Hospital Nutrition Care Betters Patient Clinical Outcomes and Reduces Costs: The Malnutrition Quality Improvement Initiative Story

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DISEASE-ASSOCIATED MALNUTRITION and malnutrition-associated diseases and conditions are common among hospitalized patients, yet all too often such malnutrition goes unrecognized and untreated. As a result, patient quality outcomes worsen, excess costs of care are incurred