

**State of the State: Malnutrition among Florida's Senior Population,  
A Proposal for Living Healthy in Florida**

Written by: Jennifer Wendel, MPH & Melissa Jochen, BS  
FDACS Dietetic Interns Class of 2018-2019

**Table of Contents**

Section 1: The Scope of Malnutrition in Florida.....

Section 2: Overview of Existing Programs Addressing Food Insecurity.....

Section 3: The Future in Senior Malnutrition: Barriers and Beyond.....

References.....

## **Section 1: The Scope of Malnutrition in Florida**

### *The Problem and Population:*

Malnutrition is a leading cause of morbidity and mortality among older adults with up to one out of two seniors being either at risk of becoming or are currently malnourished (Defeat Malnutrition Today, 2017). Due to a combination of causes and contributors, adults above the age of 60 across the population groups are at an increased risk of developing malnutrition (Fávaro-Moreira, 2016). Florida has 5.3 million seniors age 60 and older which makes up 26% of the total population and currently ranks first in the nation for the 65 and older population. Florida's senior population is expected to increase to 35% of the population at 7.1 million seniors in Florida by 2030 with seniors projected to outnumber youth in Florida by 2025. With this projected growth of seniors it is crucial to consider the cost of malnutrition to the State as well. Florida ranks third for the highest spending on seniors age 65 plus among all states at an estimated \$350,000,000 annually. There is estimated to be over one billion dollars spent annually in the state of Florida on medical costs associated with malnutrition alone. The breakdown of the spending associated with malnutrition is divided into eight common chronic diseases and their direct costs:

Dementia	\$591.8M
Depression	\$151.6M
COPD*	\$125.9M

Stroke	\$84.7M
Musculoskeletal	\$45.8M
CHF*	\$41.2M
Colon Cancer	\$14.5M
Breast Cancer	\$6.1M

*Source: Abbott (2016)*

*\*COPD stands for chronic obstructive pulmonary disease, and CHF stands for coronary heart failure.*

The Florida Senate defines “Senior Citizen” as a person who is 60 years of age and older; for the sake of consistency for this summary, we will use this definition (Florida Senate Statue, 2012). Currently vulnerable seniors can receive help from a combination of national, state, and local programs. These programs can be administered by government agencies or operate privately, and may have varying qualifications set for who is eligible to receive their services. Recognizing that the Florida State plays a key role in ensuring the health of its population, it is vital to assess the progress being made in combating malnutrition in our older adult population, as well as the barriers to adequate nutrition.

Florida has shown leadership and innovation in aging services with the prioritizing of funds and resources for seniors, allowing Floridians to age with dignity, independence and purpose. In staying consistent with Florida’s quality services, malnutrition must be addressed. While malnutrition is a prevalent and costly problem, the good news is that it is also preventable and can be inexpensive to treat, making it an urgent issue to secure the future of our aging

population, starting with nutrition. In this report, large scale research was implemented on the status of malnutrition in the senior population in the State of Florida as it relates to healthcare costs, education and awareness programs, prevention, and trends. The goal was to find areas where the State of Florida is doing well targeting malnutrition and areas for interventions or further improvement, with the goal of helping our seniors age with dignity. This study was modeled after some existing advocacy and commission models from the Massachusetts Malnutrition Prevention Commission, the Ohio Malnutrition Prevention Commission, and the Defeat Malnutrition Today Coalition Nationwide. The future direction of this project can be modeled after the State Legislative Toolkit put out by Defeat Malnutrition Today in June, 2017 (Defeat Malnutrition Today, 2017).

*Malnutrition Defined:*

The definition of malnutrition can vary depending on the agency or group seeking to define malnutrition; in this report the following three definitions give an accurate understanding:

- The Florida Department of Health defines malnutrition in accordance with the World Health Organization’s International Classification of Diseases (ICD), Version 10, as “*the cellular imbalance between supply of nutrients and energy and the body's demand for them to ensure growth, maintenance, and specific functions*” (Dasgupta, 2016). The degree of malnutrition is usually measured in terms of weight, expressed in standard deviations from the mean of the relevant reference population.
- The University of Florida defines malnutrition as “*the condition that occurs when your body does not get enough nutrients*” (University of Florida, 2017).

- The Academy of Nutrition and Dietetics (AND) defines malnutrition as:  
*“A physical state of unbalanced nutrition. It can mean undernutrition or over nutrition. When most people think of malnutrition, they usually picture undernutrition, which can be caused by a lack of calories, protein or other nutrients”*(Academy of Nutrition and Dietetics, 2019).

### Malnutrition Causes and Risk Factors:

In Florida, more than 10% of seniors live in poverty, 23% live alone, and 7% are considered low-income minority residents (Florida State Plan on Aging 2017). The seniors within these categories are all at risk for developing malnutrition as these socio-economic disadvantages often lead to poorer access to adequate nutrition. These risk factors can lead to loss of interest in life, eating dependencies, and institutionalization. Additionally, there are a myriad of other causes such as function-associated risk factors that occur with cognitive decline (often dementia) as well as decreased appetites. Combined with older adults chronic disease conditions and multiple medication use; all impact nutrition status in this population. A vicious cycle can develop when these risk factors result in malnutrition which leads to poorer health outcomes, leading to frailty and disability, delayed recovery and ultimately an increased mortality (Fávaro-Moreira et al, 2016). When considering the state level of prevention of malnutrition within the senior population, one key factor to address is inadequate nutrition. Nutritional status has been referred to as a vital marker of older adult health and has been shown to help improve health outcomes, reduce healthcare costs, and improve quality of life (Defeat Malnutrition Today, 2017). There are various reasons why malnutrition develops in the older population, but it always comes back to inadequate nutrition. In this report, the focus will be on food insecurity

as it relates to malnutrition and the how federal, state and community programs through the State of Florida can create positive outcomes for our seniors.

