National Blueprint: Achieving Quality Malnutrition Care for Older Adults

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Foreword /

It is our pleasure to present the Malnutrition Quality Collaborative's ***National Blueprint: Achieving Quality Malnutrition Care for Older Adults*** *(Blueprint)*. This document was developed with input from a variety of sectors, encompassing representatives of nonprofit organizations, state governments, professional organizations, and healthcare associations, among others. The Defeat Malnutrition Today coalition and its 55 members, along with Avalere Health, are proud to be leading partners of the Collaborative.

Older adult malnutrition is a growing crisis in America today. The cost of disease-associated malnutrition in older adults is high—estimated to be $51.3 billion per year. Up to one out of two older adults is at risk of becoming malnourished, yet insufficient attention is given to preventing or treating the condition. Malnutrition is a patient safety risk and can have deleterious effects on one's health, especially when other conditions are present. But, it is also preventable. With effective screening, assessment, diagnosis, and intervention, malnutrition can be identified and addressed to effectively reduce mortality rates, readmission rates, and complication rates such as increased length of stay and cost of care.

A collaborative effort among key stakeholders in the public and private sectors will be required to reduce and prevent malnutrition among older adults across the country. As such, this *Blueprint* includes strategies that, when implemented, can help solve this growing problem. More importantly, the *Blueprint* focuses on the many ways these groups can effectively work together.

This *Blueprint* is not intended to be an end, but rather a beginning. We hope that the many stakeholders represented in this document will take the strategies and recommendations provided and further refine them into actionable steps. We see this as a catalyst for stakeholders to innovate and to build on toward fulfilling our broader goal of achieving quality malnutrition care for older adults.

We trust you find this *Blueprint* valuable. It is hoped that solutions addressed today will help prevent further malnutrition among older adults in the future. Therefore, we encourage you to use it to not only raise awareness about malnutrition, but to build your own partnerships to craft and implement feasible solutions to combat this crisis affecting so many older adults and their families in America today.

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About Defeat Malnutrition Today

The Defeat Malnutrition Today coalition is a diverse alliance of over 55 national, state, and local stakeholders and organizations, including community, healthy aging, nutrition, advocacy, healthcare professional, faith-based, and private sector groups. The coalition shares the goal of achieving the recognition of malnutrition as a key indicator and vital sign of older adult health; it works to create policy change toward a greater emphasis on screening, detecting, diagnosing, treating, and preventing malnutrition.

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About Avalere

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Executive Summary

High-quality nutrition and malnutrition care for older adults should be at the top of the U.S. national agenda as we develop population health strategies to improve health and to deliver consistent quality healthcare at an affordable cost. An increasing body of statistics and health economics data shows the cost in human and economic terms of malnutrition among this age group. With the number of adults aged 65 years and older expected to reach 74 million by 2030, and Medicare spending projected to rise at a higher rate than overall health spending, there is an urgency to secure the future of "healthy aging," starting with nutrition.

Nutrition has been referred to as a vital sign of older adult health. Good nutrition has been shown to help support a healthy and active lifestyle, improve health outcomes, and reduce healthcare costs. In stark contrast, malnutrition, particularly the lack of adequate protein, calories, and other nutrients needed for tissue maintenance or repair, has been shown to be associated with poor health outcomes, frailty and disability, and increased healthcare costs. Importantly, malnutrition is a significant problem for both underweight and overweight or obese individuals due to loss of lean body mass.

The causes of malnutrition are multiple and complex, and the solutions will require collaboration among many organizations, government bodies, and communities. To coalesce the key stakeholders and focus additional attention on older adult malnutrition, the Defeat Malnutrition Today coalition (www.defeatmalnutrition.today) has led the development of this ***National Blueprint: Achieving Quality Malnutrition Care for Older Adults*** *(Blueprint)*. A multi-disciplinary group of coalition members and other interested stakeholders collaborated to produce the *Blueprint*. It outlines specific goals and strategies to promote and achieve high-quality malnutrition care across the continuum of acute, post-acute, and community settings.

Malnutrition Is a Critical Public Health and Patient Safety Issue

Hospital costs can be up to 300% greater for individuals who are malnourished[1]

Malnourished hospitalized adults have up to 5x increased mortality[2] and 50% higher readmission rates[3]

1 in 2

Up to 1 out of 2 older adults is either at risk of becoming or is malnourished[4,5]

4 to 6

Number of days by which malnutrition can increase length of hospital stay[6]

$51.3B

Disease-associated malnutrition in older adults is estimated to cost $51.3 billion annually[7]

Goals and Strategies of the National Blueprint: Achieving Quality Malnutrition Care for Older Adults

Goal 1	Improve Quality of Malnutrition Care Practices
Strategies	
1. Establish Science-Based National, State, and Local Goals for Quality Malnutrition Care 2. Identify Quality Gaps in Malnutrition Care 3. Establish and Adopt Quality Malnutrition Care Standards 4. Ensure High-Quality Transitions of Care	
Goal 2	**Improve Access to High-Quality Malnutrition Care and Nutrition Services**
Strategies	
1. Integrate Quality Malnutrition Care in Payment and Delivery Models and Quality Incentive Programs 2. Reduce Barriers to Quality Malnutrition Care 3. Strengthen Nutrition Professional Workforce	
Goal 3	**Generate Clinical Research on Malnutrition Quality of Care**
Strategies	
1. Evaluate Effectiveness and Impact of Best Practices on Patient Outcomes and Clinical Practice 2. Identify and Fill Research Gaps by Conducting and Disseminating Relevant Research 3. Track Clinically Relevant Nutritional Health Data	
Goal 4	**Advance Public Health Efforts to Improve Malnutrition Quality of Care**
Strategies	
1. Train Healthcare Providers, Social Services, and Administrators on Quality Malnutrition Care 2. Educate Older Adults and Caregivers on Malnutrition Impact, Prevention, Treatment, and Available Resources 3. Educate and Raise Visibility with National, State, and Local Policymakers 4. Integrate Malnutrition Care Goals in National, State, and Local Population Health Management Strategies 5. Allocate Education and Financial Resources to HHS- and USDA-Administered Food and Nutrition Programs	

Poverty and food insecurity significantly increase the risk of malnutrition. At the same time, there are other risk factors to consider as well. Changes commonly associated with aging, such as loss of appetite, limited ability to chew or swallow, and use of multiple medications, can impact diet and nutrition. Older adults are also at risk of malnutrition due to chronic illness, disease, injury, and hospitalizations. Acute conditions, like those that require surgery, as well as chronic diseases such as cancer, diabetes, and gastrointestinal, lung, and heart disease and their treatments, can result in changes in nutrient intake 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. Changes in functional ability can also lead to social isolation, which may cause depression and, in turn, affect cognitive functioning. Changes in cognitive functioning for some older adults may also be risk factors for malnutrition.

But while malnutrition is pervasive, costly, and causes patients to feel worse and heal slower, it has not yet been addressed by a systematic, consistent approach throughout the healthcare system. Broadly, there is a general lack of awareness that malnutrition is linked to acute illness, chronic disease, and poor health outcomes. Physicians receive limited nutrition training in medical schools. Many individuals among the public, including healthcare providers, are unaware of malnutrition's prevalence in older adults and have limited access to resources—including adequate nutrition services and supports—to help identify and address the condition. While there are malnutrition standards of care, best practices, and validated screening tools and diagnostic tools available, these have not been systematically adopted into routine medical care or adopted across care settings. Care coordination by the clinical care team of malnourished and at-risk older adults can often be fragmented due to lack of visibility of clinically relevant malnutrition data and documentation, and non-standardization of key malnutrition data elements in electronic health records.

Malnutrition care represents an important gap area that has been acknowledged by the Centers for Medicare & Medicaid Services (CMS). Yet, malnutrition has not been included in our national health objectives nor is it reported in key health indicators for older adults. Malnutrition care has also been omitted from most prevention and wellness, patient safety, care transitions, and population health strategies. And while addressing malnutrition aligns with CMS goals and those of the U.S. Department of Health and Human Services' (HHS) National Quality Strategy, to date, malnutrition care has not been integrated into public or private quality incentive programs.

The *Blueprint* offers strategies to address these gaps. Expertise and collaboration will be needed by many organizations to successfully implement the recommendations in this *Blueprint*. Specifically, the recommendations serve as a call to action for: national, state, and local governments; clinicians, healthcare institutions, and professional associations; older adults, families, caregivers, patient or consumer advocacy groups, and aging organizations; and public and private payers.

The time to act is now! In a healthcare environment focused on "healthy aging," preventive care, patient-centeredness, and cost efficiency, systematic malnutrition screening and appropriate multidisciplinary intervention must become a mainstay of U.S. healthcare. The value of quality malnutrition care must be realized, and our country's healthcare delivery, social services, and financial incentives must be aligned to address the epidemic of malnutrition in acute care, post-acute care, and community settings.

Overview /

> "Let food be thy medicine and medicine thy food."
>
> *– Hippocrates*

Since the time of Hippocrates several millennia ago, healthcare professionals have recognized the important link between nutrition and medicine. Today, we continue to deepen our understanding of how nutritional status affects overall health. One area of particular concern is the malnutrition crisis affecting older adults.

Malnutrition Disproportionately Affects Older Adults

Nutrition is particularly critical for older adults who may have different nutritional requirements than the average adult population. They also more often face barriers to choosing the right foods or eating enough of those foods.[8]

Malnutrition is considered a state of deficit, excess, or imbalance in protein, energy, or other nutrients that adversely impacts an individual's own body form, function, and clinical outcomes.[9] For many older adults, lack of adequate protein and loss of lean body mass are particularly significant problems, including for those who may be overweight or obese. The importance of malnutrition prevention for older adults is magnified as it affects independent living, healthy aging, and the severity of chronic conditions and disabilities.[10]

As illustrated in Figure 1, an older adult can become at risk for and develop malnutrition in multiple ways. Aging and associated changes such as loss of appetite, more limited ability to chew or swallow, and use of multiple medications can impact diet and nutrition.[11] In addition, cognitive and functional decline, which may lead to social isolation or depression, may also pose risks for developing malnutrition.[11]

Food insecurity and access to optimal nutrition are other issues of concern. It is estimated that the number of food-insecure older adults will increase by 50% when the youngest of the Baby Boom generation reaches age 60 in 2025.[12] The United States Department of Agriculture (USDA) defines food insecurity as "a household-level economic and social condition of limited or uncertain access to adequate food."[13] It can include disruptions in both the quality and quantity of food intake, generally due to financial constraints. According to studies reported by Feeding America, "Food-insecure seniors are at increased risk for chronic health conditions, even when controlling for other factors such as income."[14,15] Inadequate access to food also compounds malnutrition for food-insecure older adults who "sometimes had enough money to purchase food but did not have the resources to access or prepare food due to lack of transportation, functional limitations, or health problems."[16]

In community settings, food insecurity is a common risk factor; more than 1 in 11 older adults struggle with food insecurity and face the threat of hunger. In households with at least one member aged 65 years or older, 8.3% are food insecure. Additionally, older adults who live alone are more likely to experience food insecurity than those who live with others. Reports document that older adults near the poverty line who live alone have low or very low food security.[17] This represents a large, unmet need that can be reduced through improved education of health providers on the overlap of food insecurity and malnutrition, and engagement of older adults in programs such as the USDA Supplemental Nutrition Assistance Program (SNAP, formerly known as Food Stamps). For example, in 2013, almost 60% of the older adults eligible for SNAP did not participate—equaling nearly 5.2 million older adults who could have had improved access to nutrition, but did not.[18] Similarly, underutilization or lack of availability of home-delivered and congregate

Figure 1: Contributing Factors that Lead to Malnutrition among Older Adults

meal programs to older adults can also contribute to risks for malnutrition.Furthermore, adults with low health literacy are more likely to be older and they may also have limited understanding of the importance of nutrition or how to access adequate nutrition.[19]

Chronic disease is also an important determinant for malnutrition and healthy aging. One in four Americans has multiple chronic conditions, defined as those conditions lasting a year or more and requiring ongoing medical attention or limiting activities of daily living.[19] That number rises to three in four Americans aged 65 and older who have multiple chronic conditions.[20] Chronic diseases such as cancer, diabetes, and gastrointestinal, pulmonary, and heart disease and their treatments can result in changes in nutrient intake and ability to use nutrients, which can lead to malnutrition.[21] Additionally, chronic diseases often disproportionately impact minority populations.[22] This may add to the burden of insufficient nutrition among those populations and contribute to increased health disparities as the percentage of minority older adults is expected to increase from 20.7% to 39.1% by 2050.[19]

Disease-associated malnutrition is often multifactorial, including inflammatory responses, which can increase metabolic demand; decreased appetite; gastrointestinal problems; and difficulty chewing and swallowing, leading to decreased nutrient intake, which can diminish immune response and wound healing, and increased infection rates.[23] Such changes can increase risks for functional disability, frailty, and falling. The estimated cost for disease-associated malnutrition in older adults is $51.3 billion per year.[7] Nutrition interventions have demonstrated positive outcomes in many chronic disease populations, including individuals diagnosed with diabetes, cardiovascular disease, cancer, and chronic obstructive pulmonary disease (COPD).[21] Therefore, solutions to address malnutrition care across the care continuum require comprehensive and collaborative efforts by many stakeholder groups.

