

**Food Insecurity and Hunger among Homebound Older Adults in  
the Rural South:  
A Study of People on the Waiting List for Home-Delivered Meals**

**Final Report**

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There is little published research on the people who qualify for home-delivered meals but are relegated to a waiting list because of funding shortages, limited routes, and/or insufficient numbers of volunteers. In prior decades, waiting-list members were sometimes used as control groups or comparison groups (see, for example, Cotter and Davidson, 1978; Roe, 1990, and Steele and Bryan, 1985–1986), but they do not appear in more recent literature even in that limited role. Nevertheless, this group is of growing concern to policymakers and service providers. As a period of declining federal funding has been followed first by hurricane disaster and then a drastic budget shortfall, North Carolina has seen growing waiting lists for home-delivered meals, as well as for other services for older adults. Until now, however, we have had very little sense of who the people on the waiting list are, and how they are surviving while they wait for services.

Although Weimer (1997) asserts that “severe or life-threatening” nutritional deficits are relatively rare among older adults in the US, he also acknowledges that many elders are “at high risk of deficient intakes of some essential nutrients.” Inadequate intake of food is estimated to affect 37 to 40 percent of people 65 and older living in the community, and roughly 80 percent have diets that need improvement (White, 2001). When this nutritional risk is untreated, it can lead to increased disability and morbidity (Galanos et al., 1994; Jensen et al., 1997; Posner et al., 1994; Robertson, 2000) and increased need for services, including costly institutionalization (Robertson, 2000).

If nutritional risk is high in the general older adult population (Lee et al., 1995; Sharkey and Haines, 2002), it can be expected to be even higher among those people enrolling for meals (Coulston et al., 1996; Sharkey, 2002). Because they are screened for eligibility before being placed on the waiting list, this population is, by loose definition, homebound and assessed as unable to prepare adequate meals for themselves. Although the program is not means-tested, it is targeted toward those with the “greatest social and economic need,” in particular those who have low-

income and/or are members of ethnic minority groups (U.S. Administration on Aging, 2002). All of these characteristics—being homebound, having functional limitations, being poor, and being members of ethnic minority groups—have been associated in the literature with high nutritional risk and/or barriers to good nutritional practice (see for example Klesges et al., 2001; Lee et al., 1995; Mayo and Rainey, 2001; Payette et al., 1995; Quandt and Chao, 2000; Schoenberg, 2000; Schoenberg et al., 1997; Sharkey and Haines, 2001; Weimer, 1997).

This objective of this study was to describe those people on the waiting list for home-delivered meals in one North Carolina Area Agency on Aging (AAA) region. In so doing it addresses six questions:

1. Who are the people on the waiting list (demographics and functional status)?
2. What are they eating, and what is their level of nutritional risk?
3. How are they getting food now?
4. Are there significant differences in either nutritional risk or food-getting strategies among urban and rural elders or other subgroups?
5. How are older adults on the waiting list different from those who began receiving meals directly after assessment?
6. What has happened to these people since we interviewed them?

## **Methods**

The study was conducted through a telephone survey. Eligible members of the waiting list received a letter inviting their participation and explaining their rights as human subjects. The fact that participation could not affect the length of their wait for meals was emphasized in the letter and repeated at the beginning of the interview for every respondent, regardless of whether or not they said that they had read and understood the letter.

The survey was administered by two trained interviewers—one a social worker with an MSW and the other an aging network employee in her last year of a masters degree program in gerontology. It consisted of four types of questions:

1. Questions to determine whether respondents have used any of a series of food-obtaining, food-preparing, and food security strategies/behaviors (based on a model outlined by Quandt, Arcury, and Bell [1998], who wrote that in order to meet those three goals elders employ some combination of self-care, informal support, formal support, and medical care) and questions about type of food provided to them (e.g., whole meals, treats, garden produce, groceries, meals prepared in their home by someone else), who provided them, how much, and how often.
2. Questions from the Nutritional Screening Initiative (NSI) DETERMINE checklist, except for those items that asked about specific food intake. This checklist includes the food security item “Do you always have enough money or food stamps to buy the food you need?”
3. Descriptive questions including self-reported height and weight, basic demographic questions (e.g., gender, ethnicity, marital status, poverty), and information about ADL and IADL impairments.
4. A guided 24-hour dietary recall and questions to assess the degree to which the previous day’s diet was typical of the respondent’s eating patterns.

### **Population and Response Rate**

As of December 2001, there were 260 people on the waiting list for meals in the Northwest Piedmont AAA Region. Of the 260 people, 13 were removed because the provider agency reported that they had no telephone and so could not participate in our survey. In addition, there were 24 households in which two people were waiting for meals. One person was randomly chosen from each household to maintain the independence of the observations. This left 223 members of the waiting list apparently eligible for participation.

When we submitted our original proposal, we had hoped to interview 150 people from a waiting list of about 458, but owing to a transfer of congregate meals funds to the home-delivered program, the list was severely reduced. Therefore, we attempted to reach all of the people on the list, rather than a sample, and we added 69 new prospective interviewees as they were put on the waiting list through June 2002. This netted 292 potential respondents.

As the survey progressed, we learned that of those 292, 120 were ineligible because they had already begun receiving meals from the aging network (35); receiving meals from another agency or person including attending a congregate program (16); in a facility or day care (10); no longer needed meals because of improved health (7); had a physical condition that made it impossible to participate—usually extreme deafness (7); were deceased (6); cognitively impaired (1); or had other reasons for leaving the waiting list such as moving out of the area or needing a special diet that the meals program could not provide (12). In addition there were 26 cases in which the phone number provided by the agency had been disconnected and no other number could be found from the agency, the telephone directory, or the Internet white pages listings. We do not know how many of these died, moved to residential settings, or moved into the homes of family caregivers. Thus, the true eligible population was 172, of whom we successfully interviewed 110 (64 percent).

### **Coding**

In their training, interviewers were told to elicit and record any explanatory information respondents gave to their answers. They were provided with standard probing questions to use when answers seemed inconsistent or the respondent seemed confused. They were also provided with a protocol for taking the 24-hour dietary recall with probes for amounts, brands, and special qualities (such as fat-free, decaffeinated, and no-sugar added). Interviewers then coded and entered the data for the surveys they had conducted. In addition, all comments and clarifying information from tapes

of the interviews were transcribed. Any coding ambiguities were resolved by the principal investigator and interviewer together.

