Academy of Nutrition and Dietetics

# The Role of RDNs and NDTRs in Malnutrition Prevention and Treatment

## Issue Brief for Academy Members

### About the Academy

The Academy of Nutrition and Dietetics is committed to improving the nation's health and advancing the profession of dietetics through research, education and advocacy. Our members include registered dietitian nutritionists, nutrition and dietetics technicians, registered and advanced-degree nutritionists. The Academy works with leaders to find nonpartisan public policy solutions that promote health and reduce the burden of chronic disease, including malnutrition, through nutrition services and interventions.

### What Is Malnutrition?

Malnutrition is the inadequate intake of nutrients over time and may contribute to chronic and acute illness.[1] Malnutrition is a leading cause of morbidity and mortality, especially among older adults.[1] Up to half of adults 65 and older and as many as 39 percent of older adult patients may be malnourished or at risk.[2] Additionally, up to 31 percent of malnourished patients and 38 percent of well-nourished patients experience nutritional decline during hospital stays.[3] Despite the high prevalence of malnutrition in hospitals, a review of nationally representative data indicated that, in 2013, only 7 percent of patients had a diagnosis of malnutrition,[4] potentially leaving millions of patients undiagnosed and untreated.

People can be either underweight or overweight and still be malnourished when they lack sufficient nutrients needed to promote healing, rehabilitation and reduce their risk of medical complications.[1] Changes commonly associated with aging such as loss of appetite, limited ability to chew or swallow and use of multiple medications place older adults at a higher risk for developing malnutrition.[5] Patients experiencing malnutrition are at an increased risk for complications; they are five times as likely to die in the hospital[4] and have a 54 percent increase in readmissions compared to non-malnourished patients.[6]

### The Cost of Malnutrition

According to estimates by the Centers for Disease Control and Prevention, one in five Americans will be 65 or older by 2050.[8] With an increasingly older population that is at risk for malnutrition, the cost of malnutrition is expected to increase. Hospital costs may be up to 100 percent higher for malnourished patients compared to non-malnourished patients ($25,000 vs. $12,500).[4] The estimated economic burden of disease-associated malnutrition in the U.S. is $157 billion and nearly one third of this cost ($51.3 billion) can be attributed to older adults.[7]

## Role of the MQii to Prevent and Treat Malnutrition

Preliminary data collected from the MQii Learning Collaborative suggests a significantly reduced likelihood of 30-day readmission for malnourished patients who receive a nutrition care plan from a Registered Dietitian Nutritionist compared to those without a nutrition care plan.

Despite evidence that demonstrates the benefits of nutrition for healing and recovery and a clinical consensus model for implementing optimal nutrition care, significant variation and gaps remain with respect to nutrition screening, assessment, intervention, monitoring and overall care for malnourished and at-risk hospitalized older adults.[1] In addition, no national benchmarking of malnutrition in acute care hospitals exists in the United States.[1] To address these issues, Avalere Health and the Academy of Nutrition and Dietetics have collaborated to develop the Malnutrition Quality Improvement Initiative. This is a dual-pronged approach to advancing malnutrition care for hospitalized older adults that includes the implementation of an evidence-based toolkit as well as the adoption of four electronic quality measures.[9] The eCQMs help hospitals demonstrate successes and identify remaining gaps in care and the toolkit provides guidelines for hospitals to achieve best practices for nutrition care.[10]

**The eCQMs are:**

- Completion of a malnutrition screening within 24 hours of admission
- Completion of a nutrition assessment for patients identified as at risk for malnutrition within 24 hours of a malnutrition screening
- Creation of a nutrition care plan for patients identified as malnourished after a completed nutrition assessment
- Appropriate documentation of a malnutrition diagnosis[10]

### Etiology-based Malnutrition Definition

Adult malnutrition may be described in the context of acute illness or injury, chronic diseases or conditions and starvation-related malnutrition.[11]

### Criteria for Diagnosis

Since no single parameter is definitive for adult malnutrition, identification of two or more of the following six characteristics is recommended for diagnosis:

- Insufficient energy intake
- Weight loss
- Loss of muscle mass
- Loss of subcutaneous fat
- Localized or generalized fluid accumulation that may sometimes mask weight loss
- Diminished functional status as measured by hand grip strength[11]

A composite measure that encompasses these eCQMs has been submitted to the Centers for Medicare and Medicaid Services to be considered for adoption into CMS' programs.[10] Hospitals that participate in the MQii also receive substantial support via participation in the Learning Collaborative, which is a network of hospitals that collaborate to successfully implement the MQii and generate reports on successes and challenges. In 2017, Learning Collaborative members reported meaningful improvements in the delivery of malnutrition care.[9]

## Screening for Malnutrition

Nutrition screening is a critical step for identifying malnutrition risk and, consequently, for determining if a patient or client should continue on to the Nutrition Care Process with a full nutrition assessment. However, numerous adult nutrition screening tools exist for use in various populations, though many institutions use different screening methods without valid or reliable evidence.