Nutrition in Public Health and the Current State of Addressing Malnutrition Care for Older Adults

To date, diet quality and excess body weight have been the primary areas of focus in government goals for older adult nutrition. For example, two nutrition-related indicators—eating more than five servings of fruits and vegetables daily, and obesity—are among the 15 Key Health Indicators for older adults on which CDC annually reports data at the national, state, and selected local level.[24] This is important because there is strong evidence that:[25]

As discussions surrounding the health indicator goals established by Healthy People 2020 have summarized: "Good nutrition, regular physical activity, and a healthy body weight are essential parts of a person's overall health and well-being."[26] However, there is also strong evidence that:[27]

Up to one out of every two older Americans is at risk for malnutrition,[4,5] yet, there is a gap in malnutrition care for older adults. Because malnutrition is not readily identified and treated today, individuals are often not aware of the problem and their potential greater risk for negative health outcomes and loss of independence. Furthermore, malnutrition care is not identified in national health objectives nor is it reported in key health indicators for older adults. Malnutrition care is also not included in quality measures that help assess the value and effectiveness of older adults' healthcare.

This *Blueprint* outlines specific strategies to close the gap and improve health outcomes for older adults by addressing malnutrition care across acute, post-acute, and community settings. Person-centered care delivery means establishing systems across the continuum of care to screen, assess, diagnose, and intervene for older adult malnutrition.[28]

The Importance of High-Quality Malnutrition Care

Malnutrition Is a Key Health Indicator for Older Adults

Malnutrition affects approximately 20% to 50% of admitted hospital patients.[6] However, in an analysis by the Agency for Healthcare Research and Quality (AHRQ), malnutrition was diagnosed in only about 7% of hospital stays.[2] This important gap occurs for a number of reasons, including a lack of provider visibility into a patient's nutritional status due to how malnutrition diagnosis is documented or coded and tracked in medical records. As a result, this low rate of diagnosis leads to many potentially untreated individuals, which can lead to adverse outcomes for older adults across all care settings.

Research findings show that malnourished older adults make more visits to physicians, hospitals, and emergency rooms.[29] Malnourished patients can continue to worsen throughout an inpatient stay, which may lead to increased costs. Studies show that malnutrition, as a contributing factor to post-hospital syndrome, can increase a patient's risk for a 30-day readmission, often for reasons other than the original diagnosis.[30] Malnutrition is a patient safety risk, as those who are malnourished are more likely to experience a healthcare-acquired condition. Malnutrition is linked to increased rates of morbidity, increased incidence of healthcare-acquired pressure ulcers and infections, falls, delayed wound healing, decreased respiratory and cardiac function, poorer outcomes for chronic lung diseases, increased risk of cardiovascular and gastrointestinal disorders, reduced physical function, development of nosocomial infections, and impairment of non-specific and cell-mediated immunity.[31-37]

Malnutrition is also a concern in post-acute care and community settings. According to the National Resource Center on Nutrition, Physical Activity and Aging, nearly 35% to 50% of older residents in long-term care facilities are malnourished.[38] In an international study aggregating data from the United States and 11 other developed countries, malnutrition prevalence for older adults was found to be 50% in rehabilitation settings, 13.8% in nursing homes, and 5.8% in the community.[4] However, there remains a dearth of research about the impact or burden of malnutrition in post-acute care or community settings, and few studies highlight optimal malnutrition care practices in such settings.

High-Quality Malnutrition Care Assures Safe, Efficient, Person-Centered, and Coordinated Healthcare

With the number of adults aged 65 years and older expected to reach 74 million by 2030,[39] the urgency to secure a future of healthy aging through effective malnutrition care policies and actions comes into focus. We need to establish clinically relevant malnutrition goals and quality measures at national, state, and local levels to evaluate how well delivery and payment systems are functioning and whether older adults are receiving high-quality, safe, and coordinated healthcare.

Malnutrition is a prevalent and potentially costly problem in our broader healthcare system. However, it is also preventable. Effective and timely screening is essential to help providers make accurate diagnoses. Moreover, early nutrition interventions have been shown to substantially reduce readmission rates,[40-42] as well as complication rates, length of stay, cost of care, and, in some cases, mortality.[31] Additionally, best practices, such as those developed by the American College of Surgeons/American Geriatric Society for preoperative assessment of geriatric surgical patients or those specified for Enhanced Recovery After

Surgery (ERAS) techniques, also include recommendations on malnutrition care.[43,44] However, while recent examples of such recommendations implemented by hospital systems demonstrate similar results regarding reduced readmissions and length of stays,[45] these types of standards of care are not routinely integrated into healthcare delivery.

Making a change to integrate malnutrition care into the broader U.S. healthcare system is a wise investment because malnutrition care (from screening and assessment to diagnosis, care plans, and interventions) is a low-risk and low-cost solution that can help improve the quality of clinical care and decrease costs associated with negative outcomes. For example, timely screening and assessment followed by intervention can significantly improve health outcomes for adults, with studies finding:

- 28% decrease in avoidable readmissions,[41]
- 25% reduction in pressure ulcer incidence,[37]
- Reduced overall complications,[31]
- Reduced average length of stay of approximately two days,[46]
- Decreased mortality,[35] and
- Improved quality of life.[47-49]

For policymakers, healthcare providers, and payers, the time to act is now! In a healthcare environment emphasizing preventive care, patient-centeredness, and cost efficiency, systematic malnutrition screening, assessment, diagnosis, and appropriate multidisciplinary intervention must become a mainstay of U.S. healthcare services. The value of malnutrition prevention and care must be realized, and our country's healthcare and social services must include a focus on addressing the epidemic of malnutrition for older adults in acute care, post-acute care, and community settings.

High-Quality Malnutrition Care Builds on Existing Frameworks

Policies and actions to promote high-quality malnutrition care would provide the impetus needed to implement basic practices yet to be embraced by the broader U.S. healthcare system. For example, in both acute care and post-acute care settings, simple shifts in institutional training to emphasize malnutrition screening and assessment would be an important first step to potentially reduce the number of untreated cases of malnutrition. This could be strengthened with care standards and best practices for malnutrition care adopted across the continuum of care.

Already in the acute care setting, advances are being made for older adult care through the Malnutrition Quality Improvement Initiative (MQii)—a collaboration of the Academy of Nutrition and Dietetics, Avalere Health, and other stakeholders.[50] The initiative provides an innovative approach that recognizes the need to drive quality through the combined use of electronic clinical quality measures and an interdisciplinary toolkit to assist hospitals in achieving their performance goals for malnutrition care of older adults. The four quality measures developed by the MQii are currently under consideration by the Centers for Medicare & Medicaid Services (CMS) for adoption into their Hospital Inpatient Quality Reporting Program.[51]

However, similar focus is needed to establish evidence, care standards, and performance benchmarks to improve malnutrition care in post-acute care and community settings. There is also a need to evaluate the value of specific programs such as home-delivered meal programs on patient outcomes.[52,53] While the important work of organizations such as Meals on Wheels America, Feeding America, God's Love We Deliver, and other medically tailored meal providers in the Food is Medicine Coalition is well recognized in these settings, there remains a need to establish how and whether they might be expanded in conjunction with established care standards. The determinants of malnutrition are manifold. Thus, solutions to address malnutrition care across these settings require comprehensive and collaborative efforts by all stakeholders.

The Malnutrition Quality Collaborative

To support development of comprehensive strategies to improve malnutrition care across care settings for older adults, a Malnutrition Quality Collaborative (Collaborative) was established in late 2016. The Collaborative is a multi-stakeholder collaboration of nutrition, healthy aging, and food security experts. It was convened by Defeat Malnutrition Today, a national coalition of community, healthy aging, nutrition, advocacy, healthcare professional, faith-based, and private sector organizations that has identified malnutrition as an older adult crisis (see summary malnutrition infographic in Appendix A).

The Collaborative has two main objectives for malnutrition in acute care, post-acute care, and community settings:

1. To advance health and quality-of-life outcomes among older adults by increasing national awareness of malnutrition.
2. To engage national, state, and local healthcare stakeholders to take action to better prevent, identify, and treat malnutrition.

To provide a framework for these goals, the Collaborative engaged experts representing organizations across the continuum of care. These individuals identified the strategies and supporting recommendations for the stated goals that constitute this *Blueprint*. Additional insights on the strategies and recommendations were also solicited from external reviewers.

A National Blueprint for Achieving Quality Malnutrition Care

The Malnutrition Quality Collaborative has developed this *National Blueprint: Achieving Quality Malnutrition Care for Older Adults* as a resource for policymakers, healthcare providers, patients and their family or caregivers, and public and private payers.

The *Blueprint* has four primary goals:

- **Improve Quality of Malnutrition Care Practices Across All Care Settings:** High-quality prevention, identification, and treatment of malnutrition with emphasis on transitions of care will greatly reduce costs and improve malnutrition-associated outcomes. Establishing a comprehensive set of care standards to be adopted by nutrition professionals, other healthcare providers, and social services personnel in all settings of care will lay the foundation to improve malnutrition care and related patient outcomes for older adults.
- **Improve Access to High-Quality Malnutrition Care and Nutrition Services:** It will be important to integrate quality malnutrition care in payment and delivery models to align incentives and to reduce barriers to high-quality malnutrition care. Better education and awareness of best practices for malnutrition care are needed to ensure that older adults can access needed malnutrition care and follow-up nutrition services in a timely and efficient manner. This would include enhancing access to dietitians and other professionals trained in malnutrition care (particularly through provider referrals) and better nutrition options in all care settings.
- **Generate Clinical Research on Malnutrition Quality of Care:** Evidence generation is critical to address gaps in malnutrition prevention, identification, and treatment. A focus of this evidence generation would be to determine the impact on health outcomes of older adults, clinical practices, program delivery, and healthcare expenditures in order to establish a stronger knowledge base for malnutrition prevention, identification, and treatment across all care settings.
- **Advance Public Health Efforts to Improve Malnutrition Quality of Care:** Malnutrition is a public health issue affecting a large portion of our population. The prevalence and impact of malnutrition is not well understood by many stakeholders. Education is needed to enhance the understanding by stakeholders to prevent, identify, and treat malnutrition. Because of its prevalence as a public health issue and impact on costs, public health organizations should place a greater emphasis on malnutrition prevention, care, and treatment.

The Collaborative also outlines specific strategies—listed in the chart on the following page—to help achieve the stated goals. These strategies, in turn, guided the recommendations presented by the Collaborative in the following tables. The recommendations highlight cross-cutting activities that can be taken by various key stakeholders to improve malnutrition care across the care continuum. They represent actionable solutions, many of which can be put into place today.

The leaders called to action in these *Blueprint* recommendations include:

- National, state, and local governments
- Healthcare practitioners, healthcare institutions, and professional associations
- Older adults, families, caregivers, patient or consumer advocacy groups, and aging organizations
- Public and private payers

Much can be done at national, state, and local levels to raise awareness and advance high-quality malnutrition care. This *Blueprint* was developed to inform high-priority areas to improve malnutrition care and help set the policy agenda to address malnutrition among our nation's older adults. It is hoped that these strategies and recommendations will serve as the beginning of a unified effort to defeat malnutrition.