Areas for Interventions: Hospital Settings:

A discussion of malnutrition would not be complete without the mention of the clinical aspect. This is not the focus of this report but will be briefly addressed. The quality of malnutrition care in an acute or post-care setting is crucial for treating and preventing malnutrition. There's a large number of minority seniors who enter the hospital setting already malnourished which can often increase during hospitalization. Malnourished hospitalized patients are up to five times more likely to have an in-hospital death and are around 50% more likely to have a 30-day readmission compared to non-malnourished patients according to two recent Hospital Cost Utilization Project analyses reported through the Academy of Nutrition and Dietetics. Additionally, the cost is up to 34% higher in readmitted patients with malnutrition (Academy of Nutrition and Dietetics, 2017). One fourth of patients who are nutritionally at risk do not receive nutritional counseling or aid, even with having been in contact with health care professionals (Fávaro-Moreira et al, 2016). Additionally, according to research done by Meals on Wheels America in the State of Florida around 54% of hospitalizations are preventable if seniors are receiving adequate nutrition. Gaps in the quality of malnutrition care in the post or acute-care setting may be due to difficulty assessing/identifying malnutrition in older adults' the many different. This is an area that is always undergoing research and growth, and will need further research done to develop better malnutrition screening tools and treatment within a clinical setting for malnutrition.

Areas for Interventions: Community Settings:

Education and advocacy programs are another key way to intervene and help address issues such as a limited understanding of nutritious food, financial insecurity/difficulties, and social barriers. (Tilly, 2017). According to the USDA food insecurity is when there is a lack of access, at times, to enough food for an active, healthy life for all household members and limited or uncertain availability of nutritionally adequate foods (USDA, 2018). In the State of Florida, 8% of seniors are food insecure (Feeding America, 2019). In the brief from Feeding America, *Spotlight on Senior Health: Adverse Health Outcomes of Food Insecure Older Americans*, it states that compared to food secure seniors, food insecure seniors are: 60% more likely to experience depression, 53% more likely to report a heart attack, 52% more likely to develop asthma, and 40% more likely to report experience of congestive heart failure (Feeding America, 2019).

Food insecurity exists in every county and district within Florida, and it's important to note that not everyone who is struggling with hunger qualifies for federal nutrition assistance. This can be caused by numerous things, but some of them are that people are living longer, which in turn can mean people are outliving their savings while finding themselves in areas where the cost of living increased over the past ten years, which has outpaced the national average according to the U.S. Bureau of Labor Statistics. In addition, social security has increased by less than 2% annually while average annual spending on health care has increased by 39% from 2000 to 2014 according to federal statistics (Lade, D. C., Redi, A., & Maines, J 2017). These all play a role in increasing the food insecurity of the senior population. In the State of Florida over 80,000 older adults receive services from community nutrition programs, which



leverages over 52 million in federal funding with money also coming from local senior service levies, donations, and volunteers. Most of these nutrition providers are non-profit agencies that serve meals at senior centers or in other community settings. These nutrition programs are available to all Floridians age 60 and older in all 67 counties in Florida. The priority is still given to frail, homebound, or isolated older adults. Services include professional nutritional services, education, counseling, and risk screening (DOEA, 2011).

*Federal Nutrition Goals:*

Proactive legislative and public health policy actions can help ensure quality malnutrition care is available at a state level. Inadequate focus on preventing or quickly treating malnutrition may lead to poor health outcomes in older adults and increase medical costs as well as decrease their quality of life. The Federal government updates its *Dietary Guidelines for Americans* (DGAs) every 5 years (USDHHS and USDA, 2015); the five DGAs for 2015-2020 are:

- Follow a healthy eating pattern across the lifespan
- Focus on variety, nutrient density, and amount
- Limit calories from added sugars and saturated fats, and reduce sodium intake
- Shift to healthier food and beverage choices
- Support healthy eating patterns for all.

Looking specifically at Florida's older population, the Health and Medicine Division of National Academies of Science, Engineering, and Medicine (NASEM/HMD) in its report on

nutrition for older adults (NASEM, 2016) provides the following recommendations and also is responsible for developing the DRIs largely used by this population:

- Make fruits and vegetables central to the diet
- Eat nuts and legumes and whole grains
- Eat fish
- eat/drink low-fat dairy products
- Limit refined foods and sugar

These recommendations are incorporated into key national programs that administer state and community/local programs addressing malnutrition in the senior population and play a role in the triple threat of hunger, food insecurity, and malnutrition. These program interventions target provision of healthy, safe, and affordable foods especially for vulnerable populations.