Dietary recall information was also coded according to written protocols. However, there was vast variation among respondents in their abilities and/or willingness to provide estimates of serving sizes and amounts. In the opinions of the interviewers and the principal investigator, simple information needed for the NSI (i.e., whether the person had more or fewer than 2 servings each of vegetables, fruits, and milk) could be accurately coded. In addition, a general description of the types of meals people are consuming is possible. However, more complex estimates of dietary intake would *not* be valid from these data.

## **Who are the people on the waiting list?**

### **Demographic Description**

The typical waiting list respondent, to the degree she exists, is a widowed white woman age 77. Although the average age of respondents, as of January 1, 2002, was 77, two (1.9 percent) were disabled people less than 60 years of age, and 7 (6.7 percent) were 90 or older. Three-quarters (75.4 percent) were women, and nearly two-thirds (65.1 percent) were white. The remaining 34.9 percent were African American, with one person reporting both African American and Blackfoot Indian heritage.

Most respondents were widowed (62.3 percent), but 16.0 percent were married, 14.1 percent were divorced or separated, and 7.6 percent were never married. Although most lived alone (70.9 percent), 19.1 percent lived with one other person (most often a spouse), and 10.1 percent lived with two or more others.

As Table 1 demonstrates, respondents were quite similar in age and in the percent who are women to two comparison groups—new clients who had begun receiving services in the year

before the study was undertaken and a national sample of home-delivered meals participants reported by Millen et al. (2002). They are also similar in poverty risk to the national group.

**Table 1. Demographic Comparison Between Waiting List Respondents and Those Who Began Receiving Services February through July 2001.**

	<b>Waiting-list members</b>	<b>New 2001 Recipients</b>	<b>National HDM Recipients<sup>a</sup></b>
Mean age	77	79	78
Percent women	75.4	71.4	70
Percent African American	34.9	25.5	19
Living alone	70.9	60.6	60
Married	16.0	26.6	26
Rural	24.8	44.1	16
At or below poverty	49.5	NA <sup>b</sup>	48

<sup>a</sup>Estimates taken from Millen et al., 2002, Table 1, p.236.

<sup>b</sup>Data were reported inconsistently. They produce an estimate much lower than the other two, which is unlikely to be reliable

Ethnic composition differs, but it reflects the underlying residential pattern of the counties in that region. All three groups (waiting list, new Region I clients, and national clients) show a proportion of African Americans higher than that of the underlying population ages 60 and over, contradicting at least one study that shows African Americans less likely to participate in home-delivered meal programs than White Americans (Wallace et al., 1999). Although African Americans are over-represented relative to their numbers in the general population in all three groups, the proportion of participants who are members of that ethnic group varies. North Carolina has a larger African American population than the country as a whole. In the 2000 census, 15.9 of North Carolinians age 60 and older were African American, compared to only 8.7 percent of the US population (US Bureau of the Census, 2002, derived from data in Summary File 3, tables P145b-i.), which explains why both North Carolina groups are more heavily African American. Ethnic composition also varies across North Carolina, and especially in Region I. While in the eastern part of the state there is a large rural African American population, this is not true of the Winston-Salem

area. Nearly 18 percent of Forsyth's population age 60 and older is African American, while 60 percent of the people on the waiting list from Forsyth County are members of that ethnic group. By contrast, the percent of the population age 60 and older that is African American in the surrounding more rural counties is 5 percent in Stokes, 4 percent in Surry, and 3 percent in Yadkin, and the proportion of African Americans on the waiting list reflects this difference (6 percent in Stokes, 0 in Surry, and 8 percent in Yadkin).

It is not clear why those on the waiting list are less likely to be married and more likely to be living alone, but it is not related to their ethnicity. Among these respondents, African Americans are no less likely to be married than White Americans and are significantly more likely to live with other people ( $p = .020$ ). It is also the opposite of what we would expect if a sort of triage were taking place in managing the waiting list, as those living alone would, in general, seem to be more vulnerable than those living with others, even if the other person were also frail or disabled.

To obtain poverty status with a minimum of obtrusiveness, the interviewers were provided with a chart with the poverty levels by size of household. Their scripts said, "I do NOT need for you to tell me what your income is, but I am going to read you an amount of money, and I would appreciate it if you would tell me whether your yearly income is more or less than that amount." In some cases, people did not know but volunteered their monthly income, from which we computed annual income and made the poverty determination. Despite our delicacy, 17 people refused to provide income information. Of the 93 who reported their income, the group was almost evenly divided among those at or below the poverty line (49.5 percent) and those above it (50.5 percent), which is quite consistent with national figures and with the targeting of the program.

In its proportion living in rural areas, the waiting-list members are more rural than the national home-delivered meals sample, but less rural than the previous year's new home-delivered meal recipients in that region. There are two factors that increase the odds that waiting-list members will

be in the urban areas: (1) the urban county, Forsyth, has the largest waiting list by far; and (2) in the primarily rural counties, people who lived in or around the towns were more likely to live near meal routes and thus sign up for meals. As a result of these two factors, only about a quarter of the respondents said they lived in the country (24.8 percent), while 13.3 percent lived in a small town, 7.6 percent in the suburbs, and 54.3 percent in a city (primarily Winston-Salem). For purposes of this report, the small town, city, and suburban will be combined into urban and only the respondents who said they lived in the country will be considered rural in our analysis.

## **Functional Status**

Interviewers asked about 9 potential impairments—the standard five Activities of Daily Living (ADLs—bathing, dressing, feeding oneself, transferring from bed to chair, and using the toilet), three Instrumental Activities of Daily Living (IADLs—taking medications, paying bills, and doing housework), and 1 mobility item (ability to walk around inside the house). The interview schedule did not include questions about ability to shop and cook for oneself or to walk unaided outside the house, based on the assumption that people eligible for home-delivered meals would need assistance with all of these. (This proved to be an incorrect assumption, as is presented in the discussion of how participants get food.)

Table 2 shows waiting-list members' functional status on all nine measures. Almost all can feed themselves, and over 80 percent can transfer from bed to chair, dress themselves, use the toilet, and take their medicines. More than half can bathe themselves in the tub or take a shower, and a similar number can get around within the house without a cane, walker, or wheelchair. Clearly, these are people functioning well enough to receive services at home, but who do not for the most part need constant care or supervision.

