the second year in a row that the Food Dollars program has helped to decrease food insecurity. It should be noted that the 2013 enrollees as a group were less food insecure than the 2012 group.

⁶ The names, as well as a few details about these individuals, have been changed to protect their privacy and the confidentiality of the information they provided.

⁷ Ziliak, J.P. & Gunderson, C. (2011). *Food insecurity among older adults - Policy brief*. Washington, DC: AARP Foundation.

⁸ Ibid.

⁹ *Hunger in America 2010*. Feeding America and Mathematica Policy Research. Washington, DC, February 2010.

¹⁰ Ziliak, J.P. & Gunderson, C. (2011). *Food insecurity among older adults - Policy brief*. Washington, DC: AARP Foundation.

¹¹ Project Bread. (2011). *Status Report on Hunger*. Boston, MA: Project Bread.

¹² Coleman-Jensen, A.J. (2010). U.S. Food Insecurity Status: Toward a refined definition. *Social Indicators Research*, 95: 215-230.

¹³ Burge, K. (5 Dec 2013) The Changing Face of Hunger. *The Boston Globe*.

¹⁴ Hodinott, J. (1999). *Choosing outcome indicators of household food security*. Washington, DC: International Food Policy Research Institute.

¹⁵ Ibid.

¹⁶ Riely, F., Mock, N., Cogill, B., Bailey, L., & Kenefick, E. (1999). *Food security indicators and framework for use in the monitoring and evaluation of food aid programs*. Retrieved from: www.fantaproject.org/downloads/pdfs/fsindctr.PDF.

¹⁷ United States Department of Agriculture, Economic Research Service. (16 November, 2009). *Food Security in the United States: Measuring household food security*. See: <http://www.ers.usda.gov/Briefing/FoodSecurity/measurement.htm>.

¹⁸ Ibid

¹⁹ United States Department of Agriculture. (2000). *Core food security module questions and answer categories*. Retrieved from: www.ers.usda.gov/publications/fanrr11-1/fanrr11_1b.pdf.

²⁰ Coleman-Jensen, A.J. (2010). U.S. Food Insecurity Status: Toward a refined definition. *Social Indicators Research*, 95: 215-230.

²¹ Ziliak, J.P. & Gunderson, C. (2011). *Food insecurity among older adults - Policy brief*. Washington, DC: AARP Foundation.

²² Ibid. The authors define marginal food insecurity as one or two affirmative responses, food insecurity as three or four affirmative responses, and very low food security as affirmative responses to five or more questions.

²³ Hacker, J. et al. (2012). *Economic Insecurity Across the American States: New State Estimates from the Economic Security Index*. New York: The Rockefeller Foundation.

²⁴ Ibid. Estimates are based on comparing two consecutive years of findings from the national Current Population Survey (CPS). These are the same data used to measure federal and state levels of poverty and unemployment.

²⁵ Ibid, page 9.

²⁶ Western, B., Bloome, D., Sosnaud, B. & Tach, L. (2012). Economic Insecurity and Social Stratification. *Annual Review of Sociology*. 38: 341-359.

²⁷ <http://www.umb.edu/gerontologyinstitute/publications/retirement#EESS>

²⁸ Wider Opportunities for Women. (2012). *Doing Without: Economic Insecurity and Older Americans*. Washington, DC: Wider Opportunities for Women.

²⁹ Meschede, T., Sullivan, L. & Shapiro, T. (2009). *Living Longer on Less in Massachusetts: The new economic (in)security of seniors..* Waltham, MA: Institute on Assets and Social Policy-Demos.

³⁰ Meschede, T., Shapiro, T. & Wheary, J. (2011). *From Bad to Worse: Senior Economic Insecurity on the Rise*. Waltham, MA: Institute on Assets and Social Policy-Demos.

³¹ U.S. Census Bureau, 2011 American Community Survey.

³² See www.bostonindicators.org

³³ Greater Boston Food Bank & Feeding America. (2010). *Hunger in Massachusetts*.

³⁴ For more detailed information about the mission and programs of ABCD, Inc., see their website: www.bostonabcd.org/

³⁵ Please see Appendix C for a full list of the members of the Nutrition Committee.

³⁶ <http://www.ncoa.org/enhance-economic-security/economic-security-Initiative/savvy-saving-seniors/savvy-saving-seniors.html>

³⁷ APCO Insight. (2008). *It's Dinnertime: A Report on Low-Income Families Efforts to Plan, Shop for and Cook Healthy Meals*. ConAgra Foods Foundation.

³⁸ The Food Dollars curriculum was originally designed by Emily Stone, an ABCD staff member who worked closely with former Elder Services Director, Emily Shea. They conducted pilot classes to test the new curriculum with a grant from the Roberta Thall Charitable Trust, the program's first funder.

