

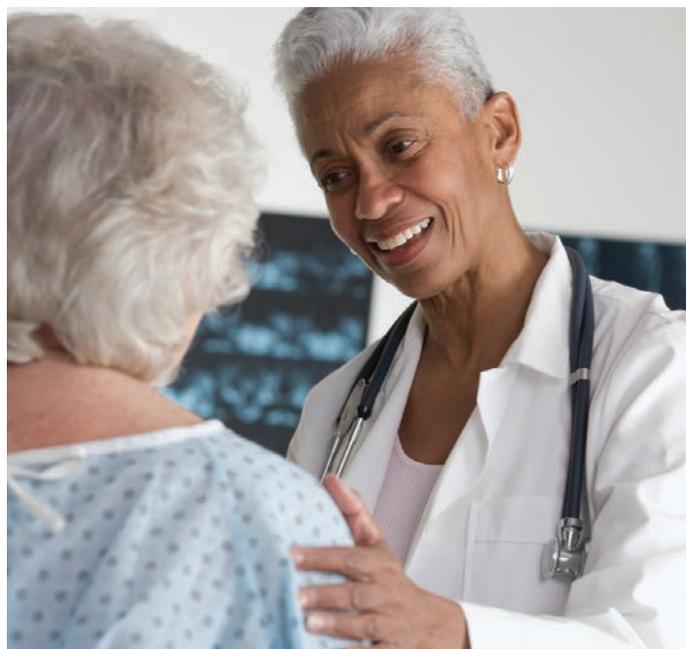


# Malnutrition Prevention Commission

March 2018

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# Malnutrition Prevention Commission

## Executive Summary

Malnutrition is a leading cause of morbidity and mortality among older adults. Due to an array of causes and contributors, older adults, across all population groups, are at an increased risk for developing malnutrition.<sup>1</sup> Older adults experiencing food insecurity suffer from higher rates of chronic disease, including diabetes, heart disease and depression.<sup>2</sup> They also endure a lower quality of life, with limitations on activities of daily living comparable to food-secure seniors who are 14 years older.<sup>3</sup> Conversely, good nutrition has been shown to help support a healthy and active lifestyle, reduce frailty and disability, improve health outcomes, and reduce health disparities and health care costs

The 131<sup>st</sup> Ohio General Assembly passed Amended Substitute House Bill 580, and Governor John R. Kasich signed it into law on December 19, 2016, establishing the Malnutrition Prevention Commission. Am. Sub. HB 580, originally proposed by Senator Gayle Manning through separate legislation, tasked the Commission with developing recommendations to reduce the incidence of malnutrition among older Ohioans based on the Commission's collection of information and study of malnutrition in the elderly (i.e., 60 years of age and older).

The Commission studied malnutrition as it relates to healthcare costs and data, education and awareness, and prevention. The Commission's findings and recommendations included in this report are hereby submitted to the Governor and the Ohio General Assembly in accordance with Ohio Revised Code 101.68.

## Key Findings

The following themes emerged based on the research and data gathered by the Commission:

### **The Population is Shifting in Ohio**

- In 2010, four Ohio counties had populations that were more than 25 percent age 60-plus. By 2030, seven counties will be under that threshold.
- By 2040, nearly 30 percent of all Ohioans will be age 60 or older, compared to just under 20 percent today.

*While the overall Ohio population is projected to increase by just 2 percent over the next decade, the proportion of population age 60 and older will grow by 46 percent.*

## The Risk for Malnutrition is High

- Chronic diseases such as cancer, stroke, diabetes and heart disease and their treatments can result in changes in nutrient intake and ability to use nutrients, which can lead to malnutrition.
- Up to 50 percent of older adults living in community settings (not in long-term-care facilities) may be malnourished.<sup>4</sup>
- In 2017, 671,333 older Ohioans were found to be isolated and living alone; 443,770 were threatened by hunger and 694,565 were living in or near the poverty line.<sup>5</sup>
- According to the American Journal of Public Health at least one-third of all 1.6 million nursing home residents in the U.S may suffer from malnutrition or dehydration.<sup>6</sup>

*The Centers for Medicaid and Medicare Services has cited malnutrition prevalence estimates of 33 percent to 54 percent, yet diagnosis rates in studies have been found to be only 7 percent, which suggests that millions of patients with malnutrition are unidentified and potentially untreated.*

## Malnutrition is Costly

- Patients who are malnourished while in the hospital have a greater risk of complications, falls, pressure injuries, infections, readmissions and a longer length of stay, which is associated with up to a 300 percent increase in costs.<sup>7</sup>
- Patients with malnutrition may experience longer hospital lengths of stays up to 4 to 6 days.<sup>9</sup>
- Malnourished hospitalized adults have up to five times increased mortality.<sup>10</sup>

*Disease-associated malnutrition in older adults is also high—estimated to be \$51.3 billion per year.<sup>8</sup>*

Several policy topics emerged during Commission meetings that were outside the scope of the Commission's tasks. Due to limitations on influencing federal policies and funding allocations, operational challenges, and resources that would be required for implementation, the Commission did not develop recommendations around these themes but recognizes the importance of these critical state and federal programs.

- Additional funding allocations for the Administration for Community Living Older Americans Act, USDA Senior Farmers' Market Nutrition Program, USDA Commodity Supplemental Food Program, Supplemental Nutrition Assistance Program (SNAP), ODA Senior Community Services, and PASSPORT Home-Delivered Meal Programs
- Adoption of the Elderly Simplified Application Project and the Standard Medical Deduction for the Supplemental Nutrition Assistance Program (SNAP) by Ohio Job and Family Services
- Expansion of Medicare and Medicaid reimbursement of Registered Dietitian (RDN) services and care transition services
- Additional limitations were discovered by the Commission when researching local and state malnutrition data particularly data representing racial and ethnic minorities



## State and Community Initiatives Addressing Nutritional Needs of Older Ohioans

Multiple state agencies and community organizations provide programs and services to meet the nutritional needs of older adults and other Ohioans eligible for food assistance. These programs and services include, but are not limited to, home-delivered meals, congregate meals at senior centers and community centers, food assistance benefits provided through the Supplemental Nutrition Assistance Program (SNAP), reimbursement to community-based adult care centers for healthy meals they serve to their clients, coupons for older adults to use at farmers' markets, food banks/food pantries, and requiring nursing homes to employ a dietitian to ensure that they meet the dietary needs of residents. Details about these and other initiatives are outlined later in this report.

### Recommendations

The recommendations are consistent with the latest research and nationally accepted standards, and can be adapted as this issue and technologies evolve. The Committee therefore offers the following recommendations for preventing malnutrition in older adults:

#### Education and Awareness:

##### Recommendation 1

Introduce legislation in the General Assembly to establish an annual Ohio Older Adult Malnutrition Awareness Week in September to align with the American Society for Parenteral and Enteral Nutrition Annual Malnutrition Awareness Week.

##### Recommendation 2

Conduct culturally and linguistically appropriate awareness campaigns to educate older adults, caregivers and healthcare providers on malnutrition impact, prevention, treatment and available resources.

##### Recommendation 3

The Ohio Department of Aging will make electronically available evidence-based malnutrition care education tools, materials, and diverse programs for clinicians, patients, families, and caregivers as part of the integration of shared decision making and person-centered care models.



## **Data and Evaluation:**

### **Recommendation 4**

Encourage Ohio hospitals to contribute their data to the Agency for Healthcare Research and Quality to regularly track malnutrition diagnosis in Healthcare Cost and Utilization Project reports.

### **Recommendation 5**

Encourage healthcare providers to adopt clinically relevant malnutrition quality measures in registries and private accountability programs to support effective malnutrition prevention, identification, diagnosis, treatment and care transitions for older adults.