**Table 2. Functional Status of the Waiting-list members**

	<b>Able to Do it Alone</b>	<b>Special Equipment</b>	<b>Someone Helps<sup>a</sup></b>	<b>Someone Does it for Respondent</b>
Feeding yourself (when someone prepares the food) ( <i>N</i> = 107)	99.1 <sup>b</sup>	0	0.9	0
Moving from the bed to a chair ( <i>N</i> = 108)	89.8	6.5	3.7	0
Getting dressed ( <i>N</i> = 107)	88.8 <sup>c</sup>	0.9	10.3	0
Getting to and using the toilet ( <i>N</i> = 108)	87.0	10.2	2.8	NA
Taking your medicine ( <i>N</i> = 107)	81.3	1.9	15.0	1.9
Taking a bath ( <i>N</i> = 107)		8.4	21.5	3.7
tub or shower	57.0			
sponge bath	9.3			
Walking around inside the house ( <i>N</i> = 108)	52.8	45.4	1.9	NA
Paying your bills ( <i>N</i> = 108)	50.0	0	13.9	36.1
Doing housework ( <i>N</i> = 108)	39.8 <sup>d</sup>	0	22.2	38.0

<sup>a</sup>If a person both received help from another and uses special equipment, it was coded as “Someone Helps”

<sup>b</sup>One of these said he/she gets it all over himself/herself, another said she sticks the spoon into the drawn fist of the other hand.

<sup>c</sup>Three said it was very hard or made them very tired, and two said they sometimes get help with buttons.

<sup>d</sup>One of these said she lets things go, uses paper plates, etc.

If we look only at people with enough impairment to need help from another person (not equipment alone), we find that of these 9 potential impairments, the mean is 1.75 and the median is 1. However, 21.1 percent report that they have no impairments that require the help of another person. The project team of course did not reveal any individual information on functional status to the AAA or the providers, but 17 of these people (15.4 percent) were in fact functioning too well to qualify for home-delivered meals. Three became congregate clients, 3 more were found not to be eligible when it was time for meals to start, and 11 later had their names removed from the list because they no longer needed the service. On the other hand, the only person interviewed who we know died before the end of the project period was someone who reported no functional limitations. In fact, being ineligible or declining services when they became available was not significantly

related to the number of functional impairments reported. This suggests that respondents exaggerated their ability to function independently, or that they had acute disabilities from which they recovered (e.g., fractures, surgery), or both.

Despite this relatively high level of independent functioning, this is a group of people with serious chronic illnesses. In fact, 37.1 percent of the respondents had diabetes, 22.6 percent had high blood pressure, and the same number of people had either a heart condition or were recovering from a heart attack. Smaller numbers reported a range of other conditions including strokes, cancer, AIDS, and kidney disease requiring dialysis.

## **What Are They Eating, and What Is Their Level of Nutritional Risk?**

### **Risk Factors**

As our key measure of nutritional risk, we used the NSI's DETERMINE checklist, a nationally developed self-screening tool used in the intake process for nutrition clients in North Carolina and much of the country. The NSI is also used by the Administration on Aging in measuring nutritional risk for the national Performance Outcomes Measures Project (POMP), in which the Northwest Piedmont Council of Government has been participating. We took our questions that ask about conditions or behavior other than actual food intake directly from the NSI. The NSI scale items about food intake were coded by our interviewers from a 24-hour dietary recall of the previous day. The decision to collect food history this way was based on Region I's experience with POMP—that participants have had extreme difficulty answering questions concerning the frequency and amount of food consumed from the various food groups when they were asked to recall the information according to the standard NSI format.

Possible scores for nutritional risk on the NSI scale range from 0 to 21, with a score of 0 to 2 representing low risk, 3 to 5 moderate risk, and 6 or more representing high risk. By this measure, 96.3 percent of waiting-list clients were at high nutritional risk. Their mean NSI score was 9.9, with

a median of 10 and a range from 3 to 16. Table 3 shows both the scoring for the scale and the percent of respondents with each risk factor.

The first standard item that appears in Table 3, which is a risk factor for over 90 percent of the respondents, is rather stringent. After all, many people who eat the recommended 5 or more servings of fruits and vegetables daily do not routinely get 3 or more of *each*. However, 34.3 percent of respondents had consumed no fruit or fruit juice the day before the interview, and 41.2 percent had consumed no nonstarchy vegetables. In fact, 14.1 percent had consumed no fruits or vegetables at all. Over 40 percent (42.6) had consumed no milk or calcium-rich products.

**Table 3. Description and Prevalence of NSI Risk Factors**

<b>NSI Risk Factors</b>	<b>Points for Risk Factor</b>	<b>Percent of Respondents with Risk Factor</b>
Eats less than 3 servings each of fruits, vegetables, and milk/calcium-rich products (item 3)	2	91.8
Takes 3 or more different prescribed or over-the-counter drugs a day (item 8)	1	83.5
Is not physically able to shop, cook, and/or feed self (item 10)	2	76.4
Eats alone most of the time (item 7)	1	70.6
Has an illness or condition that changed kind or amount of food (item 1)	2	60.6
Does not always have enough money (or food stamps) to buy needed food (item 6)	4	56.0
Has lost or gained 10 pounds in the last 6 months without wanting to (item 9)	2	31.2
Has tooth or mouth problems that make it hard to eat (item 5)	2	30.3
Eats fewer than 2 meals per day (item 2)	3	7.4
Takes 3 or more drinks of alcohol almost every day (item 4)	2	0

The mean amount of protein consumed was 4.1 ounces (median = 4), but 11.3 percent of respondents reported that they had consumed no protein. (This variable was very difficult to code, and neither the interviewers nor the principal investigator consider it very reliable.) Thirty percent

drank fewer than 8 eight-ounce glasses of water per day, with about 44 percent of those (13.2 percent of respondents) saying that they had not drunk any. Coffee and/or sodas were the drinks of choice for most people.

### Body Mass Index

Although the food intake data are not consistently detailed enough to estimate caloric intake, there is no indication that waiting-list members are receiving insufficient energy from their food. As shown in Table 4, only 2 percent of the 87 respondents who were able to report their height and weight would be considered underweight by the Body Mass Index guidelines for the general population (US Centers for Disease Control, 2002), and more than half (55.2 percent) are overweight, obese, or very obese by those guidelines. Unlike the general population (NC Division of Public Health, State Center for Health Statistics, 2001, page 41, table 18), the risk of overweight and obesity among this group of waiting list participants does not differ significantly between women and men or between white and African American participants.