Goals and Strategies of the *National Blueprint: Achieving Quality Malnutrition Care for Older Adults*

Goal 1	Improve Quality of Malnutrition Care Practices
Strategies	
1. Establish Science-Based National, State, and Local Goals for Quality Malnutrition Care 2. Identify Quality Gaps in Malnutrition Care 3. Establish and Adopt Quality Malnutrition Care Standards 4. Ensure High-Quality Transitions of Care	
Goal 2	**Improve Access to High-Quality Malnutrition Care and Nutrition Services**
Strategies	
1. Integrate Quality Malnutrition Care in Payment and Delivery Models and Quality Incentive Programs 2. Reduce Barriers to Quality Malnutrition Care 3. Strengthen Nutrition Professional Workforce	
Goal 3	**Generate Clinical Research on Malnutrition Quality of Care**
Strategies	
1. Evaluate Effectiveness and Impact of Best Practices on Patient Outcomes and Clinical Practice 2. Identify and Fill Research Gaps by Conducting and Disseminating Relevant Research 3. Track Clinically Relevant Nutritional Health Data	
Goal 4	**Advance Public Health Efforts to Improve Malnutrition Quality of Care**
Strategies	
1. Train Healthcare Providers, Social Services, and Administrators on Quality Malnutrition Care 2. Educate Older Adults and Caregivers on Malnutrition Impact, Prevention, Treatment, and Available Resources 3. Educate and Raise Visibility with National, State, and Local Policymakers 4. Integrate Malnutrition Care Goals in National, State, and Local Population Health Management Strategies 5. Allocate Education and Financial Resources to U.S. Department of Health and Human Services (HHS) and USDA-Administered Food and Nutrition Programs	

Please note: Following this section, which details recommendations by stakeholder group, a series of additional recommendations are presented that target improvements for malnutrition care in three specific care settings: acute care, post-acute care, and community settings.

Recommendations for Key Stakeholder Sectors to Advance High-Quality Malnutrition Care

The following tables represent specific recommendations to support each of the identified *Blueprint* strategies. There are four tables, each representing one of the four key stakeholder groups: national, state, and local governments; healthcare practitioners, healthcare institutions, and professional associations; older adults, families, caregivers, patient or consumer advocacy groups, and aging organizations; and public and private payers. For the different stakeholder tables, only recommendations for relevant strategies for each stakeholder sector are presented; thus, not every strategy is addressed under each individual goal.

Table 1: Recommendations for National, State, and Local Governments to Improve Quality of Malnutrition Care for Older Adults

1. Improve Quality of Malnutrition Care Practices	
Strategies	**Recommendations**
Establish Science-Based National, State, and Local Goals for Quality Malnutrition Care	• Recognize quality malnutrition care for older adults as a clinically relevant and cross-cutting priority in HHS's Quality Measure Development Plan and the Surgeon General's National Prevention Strategy
Identify Quality Gaps in Malnutrition Care	• Recognize impact of malnutrition and quality gaps for older adults in national, state, and local population health and chronic disease reports and action plans (e.g., malnutrition prevention, identification, and treatment needs in acute care, post-acute care, and home and community-based settings and among priority disease-specific populations)
2. Improve Access to High-Quality Malnutrition Care and Nutrition Services	
Strategies	**Recommendations**
Integrate Quality Malnutrition Care in Payment and Delivery Models and Quality Incentive Programs	• Adopt clinically relevant malnutrition quality measures in public and private accountability programs across the care continuum • Reduce barriers to transparency and transfer of clinically relevant malnutrition care data to downstream providers, individuals, and caregivers • Integrate quality malnutrition care in future chronic disease and surgical care demonstrations to develop innovative models to improve outcomes for malnourished and at-risk older adults • Engage relevant agencies or organizations (e.g., AHRQ, CMS, National Quality Forum [NQF]) to support development of quality measures and payment mechanisms for malnutrition care that apply to providers and relevant professionals across all settings • Urge key committees in Congress and influencers such as the Senate Finance Committee's Bipartisan Chronic Care Working Group to integrate malnutrition care coverage in legislative proposals • Services offered should be comprehensive and not limited by specific medical conditions

Table 1: Recommendations for National, State, and Local Governments to Improve Quality of Malnutrition Care for Older Adults (cont.)

Strategies	Recommendations
Reduce Barriers to Quality Malnutrition Care	• Develop report on access barriers to quality malnutrition care and nutrition services for older adults (e.g., gaps in public education, healthcare delivery systems, provider training and education, and resource allocation) • Advance national and state policies to allocate resources to support malnutrition screening of older adults at point of entry in post-acute care and community settings, including physician offices, community health centers, senior centers, in-home settings (as appropriate), and health departments • Appoint state-level lead agency to disseminate policy standards that require addressing malnutrition across all state department programs and services • Adopt electronic data standards to assist in transfer of clinically relevant malnutrition and nutrition health information across care settings and telemedicine services (e.g., nutritional status, diet orders, other nutrition interventions) • Resolve state regulatory barriers to advance dietitian order-writing privileges for clinical/nutrition orders that are permitted by federal regulation • Recommend improvements related to screening, assessment, and coordination of quality malnutrition care in future reauthorizations of the Older Americans Act • Expand coverage of medical nutrition therapy services to apply beyond current limited list of conditions (i.e., end-stage renal disease [ESRD], chronic kidney disease [CKD], and diabetes) and the currently limited populations • Provide community providers with funds and data to support maintenance and continued growth of needed services
3. Generate Clinical Research on Malnutrition Quality of Care	
Strategies	**Recommendations**
Identify and Fill Research Gaps by Conducting and Disseminating Relevant Research	• Conduct national research to assess healthcare outcomes and expenditures related to malnutrition; explore collaborations with National Institutes of Health (NIH), the Centers for Disease Control and Prevention (CDC), and HHS • Engage the newly established Office of Nutrition Research within National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK) to recommend nutrition research priorities • Conduct national and state research on barriers and pathways to reduce barriers to malnutrition care and nutrition support • Establish a central, publicly available location or source where stakeholders can access fundamental, evidence-based care standards for malnutrition care and integrate new evidence as it is developed. To help establish this resource, collaboration with organizations such as the Administration for Community Living, AHRQ, or CMS could be explored • Explore partnerships to disseminate research with federal agencies (e.g., the Administration on Aging and AHRQ)
Track Clinically Relevant Nutritional Health Data	• Establish electronic data standards to assist in transfer of clinically relevant nutrition health information across care settings (e.g., nutritional status, diet orders, other nutrition interventions) • Include clinically relevant malnutrition-related data in acute care, post-acute care, and community settings in national and state initiatives • Support public reporting of malnutrition quality-of-care data through national or state-based reports

Table 1: Recommendations for National, State, and Local Governments to Improve Quality of Malnutrition Care for Older Adults (cont.)

4. Advance Public Health Efforts to Improve Malnutrition Quality of Care	
Strategies	**Recommendations**
Educate and Raise Visibility with National, State, and Local Policymakers	• Seek to establish third-party campaign (potentially through a public-private partnership) to educate the public and providers on what "optimal nutrition" is in order to understand malnutrition, causes of malnutrition (disease, acute illness, food insecurity), and the impact on health outcomes • Advocate for publication of a report such as a Congressional Research Service report on impact of malnutrition, and how support for malnutrition care and access to such care is being addressed in federal legislation

Integrate Malnutrition Goals in National, State, and Local Population Health Management Strategies	• Convene an expert panel with providers and clinicians to develop recommendations for Healthy People 2030 related to malnutrition in older adults
	• Engage clinicians, providers, and the Office of Disease Prevention and Health Promotion (ODPHP) to adopt malnutrition goals for older adults in Healthy People 2030
	• Initiate state-level Malnutrition Prevention Commissions or add malnutrition care scope to existing older adult commissions or committees
	• Implement malnutrition screening standards for early identification with populations at high risk for malnutrition
	  ○ Implement malnutrition screening at State Departments of Health, Medicaid agencies, hospitals, and in national or state telehealth programs
	  ○ Integrate malnutrition screening, education, and interventions into state diabetes and obesity plans

Allocate Education and Financial Resources to HHS and USDA-Administered Food and Nutrition Programs	• Conduct research and publish report on share of resources required for various malnutrition prevention, malnutrition care, or food assistance programs ○ Distribute resources, as needed, based on findings from evaluated data or conducted research

Table 2: Recommendations for Healthcare Practitioners, Healthcare Institutions, and Professional Associations to Improve Quality of Malnutrition Care for Older Adults

1. Improve Quality of Malnutrition Care Practices				
Strategies	**Recommendations**	**Healthcare Practitioners**	**Healthcare Institutions**	**Professional Associations**
Establish Science-Based National, State, and Local Goals for Quality Malnutrition Care	• Establish facility, clinician, and population health level outcomes targets for malnourished and at-risk older adults	X	X	X
Establish and Adopt Quality Malnutrition Care Standards	• Convene a multidisciplinary expert panel to identify quality gaps and establish evidence-based malnutrition care standards and quality measures for older adults in post-acute care and community settings			X
	• Collaborate with accreditation organizations to include malnutrition care standards in accreditation and certification programs across the care continuum		X	X
	• Review current patient admission and discharge processes for inclusion of malnutrition and food-insecurity screening		X	
	• Establish care pathways for follow-up nutrition services and non-food support services in all settings of care			X
Ensure High-Quality Transitions of Care (TOC)	• Establish evidence-based best practices for TOC based upon patient-specific risk factors and ensure available resources to carry out effective TOC	X	X	X
	• Implement quality improvement programs to test TOC models that include quality malnutrition care best practices for malnourished and at-risk older adults	X	X	
	• 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	X	X	X

Table 2: Recommendations for Healthcare Practitioners, Healthcare Institutions, and Professional Associations to Improve Quality of Malnutrition Care for Older Adults (cont.)

Strategies	Recommendations	Healthcare Practitioners	Healthcare Institutions	Professional Associations
Ensure High-Quality Transitions of Care (cont.)	• Urge organizations such as local Area Agencies on Aging (AAAs), Aging and Disability Resource Centers (ADRCs), and other community-based organizations (CBOs) to educate individuals, caregivers, and providers on the availability of malnutrition care and nutrition services during TOC, including medically tailored home-delivered meal providers like those in the Food is Medicine Coalition	X	X	X
2. Improve Access to High-Quality Malnutrition Care and Nutrition Services				
Reduce Barriers to Quality Malnutrition Care	• Identify and adopt evidence-based nutrition standards to support early identification and access to quality malnutrition care and nutrition interventions across care settings	X	X	X
	• Adopt electronic data standards to assist in transfer of clinically relevant malnutrition care or nutrition health information across care settings (e.g., nutritional status, diet orders, other nutrition interventions)		X	
	• Assess care pathways, staffing, and roles and responsibilities needed to provide quality care and nutrition services for malnourished and at-risk older adults	X	X	X
	• Establish projections for resources needed to maintain older adult access to quality malnutrition care and nutrition services at the institutional, community, and state levels		X	X
	• Share supplier patient assistance programs to help verify insurance coverage or other resources to ensure patient access to physician-ordered medical nutrition and services (e.g., medical nutrition therapy, oral nutritional supplements, medically tailored home-delivered meals, Meals on Wheels, and/or other community support services)		X	

Table 2: Recommendations for Healthcare Practitioners, Healthcare Institutions, and Professional Associations to Improve Quality of Malnutrition Care for Older Adults (cont.)

Strategies	Recommendations	Healthcare Practitioners	Healthcare Institutions	Professional Associations
Reduce Barriers to Quality Malnutrition Care (cont.)	• Evaluate the patient-centeredness of value models (e.g., National Health Council Patient-Centered Value Model Rubric) and opportunities to integrate malnutrition care priorities within them			X
Strengthen Nutrition Professional Workforce	• Evaluate human resource barriers (e.g., staffing, education curriculum, training) to support patient access to quality malnutrition care, nutrition intervention, and community support services		X	X
	• Assess available workforce to meet current demands for quality malnutrition care for each care setting (e.g., number of dietitians, other nutrition-support professionals such as nurses and pharmacists)		X	X
	• Establish projections for future demand in 2030 or beyond for nutrition and other professionals who have responsibility for providing and maintaining older adult access to quality malnutrition care		X	X
	• Identify gaps in provider knowledge of evidence-based nutrition standards and malnutrition care quality best practices			X

	• Enhance nutrition education and training for multidisciplinary care team members (e.g., physicians, nurses, dietitians) to include:
	  ○ Documentation of malnutrition diagnosis and risk factors, such as chronic disease, food insecurity, or other psycho-social determinants
	  ○ 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
	  ○ Identification of community resources that are available
			X	X

	• Develop core materials to train multidisciplinary teams on optimal malnutrition care			X

Table 2: Recommendations for Healthcare Practitioners, Healthcare Institutions, and Professional Associations to Improve Quality of Malnutrition Care for Older Adults (cont.)