To address this gap in knowledge, the Academy's Evidence Analysis Center research staff and experts are conducting systematic reviews. The adult nutrition screening workgroup reviewed validity and reliability of adult nutrition screening tools that were quick and easy to use and could be used for a variety of age groups, settings, diseases and treatments. Of the six nutrition screening tools, the most frequently examined were the Malnutrition Screening Tool, Malnutrition Universal Screening Tool, Mini Nutrition Assessment-Short Form. MST received Grade I (Good/Strong) evidence, while the other five nutrition screening tools (Short Nutritional Assessment Questionnaire, Mini Nutrition Assessment-Short Form-Body Mass Index and Nutrition Risk Screen-2002) received Grade II (Fair) evidence. The workgroup ranked the nutrition screening tools from highest to lowest: MST, MUST, MNA-SF, SNAQ, MNA-SF-BMI and NRS-2002. The findings of the systematic review are expected to be published on the EAL in September.

While changes in acute-phase proteins (e.g. albumin and prealbumin) have been used in health care settings to diagnose malnutrition, analyses conducted by the Academy's Evidence Analysis Library indicated these parameters appear to better reflect the severity of inflammatory response rather than poor nutritional status.[12–14] Therefore, the Academy and the American Society for Parenteral and Enteral Nutrition do not propose any specific inflammatory markers for diagnostic purposes at this time.[11]

## Cost-Effectiveness of the MQii

Nutrition interventions have repeatedly been shown to be cost-effective in improving health outcomes among malnourished patients.[15,16] For example, a 2017 *American Health and Drug Benefits* study found implementation of a nutrition-focused quality improvement program reduced costs by $4.9 million and saved hospitals an average of $3,900 per patient.[17] The MQii Toolkit was tested over a three-month implementation period in 2016 through a multisite demonstration and learning collaborative. Findings suggest the toolkit helped hospitals achieve performance goals in nutrition care.[10] A 2017 *Journal of Parenteral and Enteral Nutrition* study found optimizing nutrition care in hospitals could result in a 27 percent decrease in 30-day readmission rates and a two-day reduction in average length of stay for malnourished patients.[18]

## Next Steps

The MQii is continually looking for ways to track and improve malnutrition care. A patient's condition and needs may change during the course of a chronic or acute illness, which could necessitate a change in care setting.[10] Therefore, in March, the MQii convened multi-stakeholder dialogue proceedings on malnutrition care transitions.[10] A pilot program will be established to implement and test a number of the recommendations outlined at the proceedings with the goal of advancing identification and treatment of patients as they transition across care settings.[19]

### Malnutrition Prevalence Across Care Settings

**Acute Care 20-50%**

**Post-Acute Care 14-51%**

**Community Care 6-30%**

More than 40% of patients age 50+ are not getting the right amount of protein each day.

70% of adults are overweight or have obesity.

*NHANES data from 2007-2008.*[22]

Addressing malnutrition directly aligns with the U.S. Department of Health and Human Services' National Quality Strategy priorities related to patient safety, care coordination, patient- and family-centered care, population health and affordability.[1] In the 2017 Inpatient Prospective Payment System rule, CMS recognized the prevalence and negative consequences of malnutrition as well as the need for improved screening, assessment and diagnosis.[20] The MQii Learning Collaborative grew from three hospitals in 2015 to 50 hospitals in 2017.[21] The goal in 2018 and beyond is to further expand participation in the Learning Collaborative and to generate additional evidence to support adoption of the eCQMs by CMS for the advancement of malnutrition care across our nation.[10]

## Recommended Policy Proposals

The Academy asks Congress to support the role of RDNs and NDTRs in the prevention and treatment of malnutrition and encourages Congress to support policies to better align with the goals of treatment and prevention. Malnutrition prevention and treatment should be included in future health care discussions, including in chronic disease legislation and quality measures.

**The Academy recommends[9]:**

- A multi-stakeholder group of health and community leaders and advocates came together in a national dialogue to identify real-world solutions to integrate nutrition risk identification and care into existing care transition pathways and accountable care models. The results of their discussion are the basis for these policy-related recommendations to better integrate optimal nutrition care into national quality programs.

- Adopt clinically meaningful malnutrition-related quality measures and improvement activities into accountable care models and population health initiatives to improve prevention, identification and management for patients across care settings.
- Incorporate nutrition status into transfer of health information upon admission to and discharge from acute and postacute care settings (IMPACT Act implementation).
- Include nutrition risk identification and malnutrition care in the Welcome to Medicare Exam and Annual Medicare Wellness Exam.
- Include nutrition risk identification and malnutrition care in CMS Quality Programs and Advanced Alternative Payment Models (Comprehensive Primary Care Plus Program, Bundled Payment for Care Initiative, Oncology Care Model Quality Payment Program, Hospital Inpatient Quality Reporting, Home Health and Skilled Nursing Facility Quality Reporting Programs).
- Adopt standardized malnutrition terminology and clinical standards in EHRs to improve malnutrition risk identification and data transfer across care settings.
- Establish state commissions to develop targeted local plans to improve nutrition risk identification and malnutrition care.
- Collect data and publish results from CMS national and state care transition pilots that incorporate nutrition-related activities.

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