**Table 4. Body Mass Index Based on Self-Reported Height and Weight**

<b>BMI in kg/m<sup>2</sup> (Interpretation)</b>	<b>Number</b>	<b>%</b>
Less than 19 (underweight)	2	2.3
19–24.9 (normal weight)	37	42.5
25–29.9 (overweight)	24	27.6
30–39.9 (obese)	20	23.0
40 or more (very obese)	4	4.6
Total	87	100.0
Mean	27.2	
Median	25.7	

It is true that respondents reporting that their weight had changed 10 pounds or more in the past 6 months “without trying” ( $n = 34$ ) were much more likely to have lost weight (28 or 82.4 percent) than to have gained it (6 or 17.6 percent). However, none of those who offered an explanation for weight loss cited lack of food. More than half blamed an illness that changed their eating habits. Among those whose weight changed, there was no correlation between BMI and the direction of

that change. Among respondents who changed weight and were at a low or normal weight 21.4 percent gained weight and 78.6 percent lost, while among overweight or obese respondents who changed 20.0 percent gained weight and 80.0 lost.

### Sample Menus

While some of the reported menus appear relatively balanced, or at least in keeping with the less-than-ideal menus of the general public, others highlight in ways that numbers cannot the often-mentioned issues of monotonous diets, reliance on easy-to-prepare foods, and the need to stretch the food dollar. The three menus given below for different participants have been deliberately chosen from among those at the poor end of the nutritional scale, but they are not necessarily the worst and certainly not the only such examples. It is, of course, unknown whether these same people had better daily meals before they grew old and became impaired.

Example 1: (eaten throughout the day)

- 4 or 5 pimiento-cheese sandwiches
- diet 7-Up™

Example 2:

- *Breakfast:* cooked grits (3 big spoonfuls raw), tsp. of butter
- *Lunch:* none
- *Dinner:* Shared 1 big can (15 ounces) of pork & beans with wife (some still left), 2 boiled chicken wings, 1 slice white bread.
- *Snacks:* 5–6 Jolly Rancher™ candies and 5–6 sticks of sugarless gum

Example 3:

- *Breakfast:* none
- *Lunch:* 1 baloney sandwich (1 slice baloney, 1 tablespoon of mayonnaise on white bread), an 8-ounce glass of buttermilk, 2 snack-size Milky Way bars, 4 sugar cookies
- *Dinner:* a can of Vienna sausages, 6 saltine crackers, a glass of Coke (approximately 8 ounces)
- *Snacks:* 2 juice-sized glasses of regular Coke, one 8-ounce glass of regular Coke, 1 tall cup of coffee (black), a mayonnaise sandwich (2 tablespoons of mayonnaise on 2 slices of white bread).

## How Are They Getting Food Now?

### Self-Help

About 45 percent of those on the waiting list were able to get some of their nutritional needs met within their household, either by preparing food themselves or by having it done by a person who lived in the household with them. Nearly 24 percent said that they could cook or shop for themselves (13.6 percent with help and 10.0 percent without), and of these, 68.2 percent (13 people) reported that they do all of their shopping, while 52.3 percent (11 people) reported that they do all of their own cooking. These people would appear not to qualify for home-delivered meals. Nine of the 26 people who said they could cook and or shop for themselves (34.6 percent) were, in fact, subsequently removed from the list for reasons that suggest that they really were reasonably self-sufficient (e.g., no longer needed meals, ineligible, refused, or just “no longer on list but not receiving meals”). However, local providers warn that clients and potential clients often overstate what they can do for themselves out of pride, and that the meals they fix for themselves often consist of such things as cereal, sandwiches, and canned soup. Information on respondents’ food consumption on the previous day bears this out, at least in part. Of the 15 people who said they could fix meals with help, 10 ate food for at least one meal that required some level of cooking, although we do not have information about whether or not they prepared this food. Of the 11 who said they could fix meals on their own, 3 had no cooked meals, 4 had meals that they happened to tell us were prepared by someone else, and 4 had cooked meals whose source we do not know, but which might have been cooked by the respondent.

About 22 percent of respondents said someone who lived with them did some cooking, shopping, or both. Of these, more than a third (37 percent) said that person did all of their shopping, and 30 percent said that person did all of their cooking. (Note that this refers to all the shopping and cooking that occurs, not necessarily all that respondents might need.)

Another theoretical form of self-help would be to order food from a restaurant or groceries delivered from a store. In general, these are not used. Only four people said they had food delivered from a restaurant, and one of the three restaurants named actually delivers meals (meals from the other two were picked up by friends or family members). Similarly, only two people said they ever ordered groceries to be delivered by the store. We do not have data to explain how much this lack of use is because these resources are unavailable or because they are unacceptable due to cost, taste, or other factors. For example, the one restaurant from which two people actually had food delivered was a well-known pizza chain. However, for many of today's older adults in North Carolina, pizza has not been a normal part of their diet over the life course.

In addition to help in the home, we asked about a variety of external sources of food—whether prepared meals or groceries. Both the capacity within the household and these external sources are shown in Table 5. As that table shows, the most widely used resources are family and friends bringing in prepared meals (70 percent) and bringing in groceries (65.4 percent). On average, respondents *who received prepared meals* from loved ones receive 3.2 per week, while those who got groceries averaged enough for 15.8 meals a week, although the medians are considerably lower in each case. Half of the respondents say they are sometimes taken to a restaurant or a family member's home for dinner, but as we would expect, given that these respondents are homebound by their provider's assessment, they do not go out often. The mean frequency of these trips is once every two weeks, but the median is slightly less than once a month.

There were 10 people (8.9 percent) who did not receive whole meals, groceries, or the help of someone coming to their home to cook for them, and 7 of these (6.2 percent of the waiting list) who did not receive help from any of the external sources reported in Table 5. Four of these 7 people live alone. These represent a small but very vulnerable group of people, who may face the choice between residential care and real hunger.