3. Generate Clinical Research on Malnutrition Quality of Care				
Strategies	**Recommendations**	**Healthcare Practitioners**	**Healthcare Institutions**	**Professional Associations**
Evaluate Effectiveness and Impact of Best Practices on Patient Outcomes and Clinical Practice	• Test effectiveness of current malnutrition care best practices in all care settings; in particular, the effectiveness of care standards for high-priority conditions where poor nutrition is a vital predictor of outcomes	X	X	
	• Identify quality measures to improve patient outcomes and fill gaps in acute care, post-acute care, and community settings	X	X	X
	• Evaluate the availability of International Statistical Classification of Diseases and Related Health Problems (ICD) coding and delivery systems to support the consistent access and delivery of evidence-based malnutrition care	X	X	
Identify and Fill Research Gaps by Conducting and Disseminating Relevant Research	• Identify malnutrition research gap areas and prioritize research topics for evidence generation		X	X
	• Strengthen evidence base with high-quality health economic and outcomes research of malnourished and at-risk older adults across acute, post-acute, and community settings		X	X
	• Generate evidence to inform nutrition standards and best practices for high-priority conditions where comorbid malnutrition can negatively impact outcomes		X	X
	• Publish white papers and peer-reviewed manuscripts regarding care pathways and treatments that positively impact malnutrition cost and outcomes that matter for older adults	X		X
Track Clinically Relevant Nutritional Health Data	• Adopt and implement electronic data standards that assist in transfer of clinically relevant nutritional health information across care settings (e.g., nutritional status, diet orders, other nutrition interventions) ○ Include clinically relevant malnutrition-related data in databases used in acute care, post-acute care, and community settings	X	X	

Table 2: Recommendations for Healthcare Practitioners, Healthcare Institutions, and Professional Associations to Improve Quality of Malnutrition Care for Older Adults (cont.)

Track Clinically Relevant Nutritional Health Data (cont.)	• Implement electronic data practices that require effective referral mechanisms in order to maintain ethical standards for assuring that person-centered approaches for malnutrition care are provided	X	X	
	• Support public reporting of malnutrition quality-of-care data through national or state-based reports		X	X
4. Advance Public Health Efforts to Improve Malnutrition Quality of Care				
Strategies	**Recommendations**	**Healthcare Practitioners**	**Healthcare Institutions**	**Professional Associations**
Train Healthcare Providers, Social Services, and Administrators on Quality Malnutrition Care	• Advocate for schools and universities to integrate training modules for malnutrition prevention, identification, and treatment into curriculums for physicians, nurses, dietitians, allied professionals, and physician extenders (e.g., physician assistants, occupational therapists, physical therapists, social workers, direct care workers)	X		X
	• Advocate for multidisciplinary malnutrition care training to be integrated into continuing medical education (CME) or continuing education (CE) of medical specialty, nursing, and allied health organizations, including those supporting professional workers in home health, case management, and discharge planning roles	X		X
	• Demonstrate the value (e.g., cost-quality, outcomes, patient-centered endpoints) of malnutrition care in population health management		X	X
Educate Older Adults and Caregivers on Malnutrition Impact, Prevention, Treatment, and Available Resources	• Provide incentives or tools that encourage providers to work more actively with patient engagement councils, patient advocacy groups, and consumer advisory councils to educate them on malnutrition with a focus on older adults across each care setting		X	X
	• Develop and distribute malnutrition-related educational materials for older adults and caregivers	X	X	X

Table 2: Recommendations for Healthcare Practitioners, Healthcare Institutions, and Professional Associations to Improve Quality of Malnutrition Care for Older Adults (cont.)

Strategies	Recommendations	Healthcare Practitioners	Healthcare Institutions	Professional Associations
Educate Older Adults and Caregivers on Malnutrition Impact, Prevention, Treatment, and Available Resources (cont.)	◦ Examples include resources such as those listed in Appendix D • Conduct awareness campaigns to educate the public on key therapeutic areas known to have a high prevalence of malnutrition • Educate individuals and caregivers on "what is optimal nutrition" to correct misconceptions (e.g., eating means you are not malnourished) and provide resources to access nutrition services such as through the Older Americans Act Nutrition Program or USDA Food Assistance Programs	X	X X	X X
Educate and Raise Visibility with National, State, and Local Policymakers	• Identify national or state policy key opinion leaders to advocate for malnutrition care quality standards to be incorporated across all care settings • Educate legislators and regulators on priority therapeutic areas for malnutrition prevention, identification, diagnosis, and treatment ◦ Develop materials in coordination with the National Council on Aging (NCOA) and National Falls Prevention Resource Center to connect the issue of chronic conditions and falls prevention to good nutrition for older adults ◦ Develop materials in coordination with the National Academies of Sciences, Engineering, and Medicine's Food and Nutrition Board to extend the findings of nutrition and optimized oncology outcomes and maximized patient quality of life to other conditions		X	X X
Integrate Malnutrition Care Goals in National, State, and Local Population Health Management Strategies	• Convene an expert panel with providers and clinicians to develop recommendations for Healthy People 2030 related to malnutrition in older adults			X

Table 2: Recommendations for Healthcare Practitioners, Healthcare Institutions, and Professional Associations to Improve Quality of Malnutrition Care for Older Adults (cont.)

Strategies	Recommendations	Healthcare Practitioners	Healthcare Institutions	Professional Associations
Integrate Malnutrition Care Goals in National, State, and Local Population Health Management Strategies (cont.)	• Engage clinicians, providers, and the ODPHP to adopt malnutrition goals for older adults in Healthy People 2030			X
	• Seek to establish third-party campaign (potentially through a public-private partnership) to educate the public and providers on what "optimal nutrition" is in order to understand malnutrition, causes of malnutrition (disease, acute illness, food insecurity), and the impact on health outcomes			X
	• Implement malnutrition screening standards for early identification with populations at high risk for malnutrition	X	X	
	○ Implement malnutrition screening at state Departments of Health, Medicaid agencies, hospitals, and in national or state telehealth programs	X	X	
	○ Integrate malnutrition screening, education, and interventions into state diabetes and obesity plans	X	X	
	○ Incorporate malnutrition screening into National Aging Program Information System (NAPIS) data collection for the Older Americans Act		X	
Allocate Education and Financial Resources to HHS and USDA-Administered Food and Nutrition Programs	• Conduct research and publish report on share of resources required for various malnutrition prevention, malnutrition care, or food assistance programs			X
	○ Distribute resources, as needed, based on findings from evaluated data or conducted research	X	X	X

Table 3: Recommendations for Older Adults, Families, Caregivers, Patient or Consumer Advocacy Groups, and Aging Organizations to Improve Quality of Malnutrition Care for Older Adults

1. Improve Quality of Malnutrition Care Practices				
Strategies	**Recommendations**	**Individuals, Families, and Caregivers**	**Patient and Caregiver Advocacy Groups**	**Aging Organizations**
Establish Science-Based National, State, and Local Goals for Quality Malnutrition Care	• Establish population health outcomes targets for malnourished and at-risk older adults			X
Establish and Adopt Quality Malnutrition Care Standards	• Collaborate with clinical team to customize malnutrition care plan and discharge plans to include personal health goals • Participate in patient-specific curriculums on healthcare quality to learn how to engage in health quality discussions, such as those by the National Health Council or other organizations • Participate in a technical expert panel to identify quality gaps and establish evidence-based malnutrition care standards and quality measures for older adults • Collaborate with accreditation organizations to include malnutrition care standards in accreditation and certification programs across the care continuum	X X	X X	X X X X
Ensure High-Quality Transitions of Care	• Contact local AAAs, ADRCs, and other CBOs to learn about nutrition services during TOC	X	X	X
2. Improve Access to High-Quality Malnutrition Care and Nutrition Services				
Strategies	**Recommendations**	**Individuals, Families, and Caregivers**	**Patient and Caregiver Advocacy Groups**	**Aging Organizations**
Reduce Barriers to Quality Malnutrition Care	• Make checklists available that can evaluate if older adults or their family members may be eligible for nutrition services (e.g., Meals on Wheels, congregate meals, or other nutrition-related community support services) through the Older Americans Act	X	X	X

Table 3: Recommendations for Older Adults, Families, Caregivers, Patient or Consumer Advocacy Groups, and Aging Organizations to Improve Quality of Malnutrition Care for Older Adults (cont.)

Strategies	Recommendations	Individuals, Families, and Caregivers	Patient and Caregiver Advocacy Groups	Aging Organizations
Reduce Barriers to Quality Malnutrition Care (cont.)	• Ask physician or care team if patient assistance programs are available to help verify insurance coverage or other resources to ensure access to physician-ordered treatment (e.g., education or counseling, oral nutritional supplements, home-delivered meals)	X		
	• Provide or participate in evidence-based programs (e.g., self-management, depression, falls prevention), which are cost-efficient and exhibit proven results for improving health outcomes related to malnutrition	X	X	X
	• Evaluate the patient-centeredness of value models (e.g., National Health Council Patient-Centered Value Model Rubric) and opportunities to integrate for quality malnutrition care		X	X
3. Generate Clinical Research on Malnutrition Quality of Care				
Strategies	**Recommendations**	**Individuals, Families, and Caregivers**	**Patient and Caregiver Advocacy Groups**	**Aging Organizations**
Evaluate Effectiveness and Impact of Best Practices on Patient Outcomes and Clinical Practice	• Test effectiveness of current malnutrition care best practices in home and community-based settings			X
	• Contribute to the identification or vetting of quality measures to improve malnutrition best practices and patient outcomes		X	X
Identify and Fill Research Gaps by Conducting and Disseminating Relevant Research	• Seek to be included in research efforts conducted by aging and healthcare institutes, relevant professional associations, or other organizations and contribute to identify and prioritize research topics	X	X	X
	• Publish white papers and peer-reviewed manuscripts regarding care pathways and treatments that positively impact malnutrition cost and outcomes that matter for older adults		X	X

Table 3: Recommendations for Older Adults, Families, Caregivers, Patient or Consumer Advocacy Groups, and Aging Organizations to Improve Quality of Malnutrition Care for Older Adults (cont.)

4. Advance Public Health Efforts to Improve Malnutrition Quality of Care				
Strategies	**Recommendations**	**Individuals, Families, and Caregivers**	**Patient and Caregiver Advocacy Groups**	**Aging Organizations**
Train Healthcare Providers, Social Services, and Administrators on Quality Malnutrition Care	• Advocate for schools and universities to integrate training modules for malnutrition prevention, identification, diagnosis, and treatment into curriculums for physicians, nurses, dietitians, allied professionals, and physician extenders (e.g., physician assistants, occupational therapists, physical therapists, social workers, direct care workers)		X	X
	• Advocate for multidisciplinary malnutrition care training to be integrated into CME or CE of medical specialty, nursing, and allied health organizations, including those supporting professional workers in home health, case management, and discharge planning roles		X	X
	• Require state-based home care standards for training all home-based caregivers regarding nutrition, food safety, and identification of the signs and symptoms of malnutrition		X	X
	• Demonstrate the value (e.g., cost-quality, outcomes, patient-centered endpoints) of malnutrition care in population health management		X	X
Educate Older Adults and Caregivers on Malnutrition Impact, Prevention, Treatment, and Available Resources	• Participate in patient engagement councils, patient advocacy groups, and consumer advisory councils with a focus on older adults	X	X	X
	• Develop and distribute malnutrition-related educational materials for older adults and caregivers		X	X
	○ Examples may include resources such as those referenced in Appendix D		X	X
	• Conduct awareness campaigns to educate older adults on specific diseases and conditions known to have a high prevalence of malnutrition		X	X

Table 3: Recommendations for Older Adults, Families, Caregivers, Patient or Consumer Advocacy Groups, and Aging Organizations to Improve Quality of Malnutrition Care for Older Adults (cont.)