### **Recommendation 6**

Amend Ohio Administrative Rule for the Ohio Department of Aging to require that all Area Agencies on Aging and meal service providers complete the National Aging Program Information System (NAPIS) Nutrition module in Social Assistance Management System (SAMS) which provides details of the nutrition screening results for consumers receiving home delivered and congregate meals.

### **Recommendation 7**

Ohio universities and research institutions should publish white papers and peer-reviewed manuscripts regarding care pathways and treatments that positively impact malnutrition cost and outcomes that matter for older adults.

## **Prevention Models: Team-Based Care**

### **Recommendation 8**

Integrate malnutrition care goals, such as malnutrition screening, assessment, education, and interventions, in local population health planning, such as chronic disease plans that are supported by data included in community health needs assessments.

### **Recommendation 9**

Encourage clinicians, across all care settings, to enhance nutrition education and training for multidisciplinary care team members to include: documentation of malnutrition diagnosis and risk factors, transfer of nutrition diagnosis and diet orders in discharge plan to acute, post-acute care, or home, engagement of individual/patient, family and caregiver in care plan and discharge plan development, and educate physicians and nurses on the evidence that pre-albumin and serum albumin levels are no longer recommended as an assessment of nutritional status.



### **Recommendation 10**

Encourage acute and post-acute care providers to develop a protocol or care pathway that bi-directionally links clinically relevant malnutrition care or nutrition health information and discharge plans, including local resource referrals, from hospitals to the community and home-based care setting (including long-term care facilities).

### **Recommendation 11**

Encourage hospitals to review current patient admission and discharge processes for inclusion of malnutrition and food insecurity screening. Use a validated nutrition screening tool to screen within 24 hours of admission to identify at risk or malnourished patients.

### **Recommendation 12**

Encourage a nutritional assessment and recommended intervention to be triggered for all patients who are identified as having nutritional risk via a validated screening tool. Integrate the nutritional assessment into the interdisciplinary assessment process. Use electronic medical record (EMR) triggers to automate nutritional consults and review annually for trends and disparities to inform future interventions.

### **Recommendation 13**

Encourage Area Agencies on Aging and Providers to make greater use and implementation of nutrition counseling and medical nutrition therapy for home-delivered meal clients.

### **Recommendation 14**

Clinicians should educate individuals, caregivers and providers of the nutritional services and products during transition of care; including home delivered meals, oral nutritional supplements and food assistance programs. (targeted outreach to older adults eligible for SNAP)

### **Recommendation 15**

Encourage healthcare, community-based organizations, and government agencies to support the expansion of evidence-based wellness programs (e.g., chronic disease self-management, falls, etc.), which are cost-efficient and exhibit proven results for improving health outcomes related to malnutrition for the at risk population.

### **Recommendation 16**

Encourage healthcare and community-based organizations, and government agencies to support the expansion and the use of innovative malnutrition programming such as the Meals as you Mend model, ProMedica Food Clinic and other strategies for testing, implementation and evaluation of prevention initiatives to ensure access to quality care services for all populations.



## Malnutrition Prevention Commission Process

The Malnutrition Prevention Commission's first meeting was August 28, 2017. At the initial meeting, members discussed and established its process to accomplish the tasks set forth by the Ohio General Assembly.

The Commission then set a priority to receive testimony from key stakeholders regarding malnutrition among in Ohio and promising strategies to address malnutrition in Ohio's older adults.

The Commission was briefed on the state of nutrition among older adults and current programs by the Ohio Department of Health and the Ohio Department of Aging. The Commission members requested additional information and research and also discussed and established a definition for malnutrition in older adults. In developing the definition of malnutrition, the Commission reviewed and considered the already-established definitions from the World Health Organization and The American Society for Parenteral and Enteral Nutrition (ASPEN). The Commission adopted the ASPEN definition.

### **ASPEN Definition of Malnutrition:**

*An acute, subacute or chronic state of nutrition, in which a combination of varying degrees of overnutrition or undernutrition with or without inflammatory activity have led to a change in body composition and diminished function.<sup>11</sup>*

*The three etiology-based nutrition diagnoses in adults in clinical practice settings are:*

- *Starvation-related malnutrition: Chronic starvation without inflammation (e.g., anorexia nervosa)*
- *Chronic disease-related malnutrition: Inflammation is chronic and of mild to moderate degree (e.g., organ failure, pancreatic cancer, rheumatoid arthritis or sarcopenic obesity)*
- *Acute disease or injury-related malnutrition: Inflammation is acute and of severe degree (e.g., major infection, burns, trauma or closed head injury).*

During the Commission's October 23, 2017 meeting several key stakeholders shared relevant information regarding malnutrition in older adults. Commission members asked questions regarding their testimony. At the conclusion of the meeting, the Commission members distilled information, testimonies, and discussion and proceeded to identify common themes to further explore the Commission's recommendations.

The Ohio Department of Health and the Ohio Department of Aging analyzed the submitted materials and conducted additional research when needed. Commission members were asked to provide relevant data beyond testimony regarding clinical and community efforts around minimizing malnutrition in older adults. The Ohio Department of Health and Ohio Department of Aging staff members presented draft recommendations



to the Commission on January 29, 2018. The Commission members provided amendments and edits to the report and recommendations and the members selected and voted on the recommendations to include in this report. The Ohio Department of Health then finalized the Commission's report for submission to the Governor and to the Ohio General Assembly in accordance with Ohio Revised Code 101.68.

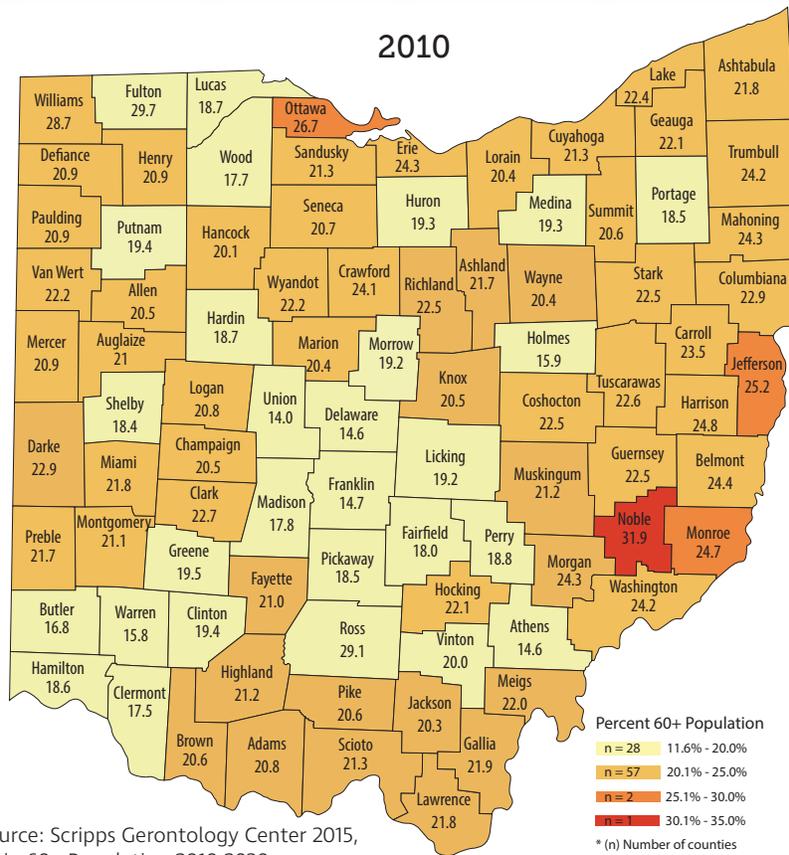
## Understanding Malnutrition in Older Ohioans

Malnutrition is a leading cause of morbidity and mortality among older adults. Due to an array of causes and contributors, older adults are at an increased risk for developing malnutrition (Moveira et al, 2016). The main cause of malnutrition in older adults is inadequate food and the presence of disease/inflammation that negatively impacts the ability to digest and absorb nutrients and/or increases the nutritional needs of the individual. Good nutrition has been shown to help support a healthy and active lifestyle, reduce frailty and disability, improve health outcomes, and reduce health care costs of individuals. Importantly, malnutrition is a significant problem for both underweight and overweight or obese individuals, due to loss of lean body mass (The Malnutrition Quality Collaborative, 2017).