**Table 5. Number and Percent of Waiting List Participants Receiving Food from Each Potential Source and Average Meals per Week Received from This Source (for Those Receiving Any)**

<b>Source</b>			<b>Mean Meals per Week</b>	<b>Median Meals per Week</b>
<i>External</i>	<i>n</i>	<i>%</i>		
Someone brings meals (homemade or from restaurants)	77	70.0	3.2	1.5
Someone brings groceries	72	65.4	15.8	9.0
Someone takes R to dinner at their home or in a restaurant	55	50.0	0.5	0.3
Someone brings treats (sweets and/or snack items)	50	45.4	NA	
Someone brings garden produce	30	27.3	6.5	1.2
Someone comes to the house to cook meals	23	20.9	5.3	1.7
Restaurants deliver meals (or delivery arranged)	4	3.6	0.9	7.9
Store delivers groceries	2	1.8	Cannot be calculated from data	
<i>Internal</i>			<b>% Who Do All</b>	<b>% Who Do Most</b>
R can cook and/or shop for self (with or without help)	26	23.6	Shop: 68.2 Cook: 52.3	Shop: 13.6 Cook: 42.9
Someone lives with R who can cook and/or shop	24	21.8	Shop: 37.0 Cook: 30.0	Shop: 14.8 Cook: 15.0

### **Sources of Informal Assistance**

As Table 6 shows, the respondent’s children are the most frequent providers of prepared meals, groceries, treats, coming to the respondent’s home to prepare meals, and taking the respondent to their home or a restaurant for a meal. Garden produce, by contrast, is most often provided by friends and neighbors, followed by siblings. This may reflect a cohort change, in that people of the respondents’ own generation may be more likely to keep a garden than the younger generations. Members of the respondents’ churches provide about 10 percent of treats, but less than 10 percent of other assistance and no groceries.

**Table 6. Relationship of Primary Informal Provider to Respondent for Each Type of Food Assistance**

Type of Assistance	Percent of Primary Providers in This Relationship						
	Child	Sibling	Other Relative	Friend or Neighbor	Church	Other	Total
Brings prepared meals	44.2	16.9	20.8	6.5	7.8	3.9	100.0
Groceries	57.1	10.0	17.1	11.4	0.0	4.3	100.0
Takes respondent out	47.3	16.4	14.5	18.2	1.8	1.8	100.0
Treats	26.0	14.0	14.0	34.0	10.0	2.0	100.0
Garden produce	6.7	23.3	13.3	40.0	7.0	10.0	100.3
Cooks in respondent's home	26.1	21.7	21.7	4.3	8.7	17.4	100.0

Interviewers did not gather data about who bore the expenses for prepared meals brought to the house, treats, garden produce, or taking the respondent out to eat. It was assumed that these were generally at the expense of the provider. However, they did ask who pays for the groceries when someone brings groceries to the home. Most of the respondents (73.9 percent,  $n = 69$ ) said that they paid for the groceries, while 15.9 percent said the groceries were a “gift” or “favor,” and 10.1 percent said that they paid sometimes, but they also received gifts of groceries.

The likelihood of paying varies according to who brings the groceries. As Table 7 shows, the respondent always pays when a distant relative or paid caregiver gets groceries, usually pays when the provider is a friend or neighbor (87.5 percent), or a child (76.9 percent) and is about equally likely to pay or receive groceries as a gift from a sibling or niece or nephew.

**Table 7. Who Pays for Groceries by the Primary Provider's Relationship with Respondent**

Relationship of Primary Provider to Respondent	Respondent pays		Gift or Favor		Some of each <sup>a</sup>	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Child ( $n = 39$ )	30	76.9	4	10.3	5	12.8
Friend or neighbor ( $n = 8$ )	7	87.5	1	12.5	0	0
Sibling ( $n = 7$ )	3	42.9	3	42.9	1	14.3
Niece or nephew ( $n = 6$ )	3	50.0	2	33.3	1	16.7
Other relative ( $n = 6$ )	6	100.0	0	0	0	0
Paid caregiver ( $n = 2$ )	2	100.0	0	0	0	0
Husband's lodge ( $n = 1$ )	0	0	1	100	0	0

<sup>a</sup>“I pay when I can”, “I pay for some of it”

A smaller number of respondents report that someone comes to their home and cooks for them. Twenty-nine people cook for 24 respondents, of whom 37.9 percent bring the food they cook with them, while 62.1 percent cook food the respondent has on hand.

### **Amount of Food Received from Informal Providers**

Given that people on the waiting list are not taken out to dinner frequently, that garden produce is seasonal, and that neither produce nor treats usually make up a meal, the three major sources of meals for people on the waiting list are having someone bring in prepared meals or groceries or come to the house to cook. Table 8 shows the mean and median number of meals provided from these sources combined for people receiving food from some or all three of these sources. As this table shows, those people who cannot provide for their needs at home are receiving enough food for about 2 meals per day, those who have someone at home to help receive about 4 meals a week, and those who can cook and shop for themselves (at whatever level) receive about 2 meals a week from these sources.

**Table 8. Meals per Week Provided from Meals Brought in, Groceries Brought in, and Someone Coming in to Cook for Respondent<sup>a</sup>**

	<i>n</i>	Meals per Week	
		Mean	Median
People who cannot cook or shop themselves and have no one living with them who can help	49	17.6	14.3
People who can cook and/or shop with help <sup>b</sup>	12	16.3	1.9
People who can cook and/or shop without help	7	11.0	1.9
People who have someone living with them who helps with cooking, shopping, or both.	18	5.5	3.8
Total (all people receiving food from any of these three sources)	84	14.3	7.14

<sup>a</sup>Only those receiving food from one or more of these services were included. Thus, there were no zero figures included in the calculations of mean and median.

<sup>b</sup>Only 1 of the 15 people who said they could cook and/or shop with help actually had a person living in the house to help them (a spouse).

## Food Security

Food Security comes in many forms. One is the financial ability to buy food. As indicated in item 6 of the NSI results described above, more than half of respondents say that they do not always have enough money (or food stamps) to buy food. There is not a significant difference between those above and below the poverty line in their responses to this question, but slightly *more* of the respondents not in poverty gave this answer.

A second form of food security is the ability to preserve food. While 27.3 percent of respondents say they receive garden produce for an average of 4.7 months of the year, only 8.2 percent of respondents (30.0 percent of those who receive produce) have someone who helps them freeze or can produce for later use. However, it is clear from the food consumed and comments from those receiving groceries that commercially canned and frozen foods are a large part of their diet.

The third form of security is in having multiple sources of food in case something happens to one source. Of the 8 sources of help from family and friends, the median number of sources each person uses is 3. Those who say they can cook and shop for themselves have more sources (median 4.0), although they receive less food from each source, while those who live with someone who can help have fewer other sources (median 2.0).

Because of the way the data were collected, the person providing the food for each of the sources discussed above might be the same person. We know, for example, whether more than one child brings groceries, but in cases where an adult child brings groceries and an adult child brings prepared foods, we do not know whether two different children or the same one are providing this service. However, one measure of the depth, and thus security, of the food supply that our data do show is the existence of more than one person providing any of the three primary sources of food—meals delivered, groceries delivered, or cooking a meal in the respondent's home. Only a little more

than a third of respondents had 2 or more providers for any of these three services (37.7 percent,  $N = 106$ ). Slightly over 12 percent had *no* providers for any of these three, and 50.9 percent had no more than 1 for any source.