Strategies	Recommendations	Individuals, Families, and Caregivers	Patient and Caregiver Advocacy Groups	Aging Organizations
Educate Older Adults and Caregivers on Malnutrition Impact, Prevention, Treatment, and Available Resources (cont.)	• Educate older adults and caregivers on "what is optimal nutrition" to correct misconceptions (e.g., eating means you are not malnourished), and provide resources to access nutrition services, such as through Older Americans Act Nutrition Program and USDA Food Assistance Programs		X	X

Educate and Raise Visibility with National, State, and Local Policymakers	• Identify national or state policy key opinion leaders to advocate for malnutrition care quality policies to be incorporated across all care settings
	• Educate legislators and regulators on priority areas for malnutrition prevention, identification, diagnosis, and treatment
	  ○ Develop materials in coordination with the NCOA and National Falls Prevention Resource Center to connect the issue of chronic conditions/falls prevention and good nutrition for older adults
	  ○ Develop materials in coordination with the National Academies of Sciences, Engineering, and Medicine's Food and Nutrition Board to extend the findings of nutrition and optimized oncology outcomes and maximized patient quality of life to other conditions
		X	X
			X
			X
			X
				X
				X
				X
				X

Table 4: Recommendations for Public and Private Payers to Improve Quality of Malnutrition Care for Older Adults

1. Improve Quality of Malnutrition Care Practices	
Strategies	**Recommendations**
Establish Science-Based National, State, and Local Goals for Quality Malnutrition Care	• Establish facility, clinician, and population health metrics to better evaluate patient outcomes for malnourished older adults or those at risk for malnutrition • Integrate malnutrition screening, education, and interventions in diabetes, COPD, oncology, and obesity plans for older adult beneficiaries and caregivers
Identify Quality Gaps in Malnutrition Care	• Recognize impact of malnutrition and quality gaps for older adults in population health and chronic disease prevention and wellness initiatives (e.g., malnutrition prevention, identification, and treatment needs in community, acute, and post-acute care settings and priority disease-specific populations)
2. Improve Access to High-Quality Malnutrition Care and Nutrition Services	
Strategies	**Recommendations**
Integrate Quality Malnutrition Care in Payment and Delivery Models and Quality Incentive Programs	• Adopt malnutrition screening, assessment, diagnosis, intervention, and care transitions standards for beneficiaries in Patient Centered Medical Home, Medicare Advantage, Shared Savings, and other alternative payment models for older adult beneficiaries • Adopt clinically relevant malnutrition quality measures in public and private accountability programs across the care continuum • Adopt electronic data standards to assist in transfer of clinically relevant malnutrition care or nutrition health information across care settings (e.g., nutritional status, diet orders, other nutrition interventions)
Reduce Barriers to Quality Malnutrition Care	• Integrate malnutrition screening in telehealth programs and other provider access initiatives • Reduce barriers to transparency and transfer of clinically relevant malnutrition care data to downstream providers, individuals, and caregivers • Expand coverage of medical nutrition therapy services to apply beyond ESRD, CKD, and diabetes and the currently limited populations • Include malnutrition care in patient assistance and patient navigator programs to help ensure older adults' access to physician-ordered medical nutrition and services (e.g., medical nutrition therapy, oral nutritional supplements, medically tailored home-delivered meals, Meals on Wheels, and/or other community-based services and supports)
3. Generate Clinical Research on Malnutrition Quality of Care	
Strategies	**Recommendations**
Identify and Fill Research Gaps by Conducting and Disseminating Relevant Research	• Conduct research on beneficiary barriers and pathways to reduce barriers to quality malnutrition care and nutrition support • Provide incentives for healthcare institutions and systems to publicly report available data on malnutrition care or patient outcomes related to malnutrition care • Request that organizations conducting research through quality improvement pilots addressing malnutrition care disseminate their study results in a timely manner

Table 4: Recommendations for Public and Private Payers to Improve Quality of Malnutrition Care for Older Adults (cont.)

Strategies	Recommendations
Track Clinically Relevant Nutritional Health Data	• Include clinically relevant malnutrition-related data in acute care, post-acute care, and community settings in beneficiary outcomes' benchmarking • Use electronic data to assist in transfer of clinically relevant malnutrition care or nutrition health information across care settings (e.g., nutritional status, diet orders, other nutrition interventions)
4. Advance Public Health Efforts to Improve Malnutrition Quality of Care	
Strategies	**Recommendations**
Integrate Malnutrition Care Goals in National, State, and Local Population Health Management Strategies	• Educate beneficiaries on what "optimal nutrition" is in order to understand malnutrition, causes of malnutrition (disease, acute illness, food insecurity), and the impact on health outcomes • Establish a central, publicly available location or source where older adult beneficiaries and caregivers can access education resources on nutrition and malnutrition care (e.g., patient portals, employee assistance websites)

Recommendations to Advance Malnutrition Care and Services in Specific Settings

The remainder of this *Blueprint* highlights recommendations to be carried out to advance quality malnutrition care in specific care settings. The Malnutrition Quality Collaborative specifies these actions for different settings, in addition to the more universal strategies and recommendations previously presented, to help optimize the advancement of malnutrition care throughout the U.S. healthcare system. Therefore, recommendations are presented for acute care, post-acute care, and community settings.

Table 5. Acute Care Recommendations to Improve Quality of Malnutrition Care for Older Adults

1. Improve Quality of Malnutrition Care Practices	
Strategies	**Recommendations**
Establish and Adopt Quality Malnutrition Care Standards	• Identify and adopt evidence-based malnutrition care standards and best practices to support early identification of malnutrition and access to quality malnutrition care and nutrition interventions for hospitalized older adults • Establish care pathways for follow-up nutrition services and non-food support services for hospitalized older adults • Address gaps and update evidence-based malnutrition care standards and best practices for hospitalized older adults as warranted (e.g., perioperative and postoperative care standards and best practices for older adults published by the American Society for Parenteral and Enteral Nutrition [ASPEN] or Academy of Nutrition and Dietetics [AND])
Ensure High-Quality Transitions of Care	• Establish evidence-based best practices for TOC specific to patient risk factors and ensure available resources to carry out effective care transitions • Collaborate with multidisciplinary stakeholders to develop a protocol or care pathway for referral processes to post-acute care or community services for those who screen positive for malnutrition risk in acute care settings • Urge organizations such as local AAAs, ADRCs, and other CBOs to educate older adults, caregivers, and providers on the availability of malnutrition care and nutrition services during TOC, including medically tailored home-delivered meal providers like those in the Food is Medicine Coalition • Identify resource and infrastructure needs to support demand for home-delivered meals and other nutrition services for at-risk and malnourished older adults transitioning from acute care settings back into their community/home; explore collaborations with AAAs, Meals on Wheels programs, and other organizations providing community-based services and support to older adults

Table 5. Acute Care Recommendations to Improve Quality of Malnutrition Care for Older Adults (cont.)

2. Improve Access to High-Quality Malnutrition Care and Nutrition Services	
Strategies	**Recommendations**
Integrate Quality Malnutrition Care in Payment and Delivery Models and Quality Incentive Programs	• Recognize quality malnutrition care for older adults as a clinically relevant and cross-cutting priority in the HHS Quality Measure Development Plan • Adopt clinically relevant malnutrition quality measures in public and private accountability programs (e.g., CMS's Inpatient Quality Reporting, the Merit-based Incentive Payment System's [MIPS] Clinical Practice Improvement Activities, or commercial plans' quality improvement programs) • Integrate quality malnutrition care into future chronic disease and surgical care demonstration projects to develop innovative models that improve outcomes for malnourished and at-risk older adults
Reduce Barriers to Quality Malnutrition Care	• Adopt clinically relevant quality measures or outcome targets to help evaluate success in meeting malnutrition standards of care for older adults (i.e., care team coordination of screening, assessment, diagnosis, treatment, and care transition upon discharge) • If a state or hospital does not recognize dietitian order-writing privileges, update regulations to align with federal regulation that allows dietitian order-writing privileges in acute care hospitals • Educate hospital leaders on the importance/value of adopting dietitian order-writing policies in reducing barriers to quality care • Reduce barriers to transparency and transfer of clinically relevant malnutrition care data to downstream providers and individuals/caregivers • Identify gaps and resources needed to provide or maintain older adult access to quality malnutrition care and nutrition services at the institutional, regional, and national levels
Strengthen Nutrition Professional Workforce	• Evaluate human resource barriers (e.g., staffing, education curriculum, training) to support individual access to quality malnutrition care, nutrition intervention, and community support services • Establish projections for future demand in 2030 or beyond for nutrition workforce and other professionals who have responsibility for providing and maintaining older adult access to quality malnutrition care
3. Generate Clinical Research on Malnutrition Quality of Care	
Strategies	**Recommendations**
Evaluate Effectiveness and Impact of Best Practices on Patient Outcomes and Clinical Practice	• Quantify impact of malnutrition care standards and best practices on outcomes such as: 30-day readmission rates, intensive care unit admission, and discharge to community/home versus discharge to post-acute care from acute care settings • Demonstrate the value (e.g., cost and quality, outcomes, patient-centered endpoints) of malnutrition care in population health management • Evaluate the availability of ICD coding to support the consistent access and delivery of evidence-based malnutrition care
Identify and Fill Research Gaps by Conducting and Disseminating Relevant Research	• Generate evidence to inform standards and best practices for high-priority conditions where comorbid malnutrition can negatively impact hospitalized older adult outcomes • Access and publish in evidence-based programming literature for older adults to inform educational and quality improvement efforts (e.g., Frontiers publishing) • Publish white papers and peer-reviewed manuscripts regarding care pathways and treatments that positively impact malnutrition costs and outcomes that matter for hospitalized older adults

Table 5. Acute Care Recommendations to Improve Quality of Malnutrition Care for Older Adults (cont.)

Strategies	Recommendations
Identify and Fill Research Gaps by Conducting and Disseminating Relevant Research (cont.)	• Establish a central, publicly available location or source where stakeholders can access current fundamental, evidence-based care standards for malnutrition care and integrate new evidence as it is developed
Track Clinically Relevant Nutritional Health Data	• Adopt electronic data standards to assist in transfer of clinically relevant malnutrition care or nutrition health information (i.e., nutritional status, diet orders, diagnoses, nutrition interventions, discharge plans) • For organizations with relevant clinical registries, partner with federal agencies to incorporate malnutrition-related data collection modules in their registries, particularly those for high-priority comorbid conditions or therapeutic areas in acute care settings such as stroke, heart failure, and oncology ○ This could include registries such as the National Cardiovascular Data Registry, Diabetes Collaborative Registry, National Cancer Institute's SEER, American College of Surgeons National Surgical Quality Improvement Program • Collaborate with AHRQ to regularly track malnutrition screening in Healthcare Cost and Utilization Project reports • Include clinically relevant malnutrition-related data in national and state information technology initiatives • Advocate that acute care administrators and providers establish long-term institutional outcomes for malnutrition in their facilities (e.g., tracking results and improving performance on the MQii electronic clinical quality measures [eCQMs] for malnutrition screening, assessment, diagnosis, and care plan documentation)
4. Advance Public Health Efforts to Improve Malnutrition Quality of Care	
Strategies	**Recommendations**
Train Healthcare Providers, Social Services, and Administrators on Quality Malnutrition Care	• Develop core materials and integrate malnutrition care training modules (such as those developed by ASPEN) into school and university curriculums for physicians, nurses, allied professionals, and physician extenders (e.g., physician assistants, occupational therapists, physical therapists, social workers, direct care workers) • Advocate for the Accreditation Council for Graduate Medical Education (ACGME) to incorporate requirements for modules on the effect of malnutrition on patient outcomes in its accreditation standards for healthcare professionals ○ To the extent possible, ACGME modules should also incorporate requirements for multidisciplinary acute care training to prevent, identify, and treat malnutrition for all medical specialties • Encourage the American Board of Medical Specialties (ABMS) to integrate interdisciplinary malnutrition training into CME modules for maintenance of certification • Similar training should extend to medical, nursing, and allied health schools so that they integrate malnutrition training into CE modules offered to alumni • Identify gaps in provider knowledge of evidence-based nutrition standards and malnutrition care best practices
Educate Older Adults and Caregivers on Malnutrition Impact, Prevention, Treatment, and Available Resources	• Establish and work with hospital patient and family engagement councils (with a focus on older adults) and conduct provider-led awareness campaigns to educate hospitalized older adults and caregivers on specific diseases and conditions known to have a high prevalence of malnutrition • Identify gaps in older adult and caregiver knowledge about malnutrition care and how to access appropriate nutrition services in the acute care setting and when transitioning to other care settings

Table 5. Acute Care Recommendations to Improve Quality of Malnutrition Care for Older Adults (cont.)