## **Section 2: Overview of Existing Programs Addressing Food Insecurity**

### **The Federal Older Americans Act Program (OAA):**

The Federal Older Americans Act Program exists to assist the elderly in leading independent, meaningful, and dignified lives in their own communities rather than in a higher cost residential or nursing home setting (OPPAGA, 2019). The OAA provides assistance in the development of new or improved programs through awarding grants and funding with a recent reauthorization in 2016. The programs under the OAA receive funding as part of the Home and Community Services budget entity. In the State of Florida, the Department of Elder Affairs

manages and oversees the funding from OAA for programs contracted with Area Agencies on Aging and local direct service providers.

Generally, the services the programs receiving funding from the OAA offer are in-home supportive services for elders such as congregate meals, home-delivered meals, and nutrition education (preventative health services) at strategic locations. They also offer information and referral assistance. The programs that receive funds for nutrition services for seniors in Florida from the OAA are the Nutritional Services Incentive Program (NSIP), Home-Delivered Nutrition Services Program, and Congregate Nutrition Services Program. To be eligible for OAA programs, individuals must be 60 years of age or older. Spouses and disabled younger adults may qualify as well. The priority is given to low-income minority individuals. The majority of participants are likely to be poor, part a minority ethnic group, live alone, and have disability or poor health (Tilly, 2017).

During the fiscal year 2016-17, in the state of Florida, the OAA provided 44,790 seniors with meal services both congregate and home-delivered. The *Nutrition Services Incentive Program* served 7,715,226 meals total that were supplemented through the program. This helps providers adjust meal rates, improving meal quality, and increasing the number of meals provided to seniors. The improvements seen in nutrition status during the State Fiscal Year of 2016-17 for clients receiving services from the OAA were 66% of new service recipients with high-risk nutrition scores. This department's performance standard was 66% (OAA, 2019). These statistics show that the OAA is a valuable program as it has impacted over half of Florida Seniors with improved nutritional status and should be continued throughout the State.

Department of Elder Affairs:

The Florida Department of Elder Affairs (DOEA) administers programs and services throughout the state of Florida for elders and the DOEA advisory council provides recommendations to Florida Legislation on how to provide quality care to the seniors within Florida. The DOEA offers nutritional care through 11 Area Agencies on Aging (AAA) that are operating in their respective Planning and Service Areas (PSAs) and these AAAs also operate as Aging and Disability Resource Centers (ADRCs). These AAAs are the designated private non-profit entities that will plan, advocate, coordinate, and fund a system of elder care services within PSA sites. The ADRCs function is to provide information and access to services for Florida seniors with information on state and federal benefits and local programs and services. Each AAA will enter into contracts with service providers to offer community-based care and are funded with federal, state, and local resources. There are 51 Community Care for the Elderly (CCEs) lead agencies as well that are contracted by the AAAs which in turn will contract in conjunction with the AAA Direct Service Providers. The AAAs will also operate a statewide network of 11 Elder Helplines. This network provides a single, coordinated system of information and access for all older adults. The 11 PSA sites with their locations are listed below (GPS, 2018):

- Northwest Florida Area Agency on Aging (Pensacola area)
- Area Agency on Aging for North Florida (Tallahassee)
- Elder Options (Gainesville)
- ElderSource The Area Agency on Aging for Northeast FL (Jacksonville)
- Area Agency on Aging of Pasco-Pinellas (St. Petersburg)
- Senior Connection (Tampa)
- Senior Resource Alliance (Orlando)

- Area Agency on Aging for Southwest FL (North Fort Myers)
- Area Agency on Aging of Palm Beach/Treasure Coast (West Palm Beach)
- Aging and Disability Resource Center of Broward County (Sunrise, FL)
- Alliance for Aging (Miami)

All of these sites will partner with many community based health providers such as hospitals, community centers, exercise centers, etc. The main nutrition related programs that are administered by the DOEA and executed through the AAAs are the Nutrition Service Incentive Program, Congregate or Group Meals, and Home Delivered Meals.

*Nutrition Service Incentive Program (NSIP):*

This program utilizes U.S. Department of Health and Human Services funds for reimbursement/supplements funding for food that is used in meals provided under the OAA. The goal is to provide incentives and effectively deliver nutritious meals to older adults in Florida by providing additional funding to providers so their meal rates can be lowered. This will ideally increase the quality and number of meals provided to clients of vulnerable status or of higher need. The NSIP reimburses SPAs for a portion of the costs of qualifying congregate and home-delivered meals, with a rate of approximately \$0.72/meal as of 2015. In the Federal Fiscal Year of 2017-2018 7,960,261 meals were reimbursed with a projected 7,960,261 for the Federal Fiscal Year of 2018-2019 (SOPS, 2019).

*Congregate or Group Meals:*

There are approximately 397 congregate meal sites in Florida with thousands of meals being served daily (SOPS, 2019). The goal of congregate meals is to provide nutritionally sound meals to eligible people at strategically located centers such as schools, churches, community centers, senior centers and other public or private facilities where people can obtain social and rehabilitative services. The aim is to reduce the isolation of the aging seniors and give them a chance to live their lives with dignity among the community. It is encouraged to attract a variety of ages to promote diverse interaction among the groups. Meals provided at a congregate meal site must comply with the Dietary Guidelines for Americans and provide one third the DRI for females 70 years old and above (The predominant statewide demographic recipient) which is established by the Food and Nutrition Board of National Academy of Sciences. In the 2016-2017 Federal Fiscal Year, 29,869 clients were served through congregate meals with a projected 30,100 being served in the 2017-2018 Federal Fiscal Year (SOPS, 2019).