### **Public Programs**

A fourth form of security is the “safety net” provided by public services to people in need of food. However, older adults as a group underuse these programs (U.S. Government Accounting Office, 2000), and those who are on the waiting list prove no exception: 18 respondents (16.4 percent) said that they received food stamps. Among these, 15 reported the amount they received: the median was \$34.00 per month, while the mean was \$44.47. This seems to belie the statement we hear so often in the aging network, that older adults do not apply for food stamps because it is not worth the trouble for the “lousy \$10 worth” they will receive. However one-third of respondents did, in fact, receive \$10.00 per month, which is a somewhat larger proportion than the 26 percent receiving this minimum benefit at the national level (Government Accounting Office, 2000). If we look only at those in poverty, a little more than a quarter (26.1 percent) received food stamps, suggesting a large pool of potentially eligible people not enrolled in the program, although for many of these respondents obtaining the food may be even more challenging than paying for it.

Only seven respondents (6.4 percent) reported that they sometimes received food from the Commodity Supplemental Food Program or “a program like that.” Two of these said that they seldom got food from the program because they could not go pick it up themselves, and they had no one to go pick it up for them. Most of the others said they got food from this source about quarterly. Four respondents (3.6 percent) reported getting food from a local food pantry or food bank “a few times a year.” Again, looking at only those who reported poverty status, only 6.5 percent used commodities programs, and only 4.3 percent ever used a food pantry.

## Advice to Others

In order to gain some insight into respondents' thoughts about potential resources, we asked a hypothetical question, which proved a challenge to many of the poorly educated and somewhat frail older adults. The question was "Suppose a friend or neighbor of yours needed help with meals and they got put on the waiting list *today*. If they called you and asked you how to get by while they were waiting, what advice would you give them?"

Seventy-seven of our respondents were able to give relevant answers to this question, and among them they produced 88 suggestions. These are summarized in general categories in Table 9. That table reflects, quite clearly, the steps that respondents are taking in their own lives. As that table shows, nearly a quarter would advise their friend to get help from family and/or friends, although as one person noted, "A lot of families help each other, but some of them don't." Another said, "Family is supposed to take care of one another if they live around each other."

**Table 9. Responses to an Open-Ended Question  
Soliciting Advice to New Waiting-list members**

<b>Advice to someone else newly on the waiting list</b>	<b><i>N</i></b>	<b>% of People</b>	<b>% of Responses</b>
Get help from family and/or friends	18	23.4	20.5
Advice on frugality and shopping (thrifty and convenient)	17	22.1	19.3
Just keep doing the best you can	15	19.5	17.0
I would share what I had with them	9	11.7	10.2
Call an agency or organization	8	10.4	9.1
Just wait/be patient	6	7.8	6.8
Pray/trust God	5	6.5	5.7
Ask for help from church	4	5.2	4.5
Ask for help. There are people who can help.	3	3.9	3.4
I get help from an aide wouldn't know what else to do.	2	2.6	2.3
You can use a restaurant sometimes.	1	1.3	1.1
Total	88	114.4	99.9

The second most common response was advice on living and shopping frugally, such as, "I tell them to get by by making the sacrifices, you know, buying food that they could ahhh . . . that could last longer than others, and eat food for another meal. Some people don't like to eat leftovers, but if

they don't have anything left you can make a good meal. That's what I do." Most of this category included advice to be thrifty and budget strictly, but some addressed the problems of cooking with poor health or disability such as the woman who said, "Get food to heat in the microwave so they wouldn't have to work nearly as hard to prepare a meal."

Nearly a fifth said that the person would just have to keep doing their best. One respondent's comment typifies this type of suggestion, "Well, you just gotta do the best you can. Do what you can. Do what you gotta do to get by. It's not always too easy to get by, though." Perhaps the most touching of these responses came from the 9 people who said that they would share what they had with the friend or neighbor who called.

### **Are There Significant Differences in Either Nutritional Risk or Food-Getting Strategies Among Urban and Rural Elders or Other Subgroups?**

Are people on the waiting list in rural areas different from their more urban counterparts? As discussed in the demographic description above, the ethnic composition differs substantially. Forty-six percent of the urban waiting-list members were African American, compared to only 4 percent of country-dwelling waiting-list members (1 person). This means that race is a potential confounder of any differences observed between rural and urban respondents. However, the differences between rural and urban dwellers were relatively small.

The only demographic rural-urban difference besides ethnicity was marital status. Rural residents were more likely to be widowed (70.8 percent, compared to 59.5 percent of urban residents) and more likely to be currently married (25 percent, compared to 13.9 percent), while the urban residents were more likely to be never-married or divorced/separated. This difference is not explained by ethnic differences in marital status.

The only significant difference in ADLs and IADLs between the two groups is that the rural residents were less likely to say that they could take their medications without help (65.4 percent of

rural residents, compared to 87.2 percent of urban ones). This difference is not explained by ethnicity, and there is no obvious reason for it except possibly educational attainment, which we did not measure.

### **Nutritional Status**

Perhaps, in part, because risk factors are uniformly fairly high, we were unable to find any significant model to predict NSI scores. Gender, age, ethnicity, marital status, number of impairments requiring assistance from another person, rural and small town residence, having no one in the home capable of cooking or shopping, the amount of food provided per week by people outside the home, and the number of types of assistance (e.g., whole meals, groceries, garden produce, treats, cooking, taking the respondent out for a meal, ordering food from stores/restaurants) were tested as theoretical predictors. None had a significant zero-order correlation with NSI scores, and none were significant within a regression model to control for the others.

There are only a few items within the NSI that show any appreciable rural-urban difference, and none of these are significant. As we have discussed, most people were eating at least two meals per day, but the few who reported fewer than two meals all lived in urban areas. Urban residents were slightly more likely to have lost or gained 10 pounds without wanting to (35.9 percent compared to 23.1 percent) and to be unable to shop or cook for themselves (79.5 percent compared to 69.2 percent). Within the urban group, African American respondents were more likely to have these last two risk factors than their white counterparts, but the differences are not statistically significant.