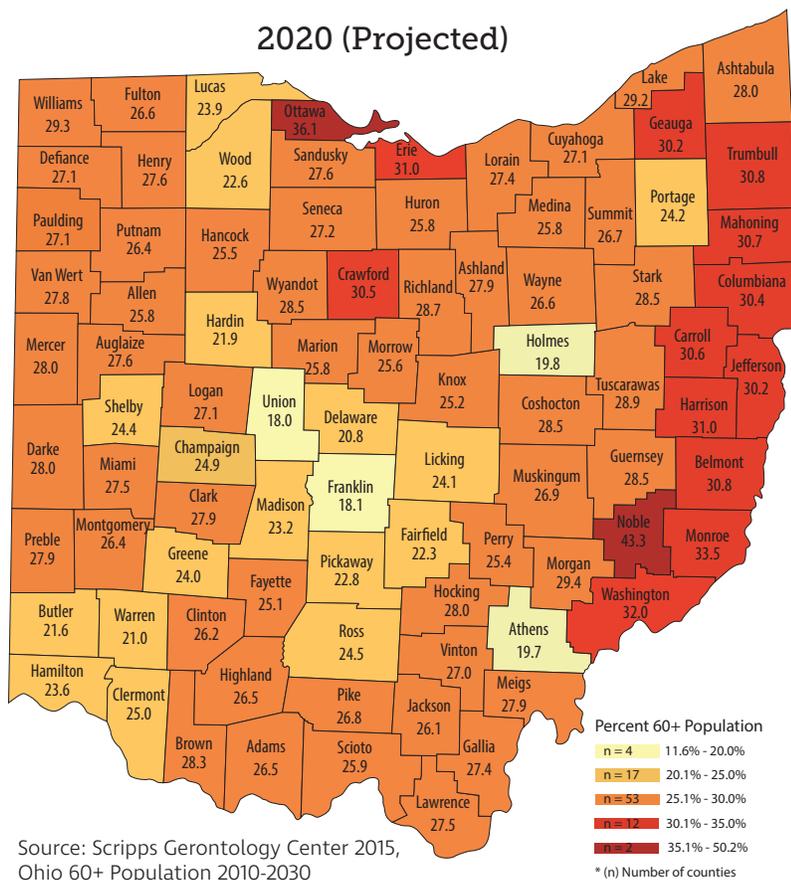
The importance of malnutrition prevention among older adults is magnified as it can impact independent living, healthy aging, and the severity of chronic conditions and disabilities (Correia & Waitzberg, 2003). Up to one out of two older adults is at risk of becoming malnourished (The Malnutrition Quality Collaborative, 2017).

Aging and associated changes such as loss of appetite, limited ability to chew or swallow and use of multiple medications can impact diet and nutrition. In addition, cognitive and functional decline, which may lead to social isolation or depression, may also pose risks for developing malnutrition (Posner et al, 1993). Because malnutrition in older adults is often linked to economic and social factors, it can also lead to more health disparities.

Nutrition is particularly critical for older adults who may have different nutritional requirements than the average adult population. As malnutrition disproportionately affects older adults, addressing the way Ohio is preventing and managing malnutrition becomes increasingly important with the state's anticipated older adult population boom. According to Scripps Gerontology Center at Miami University of Ohio, Ohio has the sixth highest number of residents age 65 or older in the nation, and Ohio's population continues to grow older. While Ohio's overall population is projected to increase by just 2 percent over the next decade, our 60-plus population will grow by 46 percent. In 2010, only four Ohio counties had populations that were more than 25 percent age 60-plus. By 2030, seven counties will be under that threshold. By 2040, nearly 30 percent of all Ohioans will be age 60 or older, compared to just *under* 20 percent today.



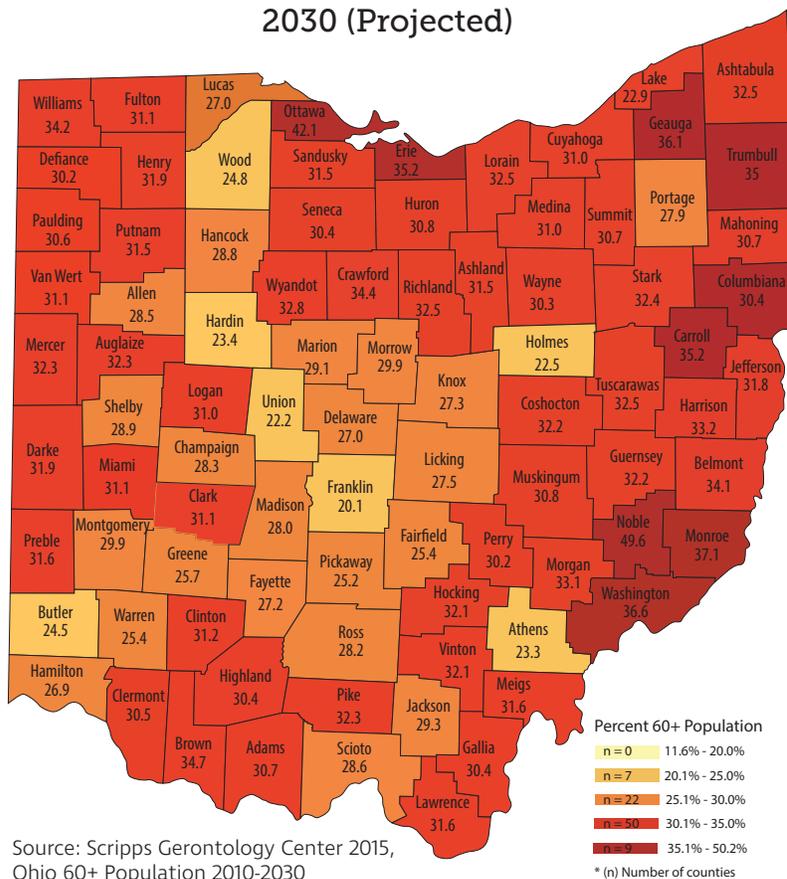
Source: Scripps Gerontology Center 2015, Ohio 60+ Population 2010-2030



Source: Scripps Gerontology Center 2015, Ohio 60+ Population 2010-2030



## 2030 (Projected)



Source: Scripps Gerontology Center 2015, Ohio 60+ Population 2010-2030



## Section 1: Scope of Malnutrition

### Risk Factors

Risk factors for malnutrition include chronic diseases, depression, social isolation, mental health, embarrassment, lack of food, food insecurity, poverty, financial constraints and repeated hospitalization (Hunger in Older Adults: Challenges and Opportunities for the Aging Services Network, 2017). Efforts should prioritize populations that disproportionately experience these risk factors.

