Spring 2015

Evaluating the Nutritional Risk of Older Adults Participating in the South Carolina Older Americans Act

Maciel Ugalde
Clemson University

Katherine L. Carson
Clemson University

Cheryl Dye
Clemson University

Vivian Haley-Zitlin
Clemson University

Evaluating the Nutritional Risk of Older Adults Participating in the South Carolina Older Americans Act

Maciel Ugalde[1], M.S (mugalde@g.clemson.edu); Katherine L. Cason, PhD, RD, LD[1]; Cheryl Dye, PhD[2]; Vivian Haley-Zitlin, PhD, RD,LD[1]; Benjamin Sharp, PhD,[3] Lingling Zhang, PhD[2]
[1] Department of Food, Nutrition, and Packaging Sciences, Clemson University, SC, [2] Department of Public Health Sciences, Clemson University, SC,
[3]Department of Mathematical Sciences, Clemson University, SC

Background

The Healthy People 2020 goal is to "improve the health, function and quality of life." For older adults, proper nutrition is essential for health and functionality as well as for social, cultural and psychological quality of life. Poor nutrition in older adults exacerbates diseases, increases disability, decreases resistance to infection, and extends hospital stays, all of which could result in increased caregiving demand and national health care expenditures.

The Older Americans Act (OAA) is the primary vehicle for delivering social and nutrition programs to older individuals. The largest health program in the OAA is the nutrition program, which includes congregate dining and home-delivered meals. OAA nutrition programs seek to:

- Reduce hunger and food insecurity;
- Promote socialization of older adults; and
- Promote the health and well-being of older adults by giving them access to nutrition and other disease prevention and health promotion services.

The nutrition program targets adults who are 60 years of age or older with greatest economic and/or social need, with particular attention to low-income minorities, those in rural areas, and those with limited English proficiency.

In order to be a service recipient, each client is initially assessed and reassessed annually, as well as when the client has a life altering change in her/his status. The assessment includes a nutritional screening section that consists of the Determine Your Nutritional Health Checklist, a tool developed by the Nutrition Screening Initiative. The checklist is based on the following warning signs: disease, eating poorly, tooth loss/mouth pain, economic hardship, reduced social contact, multiple medicines, involuntary weight loss/gain, and needs for assistance in self-care. Participants with a high risk score (6 or higher) as a result of their assessment are prioritized for OAA program services.

Objective

The purpose of this study is to determine population "hot spots" of high nutritional risk and their association with demographic indicators by analyzing data collected at senior centers using the South Carolina Lieutenant Governor's Office on Aging Assessment/reassessment instrument.

Methods

The warning signs of poor nutritional health are often overlooked. Use this checklist to find out if you or someone you know is at nutritional risk.

Determine Your Nutritional Health

Read the statements below. Circle the number in the yes column for those that apply to you or someone you know. For each yes answer, score the number in the box. Total your nutritional score.

	YES
I have an illness or condition that made me change the kind and /or amount of food I eat.	2
I eat fewer than two meals per day.	3
I eat few fruits or vegetables, or milk products.	2
I have three or more drinks of beer, liquor or wine almost every day.	2
I have tooth or mouth problems that make it hard for me to eat.	2
I don't always have enough money to buy the food I need.	4
I eat alone most of the time.	1
I take three or more different prescribed or over-the-counter drugs a day.	1
Without wanting to, I have lost or gained 10 pounds in the last six months.	2
I am not always physically able to shop, cook and/or feed myself.	2
TOTAL	

Total your nutritional score. If it's --

0-2 **Good!** Recheck your nutritional score in 6 months.

3-5 **You are at moderate nutritional risk.** See what can be done to improve your eating habits and lifestyle. Your office on aging, senior nutrition program, senior citizens center or health department can help. Recheck your nutritional score in 3 months.

6 or more **You are at high nutritional risk.** Bring this checklist the next time you see your doctor, dietitian or other qualified health or social service professional. Talk with them about any problems you may have. Ask for help to improve your nutritional health.

Remember that warning signs suggest risk, but do not represent diagnosis of any condition. Turn the page to learn more about the Warning Signs of poor nutritional health.

- Assessments from February 2013-March 2014 were included
- For those clients with multiple assessments, only the most recent one was included for data analysis.
- Total nutrition risk scores were calculated for each client using the DETERMINE checklist.
- Mean Nutrition Risk Scores were obtained for each region. Student t-test's were conducted to identify statistically significant differences in nutrition risk scores between regions.
- Descriptive statistics were used to determine which questions were most relevant in regions with nutrition risk scores.

Results

Population

- Assessments of 15,310 older adults were analyzed.
- Age (mean ± SD) : 78.05 ± 9.13
- Gender: 73.02% Females and 26.98% Males
- Race: 53.02% African American, 45.88% White and 1.10% Other