### **Resources**

There is no significant difference among rural and urban respondents in any of the 8 ways that people report receiving food (someone bringing meals, someone bringing groceries, etc.). The only difference of more than a few percentage points is in receiving garden produce (34.6 percent of

rural waiting-list members compared to 25.3 percent of urban, but this is a smaller difference than we would have anticipated and does not approach significance at this sample size).

A model to predict the amount of food provided from external informal resources did prove significant ( $p = .017$ ), although its explanatory power is modest (Adjusted  $R^2 = .158$ ). Table 10 shows nonstandardized and standardized parameter estimates and their associated probabilities.

**Table 10. Regression Parameters for a Model Explaining Number of Meals Per Week Received from External Sources<sup>a</sup>**

<b>Dependent Variable:</b> Meals per Week Received		<b>Adjusted <math>R^2 = .158</math></b>		<b><math>p = .017</math></b>
<b>Independent Variables</b>	<b>Unstandardized Coefficient</b>	<b>Standardized Coefficient</b>	<b><math>p =</math></b>	
Intercept	-16.880	—	.454	
African American	-1.115	-.031	.824	
Married (vs. all other marital statuses)	-12.035	-.228	.073	
Number of impairments	3.436	.280	.031	
Rural residence	0.374	.009	.950	
Number of ways food is received (range 0-8—i.e., whole meals, groceries, treats, produce)	3.645	.267	.033	
Age as of January 1, 2002	.225	.100	.423	

<sup>a</sup>Meals received from whole meals brought by another person, groceries brought by another person, meals cooked in the home by someone who does not live in the home, or any combination of these.

As this table shows, the number of activities with which the respondent needs the help of another person (number of impairments) and the number of different ways the respondent receives food are significant, positive predictors ( $p < .05$ ) of the number of meals the respondent receives. Being married is a borderline ( $p < .10$ ) negative predictor. Almost as important are the factors that do not predict. There are no differences by ethnicity (African American vs. White American), rural residence, or age. A larger model, with poorer overall fit, also showed that gender, and residence in a small town were unrelated.

Bivariate analysis using chi-square showed that although very few people on the waiting list received food stamps, rural residents were more likely to receive them (26.9 percent compared to

12.7). This has borderline significance ( $p = .086$ ) with this number of participants, but it is suggestive. The numbers of participants in commodities programs and food pantry programs is even smaller, and the findings do not approach significance, but the direction is the same—rural residents are more likely to get them.

### **How Are Older Adults on the Waiting List Different from Those Who Began Receiving Meals Directly after Assessment?**

As previously discussed, waiting list clients are somewhat more likely than clients who began receiving meals the preceding spring and summer to live in an urban area, to be African American, to live alone, and to be unmarried.

#### **Functional Status**

Although both groups were asked about many of the same ADL, IADL, and mobility items, the questions were asked in a somewhat different way. Respondents to the waiting list survey were asked, “Sometimes, as people get older or have health problems, they have difficulty doing things that they used to be able to do. I am going to read you a list of everyday things, and for each one I would like you to tell me whether you can do it by yourself, if you use some special equipment to help you do it, or if another person needs to help you or do it for you.” Prompts for the four categories were repeated as needed, and explanatory information was recorded and considered in the final coding of the items. The column headed “Waiting List” reports the percentage who answered either that another person needed to help or that (where relevant) another person has to do it for them. The new home-delivered meals clients were asked “Do you have any difficulty. . . (e.g., when taking a bath or shower)?” and if they answered yes, they were then asked “Do you sometimes or usually need the help of another person to perform this activity?” No explanations could be given by the interviewer, and none from the clients were recorded. The column headed “New Recipients” in Table 11 represents the percentage ( $N = 93$  or  $94$  depending on the item) who

answered yes to both parts of the question. In the wording of the specific tasks, there was only one substantive difference. New clients were asked “Can you handle your own money?” while waiting list respondents were asked about “paying your bills?” Because of these differences, the comparisons in Table 11 should serve as potential directions for further investigation, but one should be careful in interpreting them.

**Table 11. Comparison of Functional Impairments between Waiting-list members and New Meals Recipients**

	% Needing Help from Another Person	
	Waiting List	New Recipients
Doing housework	60.2	46.2
Paying your bills (waiting list) /handling your money (new clients)	50.0	22.3
Taking a bath	25.2	31.2
Taking medicine	16.9	13.8
Getting dressed	10.3	21.5
Moving from the bed to a chair	3.7	20.2
Getting to and using the toilet	2.8	8.6
Walking around inside the house	1.9	23.0
Feeding yourself (when someone prepares the food)	0.9	1.1

With those caveats in mind, it would appear that the people who began receiving meals were more likely to have mobility and ADL impairments, particularly in getting dressed, transferring from bed to chair and walking around inside the house. While 45 percent of the waiting list respondents needed special equipment (walkers, canes) to move around within the house, fewer than 2 percent said they needed another person to help, compared to 23 percent of the new meals clients. On the other hand, the waiting-list members were more likely to say they needed help by another person to do their housework (not including those who said they “just let things go” that they were no longer able to do). Waiting list respondents were also more likely to say they needed help paying bills than new clients were to say they needed help handling their money, but this may be due to the disparity in the items. This functional difference suggests the possibility that some

informal triage is taking place in assigning people to the waiting list, even though those on the waiting list qualify for home-delivered meals.

### **Nutritional Status**

While the new clients may be more functionally impaired, people on the waiting list were at even higher nutritional risk. The reader will recall that 96.3 percent of waiting-list clients were at high nutritional risk. A somewhat smaller 82.3 percent of the new meals clients had that score. Their mean NSI scores were 9.9 for waiting list and 8.5 for new clients, with a median of 10 and 8 respectively. Both groups had a maximum score of 16 and the minimums were 3 and 2 respectively. Table 12 shows comparisons of the two groups on individual risk factors. Note that the first risk factor listed in the table (NSI item 3: eats less than 3 servings each of fruits . . .etc.) and the last (NSI item 4: takes 3 or more drinks of alcohol . . .) were coded from the dietary recall among waiting list subjects, and the third item (NSI item 10: is not able to shop, cook, and/or feed self) was coded from the ADL question about ability to feed one's self and from answers to the question, "Is there anyone who lives in your house who shops or cooks for you? If yes, do they cook? Shop? Or both?" All other items represent responses to the same questions for both groups.