Strategies	Recommendations
Educate Older Adults and Caregivers on Malnutrition Impact, Prevention, Treatment, and Available Resources (cont.)	• Develop and distribute malnutrition-related educational materials for older adults and caregivers such as those referenced in Appendix D • Develop culturally sensitive training and linguistically appropriate materials to improve older adults' and caregivers' understanding of "what is optimal nutrition" and address misconceptions (e.g., eating means you are not malnourished) ○ Examples include the Spanish translation of "Nutrition Tips for Seniors with Chronic Conditions," produced by the NCOA[54] • Provide resources to individuals that link discharged patients to culturally and linguistically appropriate community-based nutrition services, such as through Older Americans Act Nutrition Programs

Educate and Raise Visibility with National, State, and Local Policymakers	• Identify congressional, gubernatorial, and other national or state key opinion leader policy champions to advocate for malnutrition care quality policies
	• Educate legislators and regulators on priority areas for malnutrition prevention, identification, diagnosis, and treatment
	  ○ Develop materials in coordination with the NCOA and National Falls Prevention Resource Center to connect the issue of chronic conditions/falls prevention and good nutrition for older adults
	  ○ Develop materials in coordination with the National Academies of Sciences, Engineering, and Medicine's Food and Nutrition Board to extend the findings on nutrition and optimized oncology outcomes/maximized patient quality of life to other conditions

Table 6: Post-Acute Care Recommendations to Improve Quality of Malnutrition Care for Older Adults

1. Improve Quality of Malnutrition Care Practices	
Strategies	**Recommendations**
Establish and Adopt Quality Malnutrition Care Standards	• Identify and adopt evidence-based malnutrition standards and best practices (e.g., malnutrition screening on admission, adoption of New Dining Practice Standards established by Pioneer Network for nursing homes) to support early identification and access to quality malnutrition care and nutrition interventions for older adults in post-acute care settings ○ This should include the establishment of malnutrition screening and assessment standards of care in patient-centered medical home networks, health homes, assisted-living facilities, and other post-acute care settings • Promote the use of resources (e.g., University of Minnesota Nursing Home Regulations Plus)[55] that provide searchable databases for comparison of federal and state-specific nursing home and assisted-living regulations, including those related to malnutrition care • Address gaps and update evidence-based malnutrition care standards for older adults in each post-acute care setting as warranted
Ensure High-Quality Transitions of Care	• Establish evidence-based best practices for TOC specific to patient risk factors and clinical conditions, and ensure available resources to carry out effective care transitions • Collaborate with acute care providers to develop a protocol or care pathway that directly links malnutrition patient data and discharge plans to the post-acute care setting • Expand post-acute care provider education on the importance of malnutrition care during care transitions, potentially working through non-governmental organizations such as the National Post-Acute Care Continuum (NPACC) and specialty organizations such as the American Hospital Association • Identify resource and infrastructure needs to support demand for home-delivered meals and other nutrition services for at-risk and malnourished older adults transitioning from post-acute care settings back into their community or home setting; explore collaborations with AAAs and other organizations providing community-based services and supports to older adults (e.g., Meals on Wheels affiliates)
2. Improve Access to High-Quality Malnutrition Care and Nutrition Services	
Strategies	**Recommendations**
Integrate Quality Malnutrition Care in Payment and Delivery Models and Quality Incentive Programs	• Recognize quality malnutrition care for older adults as a clinically relevant and cross-cutting priority in the HHS Quality Measure Development Plan • Adopt clinically relevant malnutrition quality measures in public and private accountability programs (e.g., CMS's Inpatient Quality Reporting and the MIPS Clinical Practice Improvement Activities) • Recommend that CMS require nutrition screening and admissions protocol for post-acute care settings under the Improving Medicare Post-Acute Care Transformation (IMPACT) Act of 2014 and extend such requirements to assisted-living facilities • Align financial incentives in post-acute care settings so that older adults have access to malnutrition care and nutrition services recommended by their physician or clinical care team • Promote improvements for the Older Americans Act reauthorization ○ Strengthen link between nutrition and health in the Older Americans Act program and provide for malnutrition services and support in post-acute care, home, and community-based settings

Table 6: Post-Acute Care Recommendations to Improve Quality of Malnutrition Care for Older Adults (cont.)

Strategies	Recommendations
Integrate Quality Malnutrition Care in Payment and Delivery Models and Quality Incentive Programs (cont.)	• Partner with national organizations to incorporate malnutrition care into their award program requirements (e.g., American Health Care Association and National Center for Assisted Living (AHCA/NCAL) National Quality Award Program,[56] the Accreditation Commission for Health Care awards programs for in-home care services)[57] • Include quality malnutrition care in post-acute state licensure programs; demonstrate health and economic burden of malnutrition and the effect on readmissions
Reduce Barriers to Quality Malnutrition Care	• Develop clinically relevant quality measures or outcome targets to help evaluate success in meeting malnutrition standards of care for older adults in post-acute care settings including long-term care, inpatient rehabilitation, nursing homes, skilled nursing homes, and home health • Partner with post-acute care facility accreditation organizations to adopt quality malnutrition care quality measures • Identify gaps (i.e., partner with the National Institute on Aging and the National Institute of Nursing Research to identify barriers) and resources needed to maintain older adult access to quality malnutrition care and nutrition services in post-acute care at the institutional, regional, and national levels • Reduce barriers to transparency and transfer of clinically relevant malnutrition care data to downstream providers, individuals, and caregivers
Strengthen Nutrition Professional Workforce	• Evaluate human resource barriers (e.g., staffing, education curriculum, training) to support individual access to quality malnutrition care, nutrition intervention, and community support services • Establish projections for future demand in 2030 or beyond for nutrition workforce and other professionals who have responsibility for providing and maintaining older adult access to quality malnutrition care • Identify certified providers to support malnutrition screening, assessment, and follow-up in post-acute care settings when a dietitian is not available • Define care pathways and staff responsibilities to ensure that individuals who are malnourished or screen at risk for malnutrition upon arrival to post-acute care settings receive optimal malnutrition care and care planning
3. Generate Clinical Research on Malnutrition Quality of Care	
Strategies	**Recommendations**
Evaluate Effectiveness and Impact of Best Practices on Patient Outcomes and Clinical Practice	• Quantify impact of malnutrition care standards and best practices on outcomes such as acute care readmission, discharge to community and home care settings, falls, wound healing, and infection rates
Identify and Fill Research Gaps by Conducting and Disseminating Relevant Research	• Generate evidence to inform standards and best practices for high-priority conditions where comorbid malnutrition can negatively impact hospitalized older adult outcomes • Access and publish in evidence-based programming literature for older adults to inform educational and quality improvement efforts (e.g., Frontiers publishing) • Publish white papers and peer-reviewed manuscripts regarding care pathways and treatments that positively impact malnutrition costs and outcomes that matter for hospitalized older adults • Establish a central, publicly available location or source where stakeholders can access current fundamental, evidence-based care standards for malnutrition care and integrate new evidence as it is developed

Table 6: Post-Acute Care Recommendations to Improve Quality of Malnutrition Care for Older Adults (cont.)

Strategies	Recommendations
Track Clinically Relevant Nutritional Health Data	• Invite post-acute care health information technology stakeholders to develop electronic data standards in support of malnutrition screening and management services (e.g., PointClickCare) • Adopt electronic data standards to assist in transfer of clinically relevant malnutrition care or nutrition health information (e.g., nutritional status, diet orders, other nutrition interventions) • Partner with post-acute care registry stewards to integrate malnutrition-related data collection modules • Include clinically relevant malnutrition-related post-acute care data in national and state information technology initiatives
4. Advance Public Health Efforts to Improve Malnutrition Quality of Care	
Strategies	**Recommendations**
Train Healthcare Providers, Social Services, and Administrators on Quality Malnutrition Care	• Develop core materials and integrate malnutrition care training modules (such as those developed by ASPEN and the malnutrition care resource hub available through NCOA into school and university curriculums for physicians, nurses, allied professionals, and physician extenders (e.g., physician assistants, occupational therapists, physical therapists, social workers, direct care workers) • Develop core materials and integrate malnutrition care training into CME and maintenance of certification for all medical specialties, nursing, and allied health organizations; partner with the ACGME and ABMS • Establish competencies in malnutrition prevention and management for post-acute care professionals through licensure programs, training, credentialing, and certification programs (e.g., the Certified Medical Director and Attending Physician certification programs developed by the Society for Post-Acute and Long-Term Care Medicine,[58] or other post-acute care administrator organizations) • Identify gaps in provider knowledge of evidence-based nutrition standards and malnutrition care best practices for older adults in post-acute care
Educate Older Adults and Caregivers on Malnutrition Impact, Prevention, Treatment, and Available Resources	• Engage the Society for Post-Acute and Long-Term Care Medicine to help establish roles for healthcare professionals and patient family advisory councils in post-acute care settings for malnutrition education to older adults • Develop and distribute malnutrition-related educational materials for older adults and caregivers such as those referenced in Appendix D • Develop culturally sensitive training and linguistically appropriate materials to improve older adults' and caregivers' understanding of "what is optimal nutrition" address misconceptions (e.g., eating means you are not malnourished) ○ An example of such a resource may be the Spanish translation of NCOA's "Nutrition Tips for Seniors with Chronic Conditions"[54] • Engage post-acute care patient/nutrition advocacy groups, such as NCAL, to develop and distribute educational materials for older adults and caregivers that show how malnutrition care is linked to rehabilitation and self-management outcomes, and to raise awareness of opportunities to access nutrition services to combat food insecurity • Promote education through home health agencies among older adults and caregivers to complete a nutrition screening with a primary care provider or caregiver, to receive services through the Older Americans Act Nutrition Program such as home-delivered meals and congregate meals

Table 6: Post-Acute Care Recommendations to Improve Quality of Malnutrition Care for Older Adults (cont.)