³⁹ The issue of becoming an "evidence-based" program is still under discussion with funders at the AARP Foundation. One of the requirements of being an evidenced-based program is conducting an evaluation in which there is a well-matched control group to compare to the adults 50+ who complete the Food Dollars program. We currently do not have the resources needed to have a control group. We will be considering the pros and cons of this type of evaluation in consultation with the AARP Foundation.

⁴⁰ Special thanks to Claire Corea, Frank D'Renno and Carolyn Patterson for their assistance with neighborhood maps that aided the process of site selection.

⁴¹ We used version 11.2 of Stata, a statistical data analysis software

⁴² In a few sites, the evaluators were not available to attend the Information Sessions themselves, but the provided ABCD staff with sign-up sheets and ABCD staff signed up enrollees in hour-long interview time slots.

⁴³ See Bookman et al (2012) *An Apple A Day: Promoting Healthy Eating and Reducing Food Insecurity, An Evaluation of ABCD's Food Dollars Program*. Action for Boston Community Development: Boston, MA. Appendix D, page 53.

⁴⁴ The number of completers with both pre-class and post-class interviews is smaller than hoped. The introduction of some kind of incentive, such as a Gift Certificate to one or more popular grocery stores, would have helped increase the number of people who were willing to be interviewed a second time.

⁴⁵ Caregiver workshops were offered to members by a group practice HMO as part of a larger demonstration of adding community care to HMO services. Of 1,200 members indicating interest at four sites, 532 participated in workshops and 320 (60%) completed pre- and post-questionnaires on effectiveness. See Leutz, W., Capitman, J., et al. (2002).

"Caregiver education and support: results of a multi-site pilot in an HMO." *Home Health Care Serv Q* 21(2): 49-72.

⁴⁶ The question of whether the program had less of an impact on the group that attended fewer than the full 6-week set of classes is beyond the scope of this report, and it might be a useful line of inquiry for the next evaluation.

⁴⁷ A sample size of 78 was used to present the demographic data because the characteristics of completers without a post-class interview were virtually identical to the completers who had both pre-class and post-class interviews.

⁴⁸ Data for this section are drawn from the pre-class interviews with an n=78

⁴⁹ This score was created for this evaluation and has not yet been validated.

⁵⁰ See Bookman et al (2012) *An Apple A Day: Promoting Healthy Eating and Reducing Food Insecurity, An Evaluation of ABCD's Food Dollars Program*. Action for Boston Community Development: Boston, MA, page 27.

⁵¹ We did not include data on drinking other types of fluids as many of them were unhealthy, such as canned soda. Also the curriculum emphasizes the importance of drinking 8 glasses of water.

⁵² The number of Food Dollars completers who received assistance is slightly smaller than those who reported using

⁵³ These data are more difficult to present and interpret than the other data related to financial literacy. The evaluators asked, program by program, what programs enrollees learned about in the class that they did know about before, and then whether they had started to use them or were planning to use them. There may have been two areas of confusion;

1) that the enrollees may not have understood fully the distinction between "have you ever heard of this program?" versus "are you now familiar with this program because you learned about it in the class?" and 2) that enrollees may have said "yes" to "using the program" when some meant before the classes and other mean as a result of the classes.

Both of these issues complicate interpretation of the results. There are also certain programs the vast majority of people had heard of before, such as Food Stamps (SNAP), Meals on Wheels, and The Ride, that they said they learned about in the class because they were mentioned in the class, even though they had heard of them before the class too. Therefore we must consider the responses about various programs to be less than fully accurate about what people learned in the

class versus their prior knowledge. There is much room for improvement in the way these questions are asked in the Year Two evaluation.

⁵⁴ See www.usda.gov/topics/food-nutrition-assistance/food-security-in-the-us/measurement.aspx.

⁵⁵ Coleman-Jensen, A.J. (2010). U.S. food insecurity status: Toward a refined definition. *Social Indicators Research*, 95: 215-230.

⁵⁶ Factors contributing to low levels of Latino/Hispanic debt could include the fact that Latino/Hispanic seniors either do not know about the availability of credit cards, or do not use them very much even if they have them. It could also be due to discrimination if Latinos/Hispanics applied for credit cards and were denied for reasons such as low wage jobs and little credit history. Cultural differences about the acceptability of debt or, in the case of undocumented seniors, fears about coming to the attention of government authorities, may also be explanations.

⁵⁷ <http://www.mass.gov/dph/healthequity>

⁵⁸ Copies of the pre- and post-class interview tools for 2013 are available by emailing: ann.bookman@umb.edu

⁵⁹ Neckerman, K.M., et al. (2009). Disparities in Urban Neighborhood Conditions: Evidence from GIS Measures and Field Observation in New York City. *Journal of Public Health Policy*, 30 (Supplement 1): S264-285. See also Webb, A. (2008). Food Stamp Program Participation But Not Food Insecurity Is Associated with Higher Adult BMI in Massachusetts Residents living in Low Income Neighborhoods. *Public Health Nutrition*, 11(12): 1248-1255.