*Home Delivered Meals:*

Home Delivered Meals provides nutritionally sound meals for eligible seniors that will be delivered to wherever their home residence is. The emphasis is placed on serving home-bound, susceptible seniors of social, low-income minority backgrounds that are at nutritional risk. Seniors must be 60 years of age or older as well as homebound due to disability, isolation, or illness. The meals must comply with the Dietary Guidelines for Americans. Meals must provide one third the DRI for females 70 years old and above (The predominant statewide demographic recipient) which is established by the Food and Nutrition Board of National Academy of Sciences. In the Federal Fiscal Year of 2016-2017 there were 15,235 clients served with this

service with a projected 16,444 clients being served in the Federal Fiscal Year of 2017-2018 (SOPS 2019).

*Meals on Wheels* offers in home meal delivery program that supplies homebound seniors with hot meals throughout the week. With more than one out of four seniors living alone and one out of five feeling lonely, hunger and isolation are huge issues for homebound seniors. Among seniors, the healthcare costs associated with high blood pressure are equal to those associated with isolation. This is an OAA supported program meets the specific nutritional needs of seniors by having healthy meals delivered to them in their homes. This program is a public-private partnership and also involves a lot of volunteers for the delivery of meals. *Meals on Wheels* offered an estimated 9.9 million meals total to seniors in Florida for the Federal Fiscal Year of 2017-2018 (SOPS, 2019). It is estimated to cost \$1,429/year to feed one senior in the State of Florida. When compared to the cost of \$2,091/day for a hospital stay or \$2,680/ten days for a nursing home stay, there is clearly a benefit in investing more in *Meals on Wheels* as a preventative measure. (Meals on Wheels America, 2018).

*Adult Care Food Program (ACFP):*

This program utilizes USDA grant funds to provide subsidy payments/reimbursements to participating Adult Day Care Centers and Mental Health Day Centers providing meals for the elderly (Florida State Plan on Aging, 2017). ACFP is directly administered by the DOEA. This program supports the provision of nutritious meals/snacks and increases nutritional status by enabling seniors to prolong living in their own community. The participating centers are allowed to serve up to two reimbursable meals (breakfast, lunch, or dinner) and one snack or two snacks

and one meal to each of their eligible participants. The level of reimbursement for meals is determined by assessing the economic need of each participant. In addition the participants must be seniors or age be 18 to 59 with a functional disability. The average annual meals or snacks served in Florida through the ACFP program in the Federal Fiscal Year of 2017-2018 was 2,621,757 through 174 Adult Care Program Sites (SOPS, 2019).

*National Council on Aging:*

The National Council on Aging is an organization that provides resources to seniors by assisting them in their health and economic security (National Council on Aging, n.d). This includes helping them determine their eligibility of medications, health care, income, transportation, education, food benefits and many more resources depending on their location. Specifically for senior hunger, BenefitsCheckUp is a free service provided from the National Council on Aging to guide older adults in recognizing what benefits they are eligible for based on their financial information (National Council on Aging, n.d). The application can be done online or by phone, and senior can find assistance on how to use the benefits. The programs in Florida related to food and nutrition that they are referred to are: SNAP and SUNCAP Programs, Elderly Nutrition Program-Congregate or Group Meals, Home Delivered Meals, Seniors Farmers Market Nutrition Program, The Emergency Food Assistance Program, and Feeding America.

*Feeding America:*

Feeding America is the largest hunger relief organization in the United States that provides a network of food banks, pantries and meal programs across the country. This provides education and resources to communities in their area who are facing hunger. They also provide



assistance with food banks who disburse free donated food to food pantries no matter their eligibility. Feeding America's efforts have helped nearly 46 million people, including 7 million seniors (Feeding America, 2018). Specifically to Florida they are affiliated with eight food banks across the state. These include:

- *Harry Chapin Food Bank of Southwest Florida, Ft. Myers, FL*
- *Treasure Coast Food Bank, Ft. Pierce, FL*
- *Feeding Northeast Florida, Jacksonville, FL*
- *Second Harvest Food Bank of Central Florida, Orlando, FL*
- *Feeding South Florida, Pembroke Park, FL*
- *All Faiths Food Bank, Sarasota, FL*
- *America's Second Harvest of the Big Bend, Tallahassee, FL*
- *Feeding Tampa Bay, Tampa, FL*

*Community Supplemental Food Program:*

The Community Supplemental Food Program (CSFP) is a federally funded program and provides monthly supplemental food boxes using USDA commodities and administrative funds to states for seniors below 130 percent of the Federal Poverty Line (around \$15,301) to combat poor health conditions often found in food insecure seniors. The boxes contain foods that are rich in nutrients often lacking in food insecure seniors such as protein, calcium, potassium, magnesium, and fiber. This program serves 619,000 low-income seniors and provides 8,364,467 meals both nationally and annually and is the only USDA nutrition program that uses USDA commodity foods to provide monthly food assistance specially targeted at low-income seniors. There is an estimated \$27 cost to USDA for providing commodities that will result in a monthly

food package with an average retail value of \$50. The participating seniors will benefit from having a supplemented nourishment from categories such as cereals, cheese, fruits, milk, peanut/butter/dry beans, potatoes/grains, proteins, and vegetables. In addition, the seniors are given nutritional education material as well as instructions in how to prepare the foods given in monthly package. Participants can either pick up their monthly CSFP food package at a participating food bank or other local sponsor or have a designee who is authorized to pick it up or some sites offer home-delivered packages for home-bound/limited mobility seniors (Feeding America, 2018).