Strategies	Recommendations
Educate Older Adults and Caregivers on Malnutrition Impact, Prevention, Treatment, and Available Resources (cont.)	• Urge organizations such as local AAAs, ADRCs, and other CBOs to educate older adults, caregivers, and providers on the availability of nutrition services during TOC, including medically tailored home-delivered meal providers like those in the Food is Medicine Coalition • Identify gaps in older adult and caregiver knowledge about malnutrition care and how to access appropriate nutrition services in post-acute care settings and when transitioning to other care settings

Educate and Raise Visibility with National, State, and Local Policymakers	• Identify congressional, gubernatorial, and other national or state key opinion leader policy champions to advocate for malnutrition care quality policies
	• Educate legislators and regulators on priority areas for malnutrition prevention, identification, diagnosis, and treatment
	  ○ Develop materials in coordination with the NCOA and National Falls Prevention Resource Center to connect the issue of chronic conditions/falls prevention and good nutrition for older adults
	  ○ Develop materials in coordination with the National Academies of Sciences, Engineering, and Medicine's Food and Nutrition Board to extend the findings on nutrition and optimized oncology outcomes and maximized patient quality of life to other conditions
	  ○ Develop materials to demonstrate the impact of poor malnutrition care in post-acute care settings, such as for increased rate of readmission to acute care settings
	• Engage Departments of Health, Medicaid agencies, and Departments of Aging in conjunction with AAAs to improve state and local screening for malnutrition upon admission to post-acute care settings

Table 7: Community Setting Recommendations to Improve Quality of Malnutrition Care for Older Adults

1. Improve Quality of Malnutrition Care Practices	
Strategies	**Recommendations**

Establish and Adopt Quality Malnutrition Care Standards	• Establish and adopt evidence-based malnutrition standards and best practices to support early identification and access to quality malnutrition care and nutrition interventions for older adults in patient-centered medical home networks, home health, assisted-living facilities, and other community and home-based care settings
	  ○ Promote standardization of a validated national community nutritional screening tool such as the Malnutrition Screening Tool (MST), the Malnutrition Universal Screening Tool (MUST), the National Risk Screening (NRS) tool, the Mini Nutrition Assessment (MNA), or the Short Nutritional Assessment Questionnaire (SNAQ)
	  ○ Adopt, at national level, a validated screening tool for food insecurity (e.g., Hunger Vital Sign) and partner with organizations such as the NCOA or Meals on Wheels America for best practices to engage older adults and help them access needed support services

Ensure High-Quality Transitions of Care	• Establish evidence-based best practices for TOC specific to patient risk factors and clinical conditions, and ensure available resources to carry out effective transitions into home and community settings • Collaborate with acute and post-acute care providers to develop a protocol or care pathway that directly links malnutrition patient data and discharge plans to the community and home-based care setting, while also tracking reductions in healthcare expenditures related to community and home-based care service delivery • Educate providers, individuals, and caregivers on the importance of malnutrition care during care transitions and the availability of community nutrition services during TOC (e.g., local AAAs and ADRCs) • Identify resource and infrastructure needs to support demand for home-delivered meals and other nutrition and health promotion services for at-risk and malnourished older adults transitioning from acute and post-acute care settings back into their community or home setting; explore collaborations with AAAs, local Meals on Wheels programs, and other organizations providing community-based services and supports to older adults
2. Improve Access to High-Quality Malnutrition Care and Nutrition Services	
Strategies	**Recommendations**

Integrate Quality Malnutrition Care in Payment and Delivery Models and Quality Incentive Programs	• Recognize quality malnutrition care for older adults as a clinically relevant and cross-cutting priority in HHS' Quality Measure Development Plan
	• Adopt clinically relevant malnutrition quality measures in public and private accountability programs (e.g., patient-centered medical homes, accountable care organizations, home health agencies, and MIPS Clinical Practice Improvement Activities)
	• Align financial incentives in community settings so that individuals have access to nutrition and health promotion services recommended by their physician or clinical team
	• Promote improvements for the Older Americans Act reauthorization
	  ○ Strengthen link between nutrition and health in Older Americans Act programs and provide for integrated malnutrition services and support
	  ○ Advocate for education about malnutrition screening and food-insecurity screening to be elements of Older Americans Act programs

Table 7: Community Setting Recommendations to Improve Quality of Malnutrition Care for Older Adults (cont.)

Strategies	Recommendations
Integrate Quality Malnutrition Care in Payment and Delivery Models and Quality Incentive Programs (cont.)	• Partner with national organizations to incorporate malnutrition care into award programs requirements (e.g., the Accreditation Commission for Health Care's awards program for in-home care services, the AHCA/NCAL National Quality Award Program)

Reduce Barriers to Quality Malnutrition Care	• Develop clinically relevant quality measures or outcome targets to help evaluate success in meeting nutrition standards of care for older adults in community and home-based care settings
	  ○ Example of one outcome target could be improving referral rate of eligible older adults to community nutrition services such as USDA's SNAP or Commodity Supplemental Food Program
	• Identify resources (e.g., Program of All-Inclusive Care for the Elderly [PACE], Chronic Disease Self-Management Education) needed to maintain older adult access to quality malnutrition care and nutrition services in community and home-based care at the national, state, and local levels
	  ○ Gaps may include inadequate staffing, poor training on documentation practices, or financial resources for accessing sufficient malnutrition care or nutrition services (e.g., programs and home-delivered or congregate meals for older adults living in high-priority communities)
	• Reduce barriers to transparency and transfer of clinically relevant malnutrition care data to downstream providers, individuals, and caregivers
	• Give community providers funds and data to support maintenance and continued growth of needed services

Strengthen Nutrition Professional Workforce	• Evaluate human resource barriers (e.g., staffing, education curriculum, training) to support individual access to quality malnutrition care, nutrition intervention, and community support services • Establish projections for future demand in 2030 or beyond for nutrition workforce and other professionals who have responsibility for providing and maintaining older adult access to quality malnutrition care • Identify certified providers to support malnutrition screening, assessment, and follow-up in post-acute care settings when a dietitian is not available • Define care pathways and staff responsibilities to ensure that individuals who are malnourished or screen at risk for malnutrition upon arrival to post-acute care settings receive optimal malnutrition care and care planning
3. Generate Clinical Research on Malnutrition Quality of Care	
Strategies	**Recommendations**
Evaluate Effectiveness and Impact of Best Practices on Patient Outcomes and Clinical Practice	• Collaborate with healthcare and academic partners to quantify impact of malnutrition care standards and best practices on outcomes such as acute care readmission, falls, wound healing, and infection rates
Identify and Fill Research Gaps by Conducting and Disseminating Relevant Research	• Generate evidence to inform best practices for high-priority conditions in community and home-based settings where comorbid malnutrition can negatively impact outcomes (i.e., chronic pain, depression, functional impairment, cognitive impairment, falls) • Convene expert panel to identify and prioritize research topics for community and home-based care settings, including: ○ Clinically relevant outcomes associated with home-delivered meal programs

Table 7: Community Setting Recommendations to Improve Quality of Malnutrition Care for Older Adults (cont.)

Strategies	Recommendations
Identify and Fill Research Gaps by Conducting and Disseminating Relevant Research (cont.)	○ Health and economic outcomes of malnutrition and access to nutrition providers and services (e.g., functional impairment, cognitive impairment, falls, and mental or behavioral health effects) ○ Malnutrition and food-insecurity screening on access to malnutrition interventions and outcomes ○ Impact of multidisciplinary team approaches on the success of malnutrition screening, treatment, and prevention approaches • Access and publish literature on evidence-based programming literature on older adults to inform educational or quality improvement efforts (e.g., Frontiers publishing) • Establish a central, publicly available location or source (e.g., establish as permanent the Aging and Disability Resource Center Initiative or the National Resource Center on Nutrition and Aging through the Administration on Community Living) where stakeholders can access current fundamental, evidence-based care standards for malnutrition care and integrate new evidence as it is developed
Track Clinically Relevant Nutritional Health Data	• Adopt electronic data standards to assist in transfer of clinically relevant malnutrition or nutrition health information (e.g., nutritional status, diet orders, other nutrition interventions) • Enhance infrastructure, either through increased investments or by supporting investments to enhance infrastructure, among community organizations addressing malnutrition to support tracking and monitoring of services received by older adults identified as at risk for malnutrition or malnourished ○ Partner with registry stewards to integrate malnutrition-related data collection modules • Engage the CDC's surveillance program to track and monitor malnutrition and food insecurity in community and home-based settings ○ In addition to body mass index (BMI) and fruit/vegetable intake, include malnutrition in CDC key indicators of older adult health ○ Include malnutrition screening and services data through the CDC National Health and Nutrition Examination Survey (NHANES) • Include clinically relevant malnutrition-related community and home-based care data in national and state information technology initiatives
4. Advance Public Health Efforts to Improve Malnutrition Quality of Care	
Strategies	**Recommendations**
Train Healthcare Providers, Social Services, and Administrators on Quality Malnutrition Care	• Develop core materials and integrate malnutrition care training modules (such as those developed by ASPEN) into school and university curriculums for physicians, nurses, dietitians, and allied professionals or physician extenders (e.g., physician assistants, occupational therapists, physical therapists, social workers, direct care workers) • Develop core materials and integrate malnutrition care training into CME and maintenance of certification for all medical specialties, nursing, and allied health organizations; partner with ACGME and ABMS • Raise awareness of individuals who constitute a community interdisciplinary care team, and establish competencies in malnutrition prevention and management for community and home-based care professionals through licensure programs, training, credentialing, and certification programs • Engage in educational partnerships (such as through Argentum, the National Association of States United for Aging and Disabilities, or the Retail Dietitians Business Alliance) to provide support for professionals working in independent living, assisted living, and memory care services • Identify gaps in provider knowledge of evidence-based nutrition standards and malnutrition care best practices for older adults in community and home-based care settings

Table 7: Community Setting Recommendations to Improve Quality of Malnutrition Care for Older Adults (cont.)

Strategies	Recommendations
Educate Older Adults and Caregivers on Malnutrition Impact, Prevention, Treatment, and Available Resources	• Develop and distribute malnutrition-related educational materials for older adults and caregivers on how malnutrition care impacts rehabilitation and self-management (see example resources in Appendix D) ○ Explore partnerships with NCAL and the National Academies of Sciences, Engineering, and Medicine to develop education materials or initiatives • Educate older adults and caregivers on community resources to access malnutrition care and nutrition services, including Older Americans Act Nutrition Programs, SNAP, Commodity Supplemental Food Program, and other USDA food assistance programs, home care and meal-delivery services, and ADRCs • Integrate malnutrition education into existing events and forums, e.g., Active Aging Week, Malnutrition Awareness Week, National Nutrition Month, Older Americans Month, National Family Caregivers Month

Educate and Raise Visibility with National, State, and Local Policymakers	• Identify congressional, gubernatorial, and other national or state key opinion leader policy champions to advocate for malnutrition care quality policies
	• Educate legislators and regulators on priority areas for malnutrition prevention, identification, diagnosis, and treatment
	  ○ Develop materials in coordination with the NCOA and National Falls Prevention Resource Center to connect the issue of chronic conditions and falls prevention to good nutrition for older adults
	  ○ Develop materials in coordination with the National Academies of Sciences, Engineering, and Medicine's Food and Nutrition Board to extend the findings of nutrition and optimized oncology outcomes and maximized patient quality of life to other conditions
	• Establish broad-based collaboration with CBOs to ensure food and nutrition services are in place across the care continuum that respond to risk factors and mobility issues of older adults

Integrate Malnutrition Care Goals in National, State, and Local Population Health Management Strategies	• Improve malnutrition screening rates in community and home-based settings
	  ○ Partner with Departments of Health, Medicaid agencies, State Units on Aging (SUA), AAAs, Association of State Public Health Nutritionists (ASPHN), and AND Healthy Aging Dietetic Practice Group
	  ○ Include malnutrition screening and education in mobile health clinic programs and telehealth programs
	  ○ Disseminate malnutrition pilot results with community service professionals and nutrition networks via Administration for Community Living
	• Include nutrition screening questions in CMS annual wellness and Welcome to Medicare exams
	• Appoint state-level lead agency to disseminate policy standards for addressing malnutrition in the community

Conclusion and Call to Action

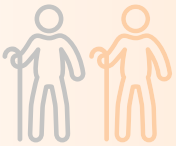
In summary, improving the quality of malnutrition care aligns with our national healthcare priorities focused on prevention and wellness, patient safety, care transitions, population health, and patient-centered strategies. Furthermore, it supports the improvement of long-term health outcomes for all individuals, particularly older adults—a growing and more prominent population placing increasing demands on the U.S. healthcare system. Therefore, timing for enacting these changes is now. Much can be done at national, state, and local levels to drive quality improvement and raise awareness to advance high-quality malnutrition care.

This *Blueprint* is just the first step in establishing a consistent, high-quality standard of malnutrition care in the United States Multi-stakeholder collaborations and partnerships will be needed to bring these recommendations to life and to secure our future of "Healthy Aging" through nutrition and high-quality, safe, coordinated malnutrition care.

Appendices /
Appendix A: Malnutrition—An Older Adult Crisis /

MALNUTRITION: AN OLDER-ADULT CRISIS

$51.3 Billion
Estimated annual cost of disease-associated malnutrition in older adults in the US[1]



Up to 1 out of 2 older adults
are at risk for malnutrition[2,3]

300%
The increase in healthcare costs that can be attributed to poor nutritional status[5]

Up to 60%
of hospitalized older adults may be malnourished[4]

4 to 6 days
How long malnutrition increases length of hospital stays[4]

Chronic health conditions
lead to increased malnutrition risk

Malnutrition leads to more
complications, falls,[6] and readmissions[7]

Just 3 steps can help improve older-adult malnutrition care

Screen
all patients

+

Assess
nutritional status

+

Intervene
with appropriate nutrition

Focusing on malnutrition in healthcare helps:

- ✓ Decrease healthcare costs[8]
- ✓ Improve patient outcomes[8]
- ✓ Reduce readmissions
- ✓ Support healthy aging
- ✓ Improve quality of healthcare

Support policies across the healthcare system that defeat older-adult malnutrition.