Despite differences in how the information was obtained, many of the risk factors are similar among the two groups. Those on the waiting list are more likely to eat alone most of the time (which is probably explained by their greater likelihood of living alone), have an illness or condition that changed the kind or amount of food they can eat, do not always have enough money (or food stamps) to buy needed food, and have tooth or mouth problems that make it hard to eat. New meals clients are somewhat more likely to have lost or gained 10 pounds in the last 6 months without wanting to. The ranking of risk factors from most widespread to least is the same for both groups except for food security and gained/lost weight, which are reversed.

**Table 12. Comparison of Individual NSI Items between  
Waiting-list members and New Meals Recipients**

<b>NSI Risk Factors</b>	<b>Percent with Risk Factor</b>	
	<b>Waiting List</b>	<b>New Recipients</b>
Eats less than 3 servings each of fruits, vegetables, and milk/calcium-rich products (item 3)	91.8	98.9
Takes 3 or more different prescribed or over-the-counter drugs a day (item 8)	83.5	89.5
Is not physically able to shop, cook, and/or feed self (item 10)	76.4	78.9
Eats alone most of the time (item 7)	70.6	55.8
Has an illness or condition that changed kind or amount of food (item 1)	60.6	42.3
Does not always have enough money (or food stamps) to buy needed food (item 6)	56.0	24.7
Has lost or gained 10 pounds in the last 6 months without wanting to (item 9)	31.2	47.9
Has tooth or mouth problems that make it hard to eat (item 5)	30.3	15.6
Eats fewer than 2 meals per day (item 2)	7.4	10.4
Takes 3 or more drinks of alcohol almost every day (item 4)	0	1.0

**What has happened to these people since we interviewed them?**

As shown in Table 13, over 40 percent of the people we spoke to were still on the waiting list in September 2002, although the bulk of the interviews were completed between January and April of that year. More than 20 percent are now receiving meals. Most of the rest have found an alternative service or no longer need the meals. Fourteen (12.7 percent) are neither on the waiting list nor receiving meals, and the providers do not know what happened to them, so it is possible that their need has changed in either a positive direction (e.g., they are able to prepare meals for themselves or are receiving informal or other formal services that meet the need) or a negative one (death or placement in a facility).

In general, providers did not explain why people were still waiting for meals, and we assume that in most cases the reason is a lack of funding for the program. However, in at least 4 rural cases

(and 2 urban ones), providers indicated that people are waiting because there is no delivery route that goes by their home. This usually occurs when the person lives in an isolated area. Either there is no volunteer willing to serve that area, or the people live so far from the meal site that the ordinary means of keeping meals within the temperatures dictated by the health guidelines of the program are not adequate for safety.

**Table 13. Status of Respondents as of September 2002**

	<i>n</i>	%
Still on the waiting list	45	40.9
Now receiving meals	25	22.7
Neither receiving meals nor on waiting list reason unknown	14	12.7
Removed from list/removed self, no longer needs meals	11	10.0
Began receiving meals, but has since discontinued them	3	2.7
Not eligible	3	2.7
Receives congregate meals	3	2.7
Receives in-home services	2	1.8
Died while on waiting list	1	0.9
Moved out of the county	1	0.9
Moved to retirement home that has meals	1	0.9
Refused meals when offered	1	0.9
Total	110	99.8 <sup>a</sup>

<sup>a</sup>Does not sum to 100 percent due to rounding.

## Policy Implications

While waiting-list members are following their own advice to “just do the best you can to get by,” it is clear that these are people at high nutritional risk. Their families and friends are a real, but limited, resource, and they are not being widely served by other public food programs that are more accessible to those who are mobile and/or have available transportation.

Our study showed a few errors in the initial screening, which might be improved by training interviewers about alternative services and enabling them to give referrals directly or encouraging them to refer waiting list clients to local information and assistance providers. It was clear, for example, in the course of several interviews that the respondents would have been able to participate and would have benefited from congregate nutrition programs, assuming transportation

were available (and, in fact, three actually became congregate clients sometime between the interview and the conclusion of the study. However, in most cases respondents were in need of meals and unable to meet these needs themselves.

Although increased funding for the home-delivered meals program in general is needed, it is unlikely in the current climate of budget deficit and political resistance to increased spending for health and social services. Given this constraint, particular attention must be focused on those who have a weak or nonexistent social support network and thus do not have anyone bringing them meals or groceries at regular intervals. One approach would be a subscreening within the current process to identify such people and the development of one or more strategies to provide some interim help. For example, the agency and/or the community might explore development of an emergency program to assist in delivering groceries that require limited or no preparation (from the food pantry for the poor or at a price that covers the costs for those who can afford it), shelf-stable meals, or some other assistance that requires less time-intensive efforts than home-delivered meals. There might be ways to develop waivers for Older Americans Act funds so they could be used to purchase and ship the easily prepared, single-serving meals now available from a number of vendors. Indeed, many agencies are currently finding alternate funding sources to provide these services to people who live in areas with no meal routes.

Two categories of people need home-delivered meals: those who have on-going needs because of chronic illnesses or frailty and those who have short-term needs because of an acute episode such as surgery. The presence of people who only anticipate needing home-delivered meals for a short time, as much as poor screening, may account for the number who no longer need meals by the time they make their way up the waiting list. When there is a waiting list, it may not be appropriate for one program to serve both groups. Perhaps a faith-based organization or other program might establish short-term help for acute cases. This would increase the likelihood that people with acute

needs would receive meals while they were still relevant and reduce the length of the wait for people who have the continuing needs.

Although this study showed little difference among rural and urban clients, at least 13.3 percent of those still waiting for meals 6 months later are doing so because there is no meal delivery route near them. There are rural elders in remote areas of North Carolina who never go on the waiting list at all for that same reason. A few of the more prosperous meals programs in North Carolina—those in which private funds, grants, or local funding supplement federal and state dollars—have purchased trucks with heated and refrigerated tray spaces, which permits them to keep meals at a safe temperature while they are delivered to remote areas. A public program of grants or low-interest loans to help less prosperous county programs in remote areas acquire these trucks would be highly beneficial.

These findings represent only a single region in North Carolina and have one known deficit in not being able to describe African Americans who live in rural counties, as is common in the eastern part of the state and much of the Southeast. Nevertheless, they represent the best knowledge available on the people who are on the waiting list for meals. Selected findings from this study have been shared with state, regional, and local providers at the NC State Conference on Aging and will appear in the state newsletter for nutrition program directors. It is hoped that they can be used to increase awareness of the plight of people on the waiting list at the federal, state, and local level, and that those more experienced in both policy and grass-roots problem-solving may discover feasible, creative solutions to the problems these elders face.

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