In the State of Florida, there are 6 Contracted Distributing Agencies for the CSFP program which are all managed by the Florida Department of Agriculture and Consumer Services. The number of seniors participating in the CFSP program in the State of Florida for the Federal Fiscal Year of 2018-2019 is at an average of 6,655 annually which comes to around 8% of seniors in Florida (National Data Bank, 2019).

- Region 1 and 2: Feeding The Gulf Coast (\*SDA) Theodore, FL 32310
- Region 3 and 6: Bread of the Mighty Food Bank Gainesville, FL 32601
- Region 4: Feeding Tampa Bay Tampa, FL 33605
- Region 5: Harry Chapin Food Bank of Southwest Florida Fort Myers, FL 33901
- Region 6 and 7: Treasure Coast Food Bank Fort Pierce, FL 34947
- Region 9: Feeding South Florida Pembroke Park, FL 33023

A 2014 USDA study rated the CSFP senior food package at 83.6 on the Healthy Eating Index (HEI: a measure of diet quality aligned with the Dietary Guidelines for Americans ranging

0-100, with 100 being the best quality diet). This is significantly higher than the HEI score for the average American diet. Further findings indicated that 23 percent of seniors total energy needs were met with one third or more of the recommended daily reference intake for protein, calcium, vitamins A, C, and several B vitamins (Feeding America, 2018). The CSFP program is a good program to combat the poor nutritional status of vulnerable seniors and should continue to be expanded and made available to all vulnerable communities within the State of Florida. Funding will need to be increased in order to serve more communities which will trickle down from Congress in the Farm Bill. The recent 2018 Farm Bill expanded the certification process for one to three years for program participants, which is good progress to making it easier for participants to stay enrolled in the program without having to reapply (Farm Bill, 2018).

#### *Supplemental Food Assistance Program (S.N.A.P.)*

The Supplemental Food Assistance Program (SNAP) formerly known as “Food Stamps” is the largest program to target food insecurity. SNAP offers nutrition assistance nationwide to low income individuals and their families by providing benefits for food assistance through a prepaid EBT card to use at grocery stores and farmer markets. SNAP eligibility is based on yearly income and the number of people per household. The eligibility requirements vary from year to year based off of the cost of living adjustment information which is recalculated each October, in the current fiscal year (USDA, 2018).

Unfortunately, in the senior community there are barriers related to technology and lack of knowledge around SNAP. Therefore, not as many seniors know how to apply which results in decreased total enrollment. Only 42 percent of eligible seniors are enrolled and receiving SNAP benefits nationally (Feeding America, 2018). This means more than half of eligible seniors are

not enrolled in SNAP benefits nationally. Specifically to Florida, there are 751,606 eligible seniors and 486,011 (64.7%) participants over the age of 60 actually receiving the benefits from the SNAP program (Rick & Verghese, 2016). The participation rate is better than the national rate but there is still a third of our eligible senior population that needs to be reached.

#### SUNCAP:

SUNCAP is a Florida food assistance program for individuals who receive Supplemental Security Income (SSI) (SUNCAP, n.d). SSI is defined as “a program funded by general tax revenues, separate from Social Security taxes, that helps the aged (at least 65 years old), blind, and disabled adults who have little or no income to meet basic needs for food, clothing and shelter” (Social Security Administration, 2018). For people who receive SSI benefits they can be also eligible to receive food assistance through the SUNCAP program without any additional applications and this would be used rather than SNAP dollars. Recipients can use benefits to buy breads, cereals, fruits, vegetables, meats, fish, poultry, dairy, and plants and seeds to grow food for their household to eat. Participants of the program get their benefits on an EBT card to access food assistance benefits. Benefits are disbursed monthly and need to be recertified every four years (SUNCAP, n.d).

#### Senior Farmers’ Market Nutrition Program:

The Senior Farmers’ Market Nutrition Program (SFMNP) is a federal grant program that provides coupons to low-income seniors. These coupons can be used at farmers markets for eligible foods such as fruits, vegetables, honey, and herbs (USDA, 2018). The purpose of this program is to provide healthy and fresh produce to low-income seniors while simultaneously

supporting agricultural efforts. The coupon program begins April 1st and runs through September 30th (DOEA, 2019). Remaining funds after this period can be used for bundles of fresh produce priced at \$40 each; these are distributed to seniors who did not receive coupon booklets in the earlier spring months (DOEA, 2019). Eligibility applications are submitted through a local elder service lead agency. If eligible, seniors will be given two booklets per season to use at farmers’ markets (DOEA, 2019). Each booklet contains five \$4 coupons, totaling to \$40 worth of coupons during the season to use on fresh produce (DOEA, 2019). The counties currently eligible for this program are as follows: Alachua, Bay, Columbia, Dixie, Escambia, Gadsden, Gilchrist, Holmes, Jackson, Lafayette, Leon, Liberty, Okaloosa, Santa Rosa, Suwannee, Union, and Washington counties. Funding may increase in the future which could open up more opportunities to expand this program.