Learn more at www.DefeatMalnutrition.Today

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Appendix B: Quality Measure Domain Table

The quality domains and sub-domains listed below align with the National Quality Strategy priorities.[59] Malnutrition-related quality measures are cross-cutting and should be integrated into public and private accountability programs to help:

- Advance health and quality-of-life outcomes for older adults
- Prevent, identify, diagnose, and treat malnutrition
- Align provider incentives across acute, post-acute, and community care settings

Quality Measure Domains	
Domains	**Sub-Domains**
Patient Safety	• Malnutrition Screening • Nutrition Assessment • Dehydration • Pressure Ulcers • Falls' Risk • Healthcare Associated Infections • Improving Diagnostic Accuracy and Timeliness
Care Coordination	• Transitions of Care • Integrated Care • Implementation of Nutrition Care Plan • Improving Diagnostic Accuracy and Timeliness • Access to Community Services
Population Health Management	• Malnutrition Screening • Nutrition Assessment • Implementation of Nutrition Care Plan • Chronic Disease • Prevention • Social Determinants of Health • Vulnerable Populations
Functional Status	• Malnutrition Screening • Nutrition Assessment • Activities of Daily Living • Sarcopenia
Patient and Caregiver Experience of Care	• Patient Satisfaction • Patient-Reported Outcomes • Patient Engagement • Quality of Life
Infrastructure	• Care Models (Alternative Payment Models) • Health Information Exchange • Transfer of Necessary Medical Information • Workforce

Appendix C: Glossary of Terms and List of Acronyms /

Acute Care Refers to treatment for a patient that is usually brief but for a severe episode of illness or conditions that result from disease or trauma. Hospitals are generally the setting where acute care is provided and include community, rural, and critical access hospitals.

Community-Based Services and Supports The blend of health and social services provided to an individual, caregiver, or family member for the purpose of promoting, maintaining, or restoring health or minimizing the effects of illness and disability. These person-centered services are usually designed to maximize an older person's independence at home or participation in the community. Such services and supports can include senior centers, transportation, home-delivered meals or congregate meal sites, visiting nurses or home health aides, adult day health services, and homemaker services.

Data Tools or Sources[60] Mechanisms that support data collection and provide information regarding patient care throughout the clinical workflow. Data sources may or may not be applicable depending on the stage in the clinical workflow. Examples of where this type of information may come from include:

- Validated screening tools such as the Malnutrition Screening Tool (MST)
  - Modified versions of validated tools
- Screening tools developed internally that are appropriate to the hospital's patient population
- Medical or health records
- Physician referral form
- Standardized nutrition assessment tools such as the Subjective Global Assessment (SGA)
- Patient/family caregiver interviews
- Community-based surveys and focus groups
- Statistical reports and epidemiologic studies
- Relevant clinical guidelines
- Current literature evidence base
- Results from documented quality improvement initiatives
- Reminder and communications tools embedded within electronic health records
- Patient self-monitoring data
- Anthropometric measures
- Biochemical data and medical tests
- Remote follow-up, including telephone and electronic health record (EHR) messaging systems
- Patient and family caregiver surveys

Food Insecurity[13] "A household-level economic and social condition of limited or uncertain access to adequate food." Ranges of food insecurity as defined by the USDA are as follows:

- **Low food security** Reports of reduced quality, variety, or desirability of diet. Little or no indication of reduced food intake.
- **Very low food security** Reports of multiple indications of disrupted eating patterns and reduced food intake.

Food Security[13] "Access at all times to enough food for an active, healthy life for all household members." Ranges of food security as defined by the USDA are as follows:

- **High food security** No reported indications of food-access problems or limitations.
- **Marginal food security** One or two reported indications—typically of anxiety over food sufficiency or shortage of food in the house. Little or no indication of changes in diet or food intake.

Hunger[13] "Is an individual-level physiological condition that may result from food insecurity." More generally, it is a sensation resulting from lack of food or nutrients, characterized by a dull or acute pain in the lower chest. Hunger is distinguished from appetite in that hunger is the physical drive to eat, while appetite is the psychological drive to eat affected by habits, culture, and other factors.

Malnutrition[9] A state of deficit, excess, or imbalance in energy, protein, or nutrients that adversely impacts an individual's own body form, function, and clinical outcomes.

Malnutrition Care Plan[60] The development of a document outlining comprehensive planned actions with the intention of impacting malnutrition-related factors affecting patient health status.

Malnutrition Diagnosis[60] The identification of and labeling of a patient's malnutrition problem that requires independent treatment that may be unrelated to the patient's index hospital admission.

Malnutrition-Risk Diet Order[50] An interim diet order that is initiated for patients identified as at risk based on malnutrition screening upon admission and pending a dietitian consult and nutrition assessment. Various diet orders utilized by facilities for patients at malnutrition risk are as follows:

- High-Calorie, High-Protein Nutrition Therapy
  - High-Calorie Nutrition Therapy
- Underweight Nutrition Therapy
- Nutrient Dense
- High Nutrient
- Three (3) small meals with snacks high in complex carbohydrates and low in simple sugars (fewer than 10g/serving); small amounts of rehydration solution between meals
- Small portions and frequent feedings of calorie-dense foods and drinks containing fat and sugar
- Soft diet with nutritional supplements to meet energy requirements

Malnutrition Intervention Implementation The implementation of specific actions to address malnutrition outlined in the care plan.

Malnutrition Screening[61] The systematic process of identifying an individual with poor dietary or nutrition characteristics who is at risk for malnutrition and requires follow-up assessment or intervention.

Medical Nutrition Therapy[62] Nutritional diagnostic therapy and counseling services provided by a dietitian or nutritional professional for the purpose of managing disease following a referral by a physician.

Monitoring and Evaluation[60] The systematic process to identify the amount of progress made since patient diagnosis and assessment of whether outcomes relevant to the malnutrition diagnosis and treatment goals are being met.

Nutrition Assessment[60] The systematic approach to collect and interpret relevant data from patients, family caregivers, and patient family members to determine a patient's malnutrition severity and establish a malnutrition diagnosis.

Patient-Centered[63] Healthcare that establishes a partnership among practitioners, patients, and their families (when appropriate) to ensure that decisions respect patients' wants, needs, and preferences and that patients have the education and support they need to make decisions and participate in their own care.

Patient-Driven[64] When the patient is a responsible driver of their own healthcare services and is encouraged by the provider to act as a full partner in decision making.

Patient Engagement[65] An ongoing process in which patients take an active role in their own healthcare.

Post-Acute Care (PAC) Care that takes place in long-term care hospitals, inpatient rehabilitation facilities, skilled nursing facilities, and home health agencies. PAC services focus on improving quality of life and functional status of patients.

Quality Care[66] A direct correlation between the level of improved health services and the desired health outcomes of individuals and populations.

Quality Improvement[67] Systematic activities that are organized and implemented by an organization to monitor, assess, and improve its healthcare with the goal of seeking continuous improvement in the care delivered to the patients the organization serves.

Quality Indicator[68] "[M]easurable [element] of practice performance for which there is evidence or consensus that it can be used to assess the quality, and hence change in the quality of care provided."

Quality Measures[69] Tools that help measure or quantify healthcare processes, outcomes, patient perceptions, and organizational structure and/or systems that are associated with the ability to provide high-quality healthcare and/or that relate to one or more quality goals for healthcare.

Shared Decision Making[70] The process of communication, deliberation, and decision making during which:

- One or more clinicians share with the patient information about relevant testing or treatment options, including the severity and probability of potential harms and benefits, and alternatives of these options given the specific nature of the patient's situation;
- The patient explores and shares with the clinician(s) his or her preferences regarding these harms, benefits, and potential outcomes; and
- Through an interactive process of reflection and discussion, the clinician(s) and patient reach a mutual decision about the subsequent treatment or testing plan.

Transitions of Care (TOC, or Care Transitions)[71] Processes to provide the patients a safe, successful transition from one provider care setting to the next.

List of Acronyms	
AAA	Area Agency on Aging
ABMS	American Board of Medical Specialties
ADRC	Aging and Disability Resource Center
AHRQ	Agency for Healthcare Research and Quality
AND	Academy of Nutrition and Dietetics
ASPEN	American Society for Parenteral and Enteral Nutrition
CBO	Community-Based Organization
CDC	Centers for Disease Control and Prevention
CE	Continuing Education
CKD	Chronic Kidney Disease
CME	Continuing Medical Education
CMS	Centers for Medicare & Medicaid Services
CSFP	Commodity Supplemental Food Program
ESRD	End-Stage Renal Disease
HHS	U.S. Department of Health and Human Services
MNA	Mini Nutritional Assessment
MNT	Medical Nutrition Therapy
MST	Malnutrition Screening Tool
MUST	Malnutrition Universal Screening Tool
NCOA	National Council on Aging
NIDDK	National Institute of Diabetes and Digestive and Kidney Disease
NIH	National Institutes of Health
NQF	National Quality Forum
NRS	National Risk Screening
OAA	Older Americans Act
ODPHP	Office of Disease Prevention and Health Promotion
SNAP	Supplemental Nutrition Assistance Program
SNAQ	Short Nutritional Assessment Questionnaire
TOC	Transitions of Care (or Care Transitions)
USDA	United States Department of Agriculture

Appendix D: Resources for Improving Malnutrition Care /

Recognizing Malnutrition

Gerontological Society of America's "What Is Malnutrition," available at: https://www.geron.org/images/gsa/malnutrition/Malnutrition_Infographic_1_FINAL_020416.jpeg

The National Council on Aging's "5 Facts about Malnutrition," available at: https://www.ncoa.org/resources/5-facts-malnutrition/

Tools for Enhancing Malnutrition Care Practices

To help with screening procedures across care settings, below is a list of validated screening tools for identifying malnutrition. These can be incorporated within a facility's care workflow or practices.

List of Validated Malnutrition Screening Tools

- Birmingham Nutrition Risk (BNR)
- Malnutrition Screening Tool (MST)
- Malnutrition Universal Screening Tool (MUST)
- Mini Nutritional Assessment (MNA)
- Nutrition Risk Classification (NRC)
- Nutritional Risk Index (NRI)
- National Risk Screening (NRS) 2002
- Short Nutritional Assessment Questionnaire (SNAQ)

Other tools to enhance malnutrition care include the following:

MQii Toolkit, available at: http://mqii.defeatmalnutrition.today/

Saint Louis University Rapid Geriatric Assessment, available at: https://www.ncoa.org/healthy-aging/chronic-disease/nutrition-chronic-conditions/nutrition-tips-for-people-with-chronic-conditions/

Resources for Educating Patients, Families, and Caregivers on How to Address Malnutrition

National Council on Aging's "Nutrition Tips for Seniors with Chronic Conditions," available at: https://www.ncoa.org/healthy-aging/chronic-disease/nutrition-chronic-conditions/nutrition-tips-for-people-with-chronic-conditions/

National Council on Aging's "Healthy Eating Tips for Seniors," available at: https://www.ncoa.org/economic-security/benefits/food-and-nutrition/senior-nutrition/

Alliance for Aging Research Malnutrition Tip Sheet, available at: http://www.agingresearch.org/backend/app/webroot/files/Publication/358/AAR%20Malnutrition%20Tip%20Sheet%207%2014.pdf

Access to Adequate Food and Nutrition

Implementing Food Security Screening and Referral for Older Patients in Primary Care, available at: http://www.aarp.org/content/dam/aarp/aarp_foundation/2016-pdfs/FoodSecurityScreening.pdf

Combating Food Insecurity: Tools for Helping Older Adults Access SNAP, available at: http://frac.org/pdf/senior_snap_toolkit_aarp_frac.pdf

Food Distribution Program on Indian Reservations (FDPIR), available at: https://www.nativeonestop.gov/resources/resource-details/360

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Notes for Implementing the *Blueprint* Strategies and Recommendations /

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