Acute conditions, such as those that require surgery, as well as chronic diseases including cancer, diabetes and gastrointestinal, lung, and heart diseases and their treatments, can result in changes in an older adult's nutrient intake and nutrient absorption that can lead to malnutrition. Further, with disease-associated malnutrition, inflammatory responses are increased, which can result in decreased appetite, gastrointestinal problems, diminished immune response, delayed wound healing and increased infection rates. Such changes can increase risks for functional disability, frailty and falling (The Malnutrition Quality Collaborative, 2017).

Poverty and food insecurity significantly increase the risk of malnutrition. Older adults experiencing food insecurity suffer from higher rates of chronic disease, including diabetes, heart disease and depression (Seligman et al, 2010). Ohio has seen a 20 percent increase in the number of older adults visiting food pantries in the past four years, with a total of 449,115 people age 60 and over visiting food pantries in the first quarter of 2017.<sup>12</sup> Food-insecure seniors also endure a lower quality of life, with limitations on activities of daily living comparable to food-secure seniors who are 14 years older (Gunderson & Ziliak, 2015).

Dental complications can also lead to malnutrition among older adults. Nutrition is compromised when eating becomes problematic due to pain, broken teeth and difficulty chewing. Poor oral health and the inability to eat nutrient dense foods can lead to a higher risk of death, functional decline and quality of life. Low-income and vulnerable older adults suffer more of the consequences of tooth decay and other oral health problems.<sup>13</sup>





33% 

About 33% of older adults admitted to the hospital may be malnourished.

50% 

Up to 50% of community-dwelling older adults may be malnourished.

300% 

Malnutrition can increase healthcare costs by 300%.

Source: *Hunger in Older Adults: Challenges and Opportunities for the Aging Services Network*, 2017.

### Economic Burden

The economic burden of malnutrition is significant. Poor nutritional status and malnutrition in the older adult population are key areas of concern. Malnutrition and unintentional weight loss contribute to an older adult's progressive decline in health, increased utilization of health care services, frequent hospitalizations, premature institutionalization, and increased mortality.



adults struggle with food insecurity and 1 in 6 face the threat of hunger. In households with at least one member aged 65 or older, 8.3 percent are food insecure. In addition, older adults who live alone are more likely to experience food insecurity. Reports document that older adults near the poverty line who live alone have low or very low food security (The Malnutrition Quality Collaborative, 2017). Millions of seniors in communities nationwide are struggling with hunger, isolation and the ability to pay for basic living needs. Of the approximate 2.6 million older adults in Ohio, 671,333 were isolated and living alone, 443,770 were at risk of hunger and 694,565 were living in or near poverty (Meals On Wheels America, 2017).

Several studies have found that Supplemental Nutrition Assistance Program (SNAP) enrollment is associated with reduced health care spending among low-income adults. Therefore, encouraging SNAP enrollment among eligible adults may help reduce health care costs overall in the U.S. Currently, this program is underutilized by Ohio's older adults due to factors including the complexity of application, stigma, inadequate benefit amounts and lack of education about the program and outreach to the community. Only 40 percent of eligible seniors, those 60+, participate in SNAP in Ohio which equates to approximately 264,000 Ohio seniors who are eligible but are not receiving SNAP benefits.<sup>20</sup>



SNAP participation in older adults can result in a lower probability of admission and shorter stays in acute care settings. SNAP participation predicts less health care utilization in the next year, with 23 percent lower odds of nursing home admission, 14 percent lower odds of hospital admission and 10 percent lower odds of using the emergency department. According to Feeding America's Map the Meal Gap data, the average cost of a meal for a food insecure person in Ohio costs \$2.72, this is 27 percent higher than the SNAP maximum benefit per meal of \$1.86, which takes into account the maximum benefit available to households of varying sizes. Greater benefit amounts are also associated with lower health care costs. In one recent study of dually enrolled Medicare and Medicaid beneficiaries a \$10 increase in SNAP benefits per month predicted a seven percent lower odds of nursing home admission, two percent lower odds of hospital admission and two percent lower odds of emergency department visits. Among those admitted, an additional \$10 in SNAP benefits predicted in the next year, a one percent lower risk for each additional day in a nursing home and one percent lower risk for each additional day in a hospital.<sup>21</sup>

Additionally, the home-delivered meals program has been studied vigorously by researchers through the More Than a Meal Pilot Research Study which was produced by Meals on Wheels America and conducted by Brown University through a grant provided by AARP Foundation. This research has focused, to date, on the impact of the meal service on senior health and well-being, overall health and associated use of healthcare services. Results

of the study concluded that seniors who receive or request home-delivered meal services are significantly more vulnerable than the average American senior. For example, 71 percent of seniors needing home-delivered meals self-report fair or poor health compared to 26 percent of average seniors. According to the Brown University Study, home-delivered meal recipients' healthcare utilization and costs declined post-enrollment compared to the equivalent amount of time before enrollment.<sup>22</sup>

### Skilled Nursing Setting

At least one-third of the 1.6 million nursing home residents in the U.S. may suffer from malnutrition or dehydration, conditions that can aggravate or cause more severe medical problems. Swallowing disorders (dysphagia) due to dementia, stroke, Parkinson's disease and other neurological diseases affect from 40 percent to 60 percent of nursing home residents.<sup>23</sup> Malnutrition and dehydration have a variety of causes such as inadequate staffing levels, a lack of individualized care, high nurse aide turnover, and other structural factors within the nursing home settings.

The greater the investment in home-delivered meals under the Older Americans Act, the more likely they are to help people who don't need nursing home care to stay in their homes, according to Brown University statistical analysis of a decade of spending and nursing home resident data. Nationwide in 2009, 12.6 percent of nursing home residents were considered "low-care," meaning they did not need many of the suite of services that a nursing home provides. This proportion is in decline from 17.9 percent in 2000 due to the variety of efforts including OAA programs as well as Medicaid-sponsored home- and community-based services (HCBS).<sup>24</sup>



Source: *The Malnutrition Quality Collaborative, 2017*



## **Section 2: State and Community Initiatives Addressing Nutritional Needs of Older Ohioans**

### **STATE AGENCY EFFORTS**

#### **Ohio Department of Aging**

##### **Older Americans Act**

Congress passed the Older Americans Act in 1965 in response to concerns of policymakers about a lack of community social services for older adults. The original legislation established authority for grants to states for community planning and social services, research and development projects and personnel training in the field of aging. The law also established the federal Administration on Aging to implement the newly created grant programs and to serve as the federal focal point on matters concerning older adults.

Although older adults may receive services under many other federal programs, today the Administration on Aging is considered to be a major vehicle for the organization and delivery of social and nutrition services to this group and their caregivers. It authorizes an array of service programs through a national network of 56 state units on aging, 629 area agencies on aging, nearly 20,000 service providers, 244 tribal organizations, and two native Hawaiian organizations representing 400 tribes. The Older Americans Act also includes community service employment for low-income older Americans, training, research and demonstration activities in the field of aging, and vulnerable elder rights protection activities.

The Administration on Aging is housed within the Administration for Community Living at the Department of Health and Human Services and plays a vital role in ensuring the needs of older adults are met through the Nutrition Services Program. The purpose of Nutrition Services Program is to reduce hunger and food insecurity among older adults; promote socialization; promote health and well-being; and delay adverse health conditions.

Services available for elders through Ohio Department of Aging and administered by Ohio's Area Agencies on Aging include home-delivered meals, congregate meals, nutritional risk assessments, nutrition consultation, nutrition education, grocery assistance, grocery delivery and the Senior Farmers Market Nutrition Program. Congregate meals are served at senior centers or other community settings where program participants can socialize with their peers. Homebound participants have nutritious meals delivered to their home-offering them the opportunity for face-to-face contact or conversation with meal delivery drivers and volunteers.