The quantity of the SFMNP grants are disbursed based on state need and participation. According to funding and history of SFMNP Grant Amounts, between the years of 2015-2019 Florida has received an ample amount of money that has fluctuated every program year. Below is the 2015-2019 SFMNP Grant Amounts for Florida (DOEA, 2019):

<b>Grant Year</b>	<b>Federal Funding</b>	<b>Farmers</b>	<b>Farmers Markets</b>	<b>Participants Receiving Coupons</b>	<b>Participants Receiving Bundled Produce</b>
2015	\$98,752	124	41	2,071	275
2016	\$97,139	139	40	1,901	475

2017	\$101,366	136	48	2,228	307
2018	\$120,662	149	50	2,750	678
2019 (Projected)	\$120,662	149	50	2,750	678

Based on the information from the chart above, Florida receives increases in federal funding yearly which increases in farmers and market participation, as well as participants from the SFMNP. This all results in a positive impact that SFMNP makes in Florida’s low income senior community.

*The Emergency Food Assistance Program:*

The Emergency Food Assistance Program is a federal program sponsored by the USDA that attracts all low income population groups, including seniors who have experienced an emergency crisis and in turn need food assistance. These types of emergency crises may include hurricanes, tornados, floods, and long term power outages. Eligibility is determined based on income or current participation in federal/state food assistance programs, and nonprofit organizations that provide nutrition assistance to low-income communities.

### **Section 3: The Future in Senior Malnutrition: Barriers and Beyond:**

#### **Barriers:**

Senior Malnutrition is a serious health problem among the country and the state of Florida. There are 1.8 million Floridians age 75 years and older with those 100 and older being the fastest growing age group by percentage in the country (State Plan on Aging Federal Fiscal Years 2017-2020, July 2016). Even though there are several state and federal programs in place as seen in this proposal, there are barriers that prevent portions of the population group from utilizing these programs. When looking at programs addressing malnutrition from a community programs perspective, there needs to be a focus on how to provide seniors with access to nutritious meals while taking into account the various barriers these seniors may face. Public health professionals and state officials need be cautious when developing interventions for seniors. For example, one of the biggest barriers among seniors is a lack of knowledge about and ability to use new technologies. Most of the government related food assistance programs have online applications or websites one must navigate for directions and resources. This makes it very challenging for seniors to find available benefits and how to receive them if they qualify.

Certain medical conditions, such as blindness or cognitive decline, may also contribute to their technological difficulties. If programs had more assistance with paper applications or advertisements of phone operated applications it may cater to this population group appropriately and significantly increase program participation.

Programs need to be mindful of other barriers seniors may face such as their emotional state. For example, the stigma of receiving federal benefits may be a barrier for seniors who have never had government assistance. Many seniors may feel embarrassed, ashamed or judged about needing benefits they did not need earlier in life. Part of this may be due to not saving enough for retirement, financial hardship, economic decline, or increased in cost of living. In addition, not all seniors at risk for malnutrition qualify for benefits; nationally about 65.8% of seniors who are food insecure have incomes above the federal 2015 poverty line of \$11,770 (Feeding America, 2018). This proves that seniors may still suffer from malnutrition even if they make more than the minimum federal requirements for benefits.

Mental health is another large factor in one's choice to seek out benefits. More than 60% of food insecure seniors have depression nationally (Feeding America, 2018). This high percentage of depression can be related to several reasons such as recent loss of a loved one, disease, isolation, and more. A side effect of experiencing depression is having little to no desire to eat or a significant change in weight. This results in being directly correlated with malnutrition. When seniors are malnourished and depressed, they may not have the desire to eat or to seek out benefits, which in turn results in a decline in their nutritional status; a never-ending cycle for senior malnutrition. This shows how important it is for interventions to be tailored to



account for these behavioral barriers that influence seniors food decisions and resource selections.

### *Baby Boomers Generation:*

The baby boomer generation is very large and is categorized by anyone who was born between the years of 1946 and 1964. This means in 2019, Baby Boomers are between 55 and 74 years old; with nearly 75% of them currently classified as seniors. This results to an expanded senior population nationally and in Florida from one larger generation to the next. This is because people in the baby boomer generation (the largest generation) are living longer, which in turn is creating a large senior population. In fact, by 2050 the 65 and older age group is expected to reach 84 million, which is double its current national senior population size (Feeding America, 2013). Additionally in 2050, 20% of the national population is expected to be seniors compared to the 15% senior population rate in 2014 (Feeding America, 2013). Proving even more so, that our senior population is growing immensely and interventions need to be considered. The more Florida focuses on senior issues for the prevention of diseases, the more Florida will save on the cost of healthcare.