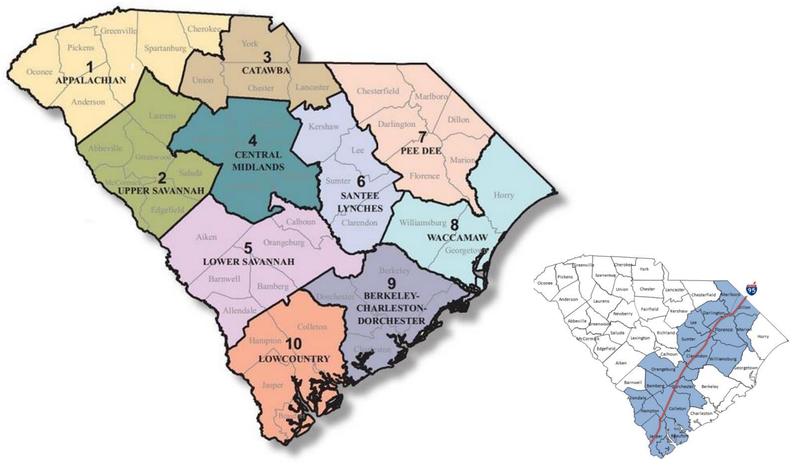

Fig. 1 South Carolina's Areas Agencies on Aging and South Carolina I-95 Corridor

Table 1. South Carolina's Area Agencies on Aging Mean Nutrition Risk Score

Area Agency on Aging	N							Mean Nutrition Risk Score
Pee Dee	1640	A						10.87
Berkley-Charleston-Dorchester	2473		B					10.52
Lower Savanah	1647			C				9.82
Appalachian	2207				D			9.11
Santee Lynches	1050				D			9.07
Waccmaw	1280					E		8.35
Low Country	966					E		8.34
Catawba	1418					E	F	8.06
Central Midlands	1341						F	7.88
Upper Savannah	1288						G	7.30

*Levels not connected by the same letter are significantly different

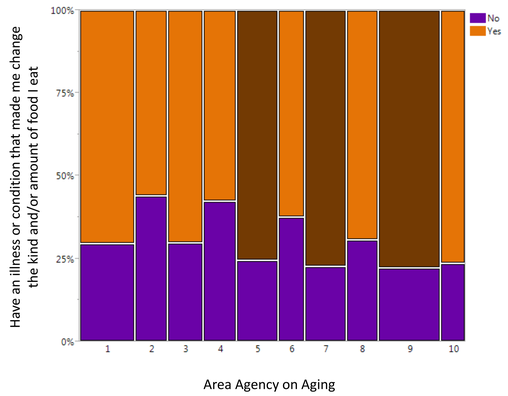

Fig 2. Older adults that have an illness or condition that made me change the kind and/or amount of food they eat vs. Area Agency on Aging

Results

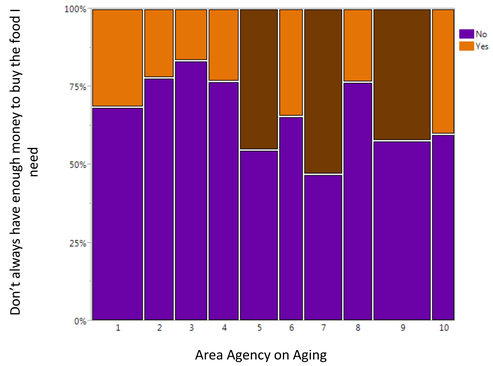

Fig 3. Older adults that don't always have enough money to buy the food that they need

Discussion

South Carolina's I-95 Corridor is a diverse and expansive region of 17 counties and nearly a million people, stretching from North Carolina to Georgia. Despite advantages, including proximity to the coast and major transportation routes, the Corridor has long been under-developed. With that underdevelopment have come problems ranging from cyclical poverty to lagging health and social well-being indicators.

Preliminary results show that older adults receiving services from Area Agencies on Aging in the South Carolina's I-95 Corridor Region have higher nutrition risk scores. Two major factors that contribute to these high nutrition risk scores found in the study are the presence of chronic diseases and food insecurity. The existence of a single chronic condition is a significant predictor of functional status decline, with the risk increasing up to the presence of four or more chronic conditions. In the United States, approximately 80% of all persons 65 years of age and older have at least one chronic condition, and 50% have at least two chronic conditions[4]. Dietary patterns and lifestyle practices are associated with mortality from heart disease, cancer, stroke, chronic lower respiratory diseases, Alzheimer's disease diabetes mellitus, and influenza and pneumonia diseases, which were among the top five leading causes of death for all persons 65 years and older in 2007[4].

In 2012, 2.8 million (8.8%) households with seniors experienced food insecurity. Of the seniors living alone 1.1 million (9.1%) experienced food insecurity[5]. Those more likely at-risk of hunger are those aged 60 years and older, living at or below poverty, high school drop outs, African American or Hispanics, divorced or separated or living with a grandchild, participants in the Supplemental Nutrition Assistance Program (SNAP), and renters[1,2]. Decrease earning potential and lack of access to food leaves the already vulnerable at increased risk for comprised health and quality of life.

Conclusion

Monitoring nutrition status at geographic levels will help track older adult at high nutritional risk and the factors affecting the nutritional status. This will lead to a better understanding of the unmet needs and will help identify strategies to enhance delivery of food and nutrition services to meet the needs of vulnerable older adults. This research could be used to engage and solicit active participation of various key players in the state to improve nutritional status of older adults. Results could also be helpful in seeking to ensure adequacy of economic resources and minimize the risk of financial challenges.

References

1. Academy of Nutrition and Dietetics (2012). Position of the Academy Nutrition and Dietetics: Food Nutrition for Older Adults: Promoting Health and Wellness, *Journal of the Academy of Nutrition and Dietetics*, 112(8), 1255-1277.
2. American Dietetic Association. (2005). Position Paper of the American Dietetic Association: Nutrition Across the Spectrum of Aging. *Journal of the American Dietetic Association,* 105, 616-633.
3. American Dietetic Association (2010). Position of the American Dietetic Association, American Society for Nutrition, and Society for Nutrition Education: Food and Nutrition Programs for Community-Residing Older Adults. *Journal of the American Dietetic Association,* 110, 463-472.
4. Centers for Disease Control and Prevention [CDC]. (2011). Healthy Aging: Helping People to Live Long and Productive Lives and Enjoy a Good Quality of Life. Retrieved from: http://www.cdc.gov/chronicdisease/resources/publications/aag/pdf/2011/healthy_aging_aag_508.pdf
5. Coleman-Jensen, A., Nord, M., & Singh, A. (2013). *Household Food Security in the United States in 2012, Table 2.* USDA ERS.