Older Americans Act nutrition programs must meet 33 1/3 percent of the Dietary Reference Intakes and must meet the 2015-2020 Dietary Guidelines for Americans. In 2016, 38,415 Ohioans received home delivered meals and 46,091 Ohioans received congregate meals through Older Americans Act Title III funds, local levy dollars, private donations and state resources.<sup>25</sup> The Older Americans Act covers 33 percent of the total cost to provide nutritious meals, safety checks and friendly visits. Programs rely on contributions from state (Senior Community Services Block Grant) and local resources and private donations and other resources to cover the remaining costs of the program.

### 2016 State of Ohio Program Report

Service	# of Providers	Persons Served	# of Meals	Older Americans Act Title III Funds	Total Expenditure
Home-Delivered Meals	119	38,415	5,873,901	\$17,619,985	\$42,628,313
Congregate Meals	115	46,091	1,902,170	\$8,656,554	\$17,439,741
TOTAL		84,506	7,860,577	\$26,276,539	\$60,068,054

Mathematica Policy Research, a national nonpartisan research organization that assesses the effectiveness of policies and programs, evaluated Nutrition Services Program outcomes in the United States in 2015. By comparing data from program participants and a matched sample of eligible nonparticipants who live in the same neighborhood, the evaluation estimated the effects of congregate and home-delivered meal participation on food security, socialization and the quality of participants' diets. The program had positive impacts on the diets of participants, but its effects on food security and socialization were mixed. The findings showed that congregate meal participation had positive effects across the board. In comparison to nonparticipants, congregate meal participants had lower levels of food insecurity, better socialization outcomes and healthier diets in terms of both nutrient intakes and overall quality. Although home-delivered participants' food security and socialization outcomes were similar to those of nonparticipants, home-delivered meal participation had a positive impact on nutrient intakes and diet quality, and the program meals made substantial contributions to participants' diets.<sup>26</sup>

In additional evaluation efforts, Ohio is implementing a nutrition impact survey to measure and demonstrate the health and social benefits of the home-delivered meal programs. Buckeye Hills Regional Council was one of the first area agencies on aging to implement the survey in 2017.

Preliminary outcomes conclude:

- Nearly 20 percent of respondents are socially isolated;
- Nearly 25 percent of respondents are food insecure;
- Nearly 25 percent of respondents strongly agree that home-delivered meals help manage chronic conditions, e.g., high blood pressure, diabetes and heart disease);
- And nearly 30 percent of respondents strongly agreed home-delivered meals caused them to have fewer hospital visits.

## **PASSPORT**

The Pre-Admission Screen System Providing Options & Resources Today Program (PASSPORT) is an Ohio Medicaid waiver program administered by Ohio's PASSPORT Administrative Agencies that allows income-eligible older adults who require a nursing facility level of care to remain living at home or in a community setting by receiving care services and supports in those settings. The participating older adults benefit with a higher quality of life by providing them a choice of residential locations in which they can receive care services which can include home delivered meals. In 2017, PASSPORT served 4,183,580 home-delivered meals.

## **Senior Farmers' Market Nutrition Program**

The Senior Farmers' Market Nutrition Program, administered by Ohio's Area Agencies on Aging and funded by the U.S. Department of Agriculture with additional funding from state and local resources provides \$50 worth of coupons to older adults can use to purchase locally grown produce from participating farmers. Eligible older adults must be 60 or older, live in a service area that participates in the program and meet income guidelines. Older adults benefit from the social interaction at farmer's markets and roadside stands, learn valuable nutrition information and supplement their nutritional intake by eating fresh, locally grown produce. Ohio's older adults enjoy the fresh produce and farmers indicate that they have enjoyed helping Ohio's older adults and have found a new customer stream to their markets and roadside stands. Ohio is the third-largest recipient of USDA funds to support the Senior Farmers' Market Nutrition Program. Ohio's program has experienced tremendous over the past decade. In 2016, 33,407 older Ohioans participated in the Senior Farmers' Market Nutrition Program with the program's coupon redemption rate being 97.7 percent.

## **Healthy U**

The Ohio Department of Aging offers the Healthy U program. This is a six week, 2-2 ½ hour Chronic Disease Self-Management health and wellness program for those who are 60 and older at no cost to the participant. Caregivers who care for those with chronic conditions are also welcome to attend. Healthy U was developed at Stanford University and is effective at improving health outcomes. It is held in community settings, medical centers, senior centers, libraries, hospitals, independent living communities, and are offered in many Ohio counties. In addition to the Chronic Disease Self-Management Program (CDSMP), Ohio Department of Aging and Area Agencies on Aging also offer the Chronic Pain Self-Management and Diabetes Self-Management Programs. In 2017, nearly 1800 Ohioans enrolled in Healthy U programs.





## Ohio Department of Education

### **The Child and Adult Care Food Program**

The Child and Adult Care Food Program (CACFP) is a federally funded U.S. Department of Agriculture program administered by the Ohio Department of Education, Office for Child Nutrition. CACFP enables child and adult care institutions and family or group day care homes to provide nutritious meals and snacks as a regular part of their day care. The program contributes to the wellness, healthy growth, and development of infants and young children, as well as to the health and wellness of older adults and chronically impaired people with disabilities.

The program serves adults who are 60 or older and adults of any age who are functionally impaired to an extent that limits their independence and ability to carry out activities of daily living. The adult component of CACFP provides reimbursement to adult care centers for healthy meals served to adults enrolled in their programs. These payments help to lower the costs of serving nutritious meals that adults need to maintain or improve their health. To participate in CACFP—centers must provide adults with supervised care in community-based settings on a less than 24-hour basis. These nonresidential programs give adults supervision, increased social interaction and assistance with daily living activities. In 2017, Ohio served 509,901 meals to older adults under CACFP.

## Ohio Department of Health

### **Creating Healthy Communities**

Creating Healthy Communities is a program that is committed to preventing and reducing chronic disease statewide. Through cross-sector collaboration, they are activating communities to improve the access to and the affordability of healthy food, increase opportunities for physical activity, and assure tobacco-free living where Ohioans live, work and play. By implementing sustainable evidence-based strategies, Creating Healthy Communities is creating a culture of health. Increasing access to healthy food ultimately helps reduce the risk of malnutrition in Ohioans, including older adults.

Specific examples from the Creating Healthy Communities program at the local level include increasing the amount of healthy food sold in convenience stores, establishing community gardens at senior low-income housing facilities, developing a mobile produce pantry for seniors unable to leave their home, and establishing farmers' markets that accept the Senior Farmers Market Nutrition Program. At the state level, Creating Healthy Communities is helping to expand Produce Perks, Ohio's nutrition incentive program, by allowing Senior Farmers Market Nutrition Program recipients to double their dollars at both farmers' markets and retail stores when purchasing produce.



## Nursing Home Dietary Regulations

In Ohio, long-term care facilities are inspected and licensed by the Ohio Department of Health (ODH). Facilities that provide services to Medicare and Medicaid residents are also certified by the federal Centers for Medicare and Medicaid Services. This means that these facilities must comply with both state and federal regulations in order to operate in Ohio and receive Medicare and Medicaid reimbursement. At the Ohio Department of Health, the Office of Health Assurance and Licensing assures quality in healthcare facilities, including nursing homes and residential care facilities.

With regards to dietary regulations, both state and federal law requires nursing homes to provide nourishing, palatable meals that consider the preferences of each resident. This is designed to ensure that facility staff support the nutritional well-being of residents while respecting an individual's right to make choices about his or her diet.