### *Conclusion of Florida Overall:*

Florida still has the most in the nation for the 65 and older population with more seniors retiring here each year. As of 2019, there are approximately 2,819 assisted living facilities, 320 adult family care homes, 747 nursing homes, 285 senior centers, and 397 congregate meal sites throughout the state (DOEA, 2019). All of these provide some type of meal service for elders in Florida. This is a great start but is still not enough to address the number of seniors who are still

malnourished. According to Department of Elder Affairs, below are the top five counties in Florida with the densest population of elders and the top five counties with senior minority populations (DOEA, 2019):

Densely Senior Populated Counties:

1. Sumter- 60.7%
2. Charlotte- 46.1%
3. Citrus- 43.4%
4. Sarasota- 42.3%
5. Highlands- 41.6%

Counties with Highest Senior Minority Populations:

1. Citrus- 25.3%
2. Flager- 24.9%
3. Charlotte- 22.6%
4. Jefferson-21%
5. Miami-Dade 20.7%

It is evident that there is a large correlation between densely senior populated counties and counties with high senior minority populations. When comparing both lists, Citrus and Charlotte counties both rank in the top three for senior population and senior minority population. This should be recognized for arisen issues in language and cultural competence barriers. Additionally, it is also important to notice the locations of the counties with high senior population. After researching the Florida Planning and Service Area (PSA) for Area Agency on

Aging Offices, the nearest PSA office from Sumter county (60.7%- Ranked #1) and Citrus county (43.4%- Ranked #3) are both over an hour away. Having a PSA office far from a heavily populated area of seniors, who may have trouble driving, makes it very difficult to provide resources and outreach to this area of the state.

Senior Malnutrition and overall senior wellness is something Florida needs to dedicate more time and money towards in order to develop and improve interventions and resources that are available to seniors. This can be done by building upon goals already established in the Florida State Plan on Aging. The goals specifically related to health and nutrition are summarized below (Rick & Verghese, 2016):

- Goal 2: Provide medical and home and community-based services to enable individuals to maintain the highest level of independence for as long as possible, including support for caregivers
- Goal 3: Health and Wellness – Empower older Floridians, individuals with disabilities, and their caregivers to live active, healthy lives to improve their overall health status
  - Manage and coordinate programs that empower older Floridians to control their own health through community level interventions
  - Encourage and offer programs to the Area Health Education Centers on good nutrition and physical activity education to senior health.
  - Provide health and wellness options specifically for homebound elders and their caregivers

This is a need for the overall future of our Florida's aging population. Making these interventions will exceed a great benefit for Florida's senior citizens, allowing them to live longer lives that are rich and full of dignity.

## References:

2012 Florida Statutes, Florida Senate. (2012). Title XXXIII. Chapter 501.2077. Retrieved from <https://www.flsenate.gov/Laws/Statutes/2012/501.2077>

Abbott. 2016. Malnutrition in America: *A 15.5 Billion Issue*. Retrieved from <https://avalaunchmedia.com/inter/Abbott/malnutrition.html>

Academy of Nutrition and Dietetics. (April 2017). Academy of Nutrition and Dietetics, Senior Advocates and Patient Groups Commend CMS for Taking Action Against Hidden Epidemic of Older Adult Malnutrition. Retrieved from <http://www.prnewswire.com/news-releases/academy-of-nutrition-and-dietetics-senior-advocates-and-patient-groups-commendcms-for-taking-action-against-hidden-epidemic-of-older-adult-malnutrition-300442841.html>. Accessed May 31, 2017

Dasgupta, S., & Aly, A. M. (2016). Dilated Cardiomyopathy Induced by Chronic Starvation and Selenium Deficiency. *Case reports in pediatrics*, 2016, 8305895.

Defeat Malnutrition Today. (June 2017). Advancing Policies for Quality Malnutrition Care in Older Adults, State Legislative Toolkit. *Washington, DC: Defeat Malnutrition Today*. Retrieved from [http://defeatmalnutrition.today/sites/default/files/documents/2017%20Malnutrition%20Legislative%20Toolkit\\_PRINT.pdf](http://defeatmalnutrition.today/sites/default/files/documents/2017%20Malnutrition%20Legislative%20Toolkit_PRINT.pdf)

Department of Elder Affairs (DOEA). (2019). Summary of Programs and Services. *Department of Elder Affairs*. Pages 9-88.

Department of Elder Affairs (DOEA) (2017). DOEA 2017 Fact Sheet. Retrieved from [http://elderaffairs.state.fl.us/doea/pubs/pubs/DOEA\\_Fact\\_Sheet.pdf](http://elderaffairs.state.fl.us/doea/pubs/pubs/DOEA_Fact_Sheet.pdf)

Fávaro-Moreira, N. C., Krausch-Hofmann, S., Matthys, C., Vereecken, C., Vanhauwaert, E., Declercq, A., . . . Duyck, J. (2016). Risk Factors for Malnutrition in Older Adults: A Systematic Review of the Literature Based on Longitudinal Data. *Advances in Nutrition*, 7(3), 507-522. doi:10.3945/an.115.011254

Federal Older Americans Act (OAA) Program. (n.d.). Retrieved from <http://elderaffairs.state.fl.us/doea/oaa.php>

Feeding America. (2013). Baby Boomers and Beyond: Facing Hunger After Fifty. *Feeding America Network*. Pg. 1-15. Retrieved from

<https://www.feedingamerica.org/sites/default/files/research/senior-hunger-research/baby-boomers-executive-summary.pdf>.

Feeding America. (2018). *Feeding America*. Retrieved from <https://www.feedingamerica.org>.

Goates S, Du K, Braunschweig CA, Arensberg MB (2016) Economic Burden of Disease-Associated Malnutrition at the State Level. *PLoS ONE* 11(9): e0161833. <https://doi.org/10.1371/journal.pone.0161833>

GPS (2018). Retrieved from <http://www.oppaga.state.fl.us/profiles/5054/front.htm/>

Lade, D. C., Redi, A., & Maines, J. (2017, May 30). The Hidden Hungry. *Sun Sentinel*. doi:<http://interactive.sun-sentinel.com/senior-food-deserts/>

Meals on Wheels America. (2018, November). Florida Meals on Wheels Fact Sheet. Retrieved March 18, 2019, from [https://www.mealsonwheelsamerica.org/docs/default-source/fact-sheets/2018/2018-state/florida-mowa-fact-sheet-2018.pdf?sfvrsn=e672be3b\\_4](https://www.mealsonwheelsamerica.org/docs/default-source/fact-sheets/2018/2018-state/florida-mowa-fact-sheet-2018.pdf?sfvrsn=e672be3b_4)

NASEM (National Academies of Sciences, Engineering, and Medicine)/Health and Medicine Division (HMD). (2016). Meeting the Dietary needs of Older Adults: Exploring the Impact of the Physical, Social, and Cultural Environment: *Workshop summary, The National Academies Press*. Retrieved from <https://www.ncbi.nlm.nih.gov/books/NBK379100/> doi: 10.17226/23496

National Council on Aging. (n.d). About NCOA. *National Council on Aging*. Retrieved from <https://www.ncoa.org/about-ncoa/>.

National Data Bank. (2019). CSFP Participation Data. *National Data Bank*. Retrieved from: [http://www.ncsfpa.org/\\_assets/2019/03/NCSFPA-Monthly-Participation-Report-December2018.pdf](http://www.ncsfpa.org/_assets/2019/03/NCSFPA-Monthly-Participation-Report-December2018.pdf)

Social Security Administration (2018). Supplemental Security Income. *Social Security Administration*. Retrieved from <https://www.ssa.gov/ssi/>.

State Plan on Aging Federal Fiscal Years 2017-2020 (July, 2016). State Plan on Aging Federal Fiscal Years 2017-2020. *Department of Elder Affairs State of Florida*, 1-105. Retrieved March 5, 2019, from [http://elderaffairs.state.fl.us/doea/StatePlan/2017-2020 State Plan on Aging.pdf](http://elderaffairs.state.fl.us/doea/StatePlan/2017-2020%20State%20Plan%20on%20Aging.pdf)

SUNCAP, (n.d) Food Assistance Program. *Department of Child and Family Services*. Access Florida. Retrieved from <https://www.dcf.state.fl.us/programs/access/docs/suncapenglish.pdf>.

Rick, S., Verghese, P.S., (2016). State Plan on Aging: Federal Fiscal Years of 2017-2020. *Department of Elder Affairs*. Pg. 3-33. Retrieved from [http://elderaffairs.state.fl.us/doea/StatePlan/2017-2020\\_State\\_Plan\\_on\\_Aging.pdf](http://elderaffairs.state.fl.us/doea/StatePlan/2017-2020_State_Plan_on_Aging.pdf) .

Tilly, J., DrPH. (2017). Opportunities to Improve Nutrition for Older Adults and Reduce Risk of Poor Health Outcomes. *Administration for Community Living*, (3), 1-15. Retrieved March 12, 2019, from <https://nutritionandaging.org/wp-content/uploads/2017/03/Malnutrition-Issue-Brief-final-3-2017.pdf>.

University of Florida. (2017, October 13). Malnutrition. Retrieved from <https://ufhealth.org/malnutrition>

United States Department of Agriculture (USDA). (2018). Food and Nutrition Services. *Supplemental Nutrition Assistance Program (SNAP)*. Retrieved from <https://www.fns.usda.gov/snap/supplemental-nutrition-assistance-program-snap>.

United State Department of Agriculture (USDA). (2018). Senior Farmers' Market Nutrition Program. *USDA*. Retrieved from <https://www.fns.usda.gov/sfmnp/overview>.

United States Department of Agriculture (USDA). (2019). Commodity Supplemental Food Program (CSFP). *2018 Farm Bill Information Memo*. Retrieved from <https://fns-prod.azureedge.net/sites/default/files/CSFP-%202018%20Farm%20Bill%20Memorandum.pdf>

U.S. Department of Health and Human Services (USDHHS) and U.S. Department of Agriculture (USDA). (2018). 2015–2020 Dietary Guidelines for Americans. 8th Edition. December 2015. Retrieved from <http://health.gov/dietaryguidelines/2015/guidelines/>

What is Malnutrition. (n.d.). (September, 2017). Retrieved from <https://www.eatright.org/food/nutrition/healthy-eating/what-is-malnutrition>.