Nursing homes are required to employ a dietitian to plan, direct and implement dietary services and ensure that they meet resident needs. The dietitian is also responsible for:

- Overseeing the development and implementation of policies and procedures which assure that all meals are prepared and served as ordered and that food service personnel maintain safe and sanitary conditions in procurement, storage, preparation, distribution and serving of food.
- Monitoring food preparation staff and staff responsible for carrying out food service duties.
- Overseeing, or arranging for, the training of staff in performing food service duties and in the preparation of foods for all diets.

When conducting surveys of nursing homes, ODH surveyors interview staff and residents, observe meals, and review records to determine whether:

- Residents are receiving food in the amount, type, consistency and frequency to maintain normal body weight and acceptable nutritional values.
- Resident preferences and needs are incorporated into the development of the individual food plan.
- A resident chooses not to consume certain foods or food groups such as the resident is a vegetarian or does not eat dairy, how does the facility ensure the resident's menu and/or the individual resident's food plan meets his or her nutritional needs.
- Menus meet basic nutritional needs by providing meals based on individual nutritional assessment, the individualized plan of care, and established national guidelines and are periodically updated to mitigate the risk of menu fatigue.
- Menus are reviewed and revised as needed by the dietitian.

Rules that establish nutrition standards appear in the Ohio Administrative Code.



Although the word “malnutrition” is not used or specifically referenced on the survey form used by ODH in a facility review, there are elements of the rules that address to frequency of meals, content of meals, food availability, and monitoring of the residents to identify changes in weight and/or consumption habits.

ODH surveyors interview the nursing home’s dietitian and dietary manager as well as other staff and residents to ensure needs are adequately met.

When nursing homes are not meeting residents’ needs and are out of in compliance with the regulatory requirements, corrective action can be pursued through imposition of remedies: civil monetary penalties, denial of payment, state monitoring, directed in-service training, termination of provider agreements and/or licensure revocation.

## **Ohio Department of Job and Family Services**

### **Supplemental Nutrition Assistance Program**

The Ohio Food Assistance Program (federally known as Supplemental Nutrition Assistance Program, or SNAP) is designed to raise nutritional levels, to expand buying power, and to safeguard the health and well-being of individuals in low-income households in Ohio. A household may consist of an individual or a group of individuals who live together and usually purchase, prepare, and eat their food together. Food assistance benefits are distributed electronically through the Ohio Direction Card, which is similar to a debit card. In 2017, 23 percent or 175,436 households who received SNAP included a senior. Income eligibility for the program is 130 percent or below of the federal poverty level.

### **Commodity Supplemental Food Program**

The Commodity Supplemental Food Program improves the health of low-income adults 60 or older by supplementing their diets with protein-rich nutritious foods. Eligible households are those with incomes at or under 130 percent of the federal poverty level. A monthly box of food provides nutrients typically lacking in the diets of older adults and includes a variety of foods, including cheese, nonfat dry and ultra-high-temperature milk, juice, oats and ready-to-eat cereal, rice and pasta, peanut butter, dry beans or peas, canned meat, poultry or fish, and canned fruits and vegetables. Eighty-five of Ohio’s 88 counties participate in the Commodity Supplemental Food Program. In 2017, 24,427 individuals received monthly boxes. Commodity Supplemental Food Program is funded by the U.S. Department of Agriculture, administered by the Ohio Department of Job and Family Services and delivered through local food banks.





## **Cleveland Clinic Akron General**

### **Nutrition with Med Pass Program**

Patients at Cleveland Clinic Akron General hospital who are at risk for malnutrition are screened upon admission in the acute care setting using a validated screening tool. Patients receive a consultation with a dietitian and are provided a high-protein oral nutritional supplement with each of three daily medication distributions.

Since implementing this program, the time between a nurse identifying a patient with a nutritional need and the initiation of an intervention has decreased from 2.3 days to within the first 24 hours. The percentage of patients receiving oral nutritional supplement increased from 6.1 percent to 8.1 percent. There was a greater reduction in length of stay for diagnoses associated with oral nutritional supplement (-0.77 vs -0.39  $p < 0.01$ ) and the cost to treat these individuals decreased by \$856 with the same diagnoses as compared to an increase of \$93 for other diagnoses. Early intervention with oral nutritional supplementation may lead to improvements in health outcomes, quality of care and health care spending.

## **Guernsey County Senior Citizens Center, Inc.**

### **Meals on Wheels of Guernsey County**

The Guernsey County Senior Citizens Center's "Meals as you Mend" program serves residents 60 and older who are being discharged from the hospital or nursing home and may need assistance with the preparation of nutritious meals. These individuals often are weakened, tire easily, and do not have family support during the day. Without proper nutrition, recovery is longer and overall health is not improved for these individuals. A nutrition risk assessment is completed for each client to identify appropriate referrals to food banks or other service to secure groceries. If an individual qualifies, the assessor enrolls him or her in the Commodity Supplemental Food Program. The assessment also determines if there are other services needed for the individual to remain safe in their home.

To monitor the success of the program, the assessor follows up with the client at regular intervals. Meals on Wheels of Guernsey County continues to complete the nutrition risk assessment form to determine whether the client is improving or needs any other services. Hospital and nursing home readmissions are also measured. As of November 2017, the program included 79 active clients, of which only six (less than 1 percent) had been readmitted to a hospital or nursing home. Funding for this project comes from the Ohio Department of Aging's Senior Community Services Block Grant through Area Agency on Aging Region 9.

## LifeCare Alliance

LifeCare Alliance is a not-for-profit organization that provides a comprehensive array of health and nutrition services to older adults and medically challenged or homebound residents of Central Ohio through its signature programs: Meals-on-Wheels, Senior Dining Centers, Wellness Centers, Help-at-Home, Visiting Nurses, the Columbus Cancer Clinic, Project OpenHand-Columbus, Groceries-to-go, IMPACT Safety and Senior PetCare. Each day, LifeCare Alliance serves more than 3,500 central Ohioans via its home-delivered meal program. LifeCare Alliance has the following four goals to combat older adult malnutrition: reduce hunger and food insecurity, promote socialization, promote health and well-being, and delay adverse health conditions.



### CORE

Core is a LifeCare Alliance two-phase pilot program that aims to help physicians improve outcomes for nutritionally at-risk adults by offering a package of services. It is designed to leverage recent pushes for models of reimbursement through Centers for Medicare and Medicaid Services that emphasize preventative care much like Comprehensive Primary Care Plus, Managed Long-Term Services and Support, and MyCare Ohio. Phase One of the pilot consists of a 30-day community-based assessment package for an adult who is identified as nutritionally at-risk by their physician. The package consists of a month of home-delivered meals as well as in-home screenings and initial assessments covering the nutrition, occupational therapy, and nursing domains. Phase Two of the pilot is based upon the assessments in Phase One. The physician has the option to select from a list services to be provided for the patient. This list of services includes but is not limited to: meal preparation, grocery shopping, medical nutrition therapy, comprehensive diabetic intervention safety checks, and minor home repair. These services can be offered through contracts with the physicians and leveraging reimbursement through the Centers for Medicare and Medicaid Services. This program is designed to be flexible to the individual needs of each physician with which LifeCare Alliance contracts with, who may have unique populations and therefore unique data collection priorities.

### Community Development for All People Nutrition Programs

This program's goal is to increase availability, access, and consumption of fresh fruits and vegetables. Community Development for All People operates a Fresh Market located on the south side of Columbus, Ohio which has dispersed over 632,000 pounds of free fresh fruits and vegetables to more than 28,000 individuals in 2017 and 4,805 seniors received free produce in 2017. Thirty minute sessions focus on varying topics that serve to educate and inform shoppers. Because of this programming, 61 percent of participants report an improvement in their diet, 65 percent are now more physically active, and over 95 percent report a greater self-efficacy to use food provided and create healthy meals at home.





## Ohio Association of Foodbanks

Ohio's Association of Foodbanks provide food, funding, programming and technical assistance to more than 3,300-members in food pantries (1,722), soup kitchens (722), homeless shelters (105) and new in-demand and supplemental site-based distributions outlets (809). The network distributed over 216 million pounds of food to more than 2 million Ohioans in 2017. More than 70 percent of the charities that serve this population are faith-based, and 6 in 10 are 100 percent volunteer-driven. More than 2 million different Ohioans (1 in 6) were served by these programs in 2016. In addition, the food banks operate and distribute food from the U.S. Department of Agriculture. These programs include operating The Emergency Food Assistance Program and Commodity Supplemental Food Program in partnership with the Ohio Department of Job and Family Services.

The Association also collaborates with the Ohio Department of Job and Family Services to operate the Ohio Food Program and Agricultural Clearance Program, two complementary, state-funded food programs that successfully acquired more than 54 million pounds of healthy wholesome food in 2017, or 45 million meals. Ohio Food Program and Agricultural Clearance Program made up more than 25 percent of all the food distributed by Ohio's 12 Feeding America foodbanks in state fiscal year 2017. Thanks to partnership with more than 120 farmers, growers, producers, and distributors, Ohio Food Program and Agricultural Clearance Program provided wholesome, nutritious foods including fresh fruits and vegetables, protein items and shelf-stable products, to individuals and families that cannot always afford sufficient nutritious food.

Additionally, the Ohio Association of Foodbanks operates the Ohio Benefit Bank™ which began as an effort to reduce poverty by making the benefit application process easier to navigate. Today, it is implemented in partnership with four federal agencies, eight state agencies and more than 1,100 faith-based and community organizations. Through the Ohio Benefit Bank™. Ohioans can use as online service to complete applications for programs including food assistance, child care assistance, health coverage and more.

### Mid-Ohio Foodbank

The Mid-Ohio Foodbank in Columbus has teamed up with local health clinics, hospitals and doctor's offices to provide intensive support to individuals with diabetes to help them manage their disease. Clients coming to food pantries are screened for diabetes, then offered a diabetes-friendly box containing whole grains, fruits, vegetables, lean meat and low-fat dairy foods, good choices for their meals. Clients also access health education classes and diabetes information sheets along with nutrition tips and recipes specific to items in their food box. Clients without a doctor are referred to a local provider who can ensure they receive the health care services including medication and blood sugar testing supplies, that they need to manage their disease.



## The Ohio State University Extension

The Supplemental Nutrition Assistance Program (SNAP) Education/Nutrition Education and Obesity Prevention Grant Program is a free nutrition education program that serves SNAP participants and low-income individuals eligible to receive SNAP benefits or other means-tested federal assistance programs throughout Ohio. The program is funded by the United States Department of Agriculture Food and Nutrition Service and works in partnership with the Ohio Department of Job and Family Services and the Ohio State University Extension to improve the likelihood that families and individuals (youth and adults) who receive SNAP benefits will make healthy food choices and choose active lifestyles.

## ProMedica Health System

In 2017, ProMedica Health System screened more than 500,000 individuals for food insecurity in the outpatient and inpatient settings. ProMedica also screens for 10 social determinants of health (more than 20 percent of patients have triggered positive in 4 or more domains). While food insecurity is strongly related to health outcomes, issues such as domestic violence, transportation, housing and the ability to afford medications are also critical. ProMedica screenings and interventions for food insecurity are associated with a 3 percent decline in emergency room visits, a 53 percent decline in hospital readmissions and a 4 percent increase in primary care visits.

ProMedica operates a food clinic to increase access to healthy food for food insecure patients seen by ProMedica physicians. The clinic provides food and healthy eating resources in a friendly and welcoming environment with a special consideration for medical nutrition needs, as determined by the patient's physician. A healthcare professional writes a referral to the food pharmacy for patients who are identified as food insecure. These patients are then able to visit the clinic to pick up a supplemental supply of healthy food for their family. The food clinic takes patient diagnoses into account when fulfilling the order, ensuring that all items provided to the patient are consistent with their medical needs. The clinic primarily offers healthy choices that promote healthy eating and balance at meals. Patients can choose their food selection, such as the type of vegetables or grains. Each visit to the clinic is recorded in their electronic medical record. By connecting the food package with the patient record, ProMedica can better track and report on the progress of each patient and develop additional interventions as needed over time. In addition to receiving healthy food, patients are offered the opportunity to meet with a registered dietitian-free of charge to discuss their dietary needs as well as connect with other community resources. Early outcomes for this clinical integration and community-connected model are very promising. While more research is necessary, patients participating in the food clinic are experiencing improved health, increased compliance with primary care visits, and reduced emergency room visits and re-admission rates.





### Prevention Models: Team-Based Care

8. Integrate malnutrition care goals, such as malnutrition screening, assessment, education, and interventions, in local population health planning, such as chronic disease plans that are supported by data included in community health needs assessments.
9. Encourage clinicians, across all care settings, to enhance nutrition education and training for multidisciplinary care team members to include: documentation of malnutrition diagnosis and risk factors; transfer of nutrition diagnosis and diet orders in discharge plan to acute, post-acute care, or home; engagement of individual/patient, family and caregiver in care plan and discharge plan development; and educate physicians and nurses on the evidence that pre-albumin and serum albumin levels are no longer recommended as an assessment of nutritional status.
10. Encourage acute and post-acute care providers to develop a protocol or care pathway that bi-directionally links clinically relevant malnutrition care or nutrition health information and discharge plans, including local resource referrals, from hospitals to the community and home-based care setting (including long-term care facilities).
11. Encourage hospitals to review current patient admission and discharge processes for inclusion of malnutrition and food insecurity screening. Use a validated nutrition screening tool to screen within 24 hours of admission to identify at risk or malnourished patients.
12. Encourage a nutritional assessment and recommended intervention to be triggered for all patients who are identified as having nutritional risk via a validated screening tool. Integrate the nutritional assessment into the interdisciplinary assessment process. Use electronic medical records (EMR) triggers to automate nutritional consults and review annually for trends and disparities to inform future interventions.
13. Encourage Area Agencies on Aging and Providers to make greater use and implementation of nutrition counseling and medical nutrition therapy for home-delivered meal clients.
14. Clinicians should educate individuals, caregivers and providers of the nutritional services and products during transition of care; including home delivered meals, oral nutritional supplements and food assistance programs. (targeted outreach to older adults eligible for SNAP)
15. Encourage healthcare, community-based organizations, and government agencies to support the expansion of evidence-based wellness programs (e.g., chronic disease self-management, falls, etc.), prioritizing those at risk, which are cost-efficient and exhibit proven results for improving health outcomes related to malnutrition.
16. Encourage healthcare, community-based organizations, and government agencies to support the expansion and the use of innovative malnutrition programming such as the Meals as you Mend model, ProMedica Food Clinic and other strategies for testing, implementation and evaluation of prevention initiatives to ensure access to quality care services for all populations.



(f) A dietitian licensed under Chapter 4759. of the Revised Code who actively practices in a nursing home, as defined in section 3721.01 of the Revised Code;

(g) A dietitian licensed under Chapter 4759. of the Revised Code who represents the Ohio Academy of Nutrition and Dietetics;

(h) An individual who represents the Ohio Association of Area Agencies on Aging.

(C) The Commission members described in division (B)(7) of this section shall be appointed not later than thirty days after the effective date of this section. An appointed member shall hold office until the Commission ceases to exist. A vacancy shall be filled in the same manner as the original appointment.

The Director of Health or the Director's designee shall serve as chairperson of the Commission.

A member shall serve without compensation except to the extent that serving on the Commission is considered part of the member's regular duties of employment.

SECTION 3. (A) The Malnutrition Prevention Commission created under Section 2 of this act shall do all of the following:

(1) Study the impact of malnutrition on older adults in all health care settings in this state;

(2) Investigate effective strategies for reducing the incidence of malnutrition among older adults;

(3) Monitor the influence of malnutrition on older adults' health care costs and outcomes, quality indicators, and quality of life measures;

(4) Develop strategies for improving data collection and analysis regarding malnutrition risks, health care costs, and protective factors for older adults;

(5) Develop strategies for maximizing the dissemination of proven, effective malnutrition prevention intervention models, including community nutrition programs, medical nutrition therapy, and oral nutrition supplements;

(6) Identify evidence-based strategies that raise public awareness of malnutrition among older adults, such as educational materials, social marketing, and statewide campaigns;

(7) Identify evidence-based malnutrition prevention intervention models, including community nutrition programs, that reduce the rate of malnutrition among older adults and reduce the rate of rehospitalizations due to conditions caused by malnutrition, and identify barriers to those intervention models;

(8) Identify models for integrating the value of malnutrition care into health care quality evaluations across health care payment models;

(9) Examine the components and key elements of malnutrition prevention intervention initiatives, consider their applicability in this state, and develop strategies for testing, implementation, and evaluation of the initiatives.

(B) The Commission shall prepare a report of its findings and recommendations. Not later than twelve months after the effective date of this section, the Commission shall submit a copy of the report to the Governor and, in accordance with section 101.68 of the Revised Code, the General Assembly. The Commission shall cease to exist upon the submission of the report.

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Speaker \_\_\_\_\_ of the House of Representatives.

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President \_\_\_\_\_ of the Senate.

Passed \_\_\_\_\_, 20\_\_\_\_

Approved \_\_\_\_\_, 20\_\_\_\_

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Governor.

The section numbering of law of a general and permanent nature is complete and in conformity with the Revised Code.

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*Director, Legislative Service Commission.*

Filed in the office of the Secretary of State at Columbus, Ohio, on the \_\_\_\_\_ day of \_\_\_\_\_, A. D. 20\_\_\_\_\_.

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*Secretary of State.*

File No. \_\_\_\_\_ Effective Date \_\_\_\_\_



## Appendix 2: List of Commission Members

**Representative Stephen Huffman**  
**Senator David Burke**

**Dr. Mary Kate Francis**, Ohio Department of Health, Chair

**Ainsley M. Malone**, Mount Carmel West Hospital

**Anita J. Meehan**, Cleveland Clinic Akron General

**Brian C. Polzner**, LifeCare Alliance

**Elizabeth A. Kowalczyk**, Ohio Association of Area Agencies on Aging

**Erin Dillion**, Ohio Department of Agriculture

**Jay M. Mirtallo**, The Ohio State University College of Pharmacy

**Katy Will**, on behalf of Interim Director **Beverley Laubert**, Ohio Department of Aging

**Leslie McGee**, Ohio Department of Job and Family Services

**Pauline Zarrieff**, Preventative HealthCare Services

**Randall H. Schimmoeller**, ProMedica

**Amy Elbaor**, Commission on Minority Health

**Suzanne Call Cryst**, The Maria Joseph Nursing and Rehab Center

**Tanya R. Gure**, Ohio State University Medical Center

## Appendix 3: Presentations/Testimony

### Oral Testimony

**Earl J. Lawson**, The African American Alzheimer's and Wellness Association

**Rebecca Liebes**, Area Office on Aging of Northwestern Ohio, Inc.

**Meredith Ponder Whitmire**, Defeat Malnutrition Today

**Randy Schimmoeller & Chloe Plummer**, ProMedica

**Kate Warren**, The Center for Community Solutions

**Beth Kowalczyk**, The Ohio Association of Area Agencies on Aging

**Julie A. Palmer**, LifeCare Alliance

**Mary Beth Arensberg**, Abbott Nutrition

**Dr. Douglas Beach**, Western Reserve Area Agency on Aging

**Lisa Hamler-Fugitt**, Ohio Association of Foodbanks

**Ainsley Malone** and **Suzanna Cryst**, via conference line

### Written Testimony

**Susan Wallace**, LeadingAge Ohio

**Renee Mahaffey Harris**, Ohio African American Coalition on Health Disparities



## Appendix 4: Stakeholder List

Abbott Nutrition

African American Alzheimer's and Wellness Association

American Society for Parenteral and Enteral Nutrition

Columbus Chapter, National Black Nurses Association/Ohio Coalition of Black Nurses

Licensed Practical Nurse Association of Ohio, Inc.

LifeCare Alliance

Meals on Wheels Association of Ohio

National Association of Social Workers, Ohio Chapter

Ohio Academy of Nutrition and Dietetics

Ohio Academy of Senior Health Sciences

Ohio Association of Area Agencies on Aging

Ohio Association of Assisted Living

Ohio Association of Food Banks

Ohio Chamber of Commerce

Ohio Chapter, American Society for Parenteral and Enteral Nutrition

Ohio Federation for Health Equity and Social Justice

Ohio Hospital Association

Ohio Manufacturers Association

Ohio Nurses Association

Ohio Pharmacist Association

Ohio Physical Therapy Association

## Appendix 5: Glossary

<b>Disease-Associated Malnutrition</b>	<p>Disease-associated malnutrition (DAM) is malnutrition that occurs from disease-related causes. This is different from malnutrition caused by lack of availability of food. In patients with DAM, nutrient intake is diminished and inflammatory responses increase, inducing increased metabolic demand, decreased appetite, gastrointestinal problems, and difficulty chewing and swallowing, all of which can decrease lean body mass and increase the risks of complications during treatment of the primary disease. Increased inflammatory responses also diminish immune response, increasing infection rates, decreasing muscle strength, retarding wound healing, and reducing physical function. Collectively these factors increase risks for functional disability, frailty, and falling.</p>
<b>Food Insecurity</b>	<p>Lack of consistent access to enough food for an active, healthy life. USDA's defines ranges of food security including high food security, marginal food security, low food security and very low food security.</p>
<b>Health Disparity</b>	<p>A particular type of health difference that is closely linked with social, economic, and/or environmental disadvantage. Health disparities adversely affect groups of people who have systematically experienced greater obstacles to health based on their racial or ethnic group; religion; socioeconomic status; gender; age; mental health; cognitive, sensory, or physical disability; sexual orientation or gender identity; geographic location; or other characteristics historically linked to discrimination or exclusion.</p>
<b>Health Equity</b>	<p>Attainment of the highest level of health for all people. Achieving health equity requires valuing everyone equally with focused and ongoing societal efforts to address avoidable inequalities, historical and contemporary injustices, and the elimination of health and health care disparities</p>
<b>Oral Nutrition Supplements</b>	<p>Oral Nutritional Supplements are sterile liquids, semi-solids or powders, which provide macro and micro nutrients. They are widely used within the acute and community health settings for individuals who are unable to meet their nutritional requirements through oral diet alone.</p>
<b>Malnutrition</b>	<p>An acute, subacute or chronic state of nutrition, in which a combination of varying degrees of overnutrition or undernutrition with or without inflammatory activity have led to a change in body composition and diminished function.</p>
<b>Quality of Life</b>	<p>An individual's perception of their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards and concerns. It is a broad ranging concept affected in a complex way by the person's physical health, psychological state, personal beliefs, social relationships and their relationship to salient features of their environment.</p>



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**Ohio**  
Department of Health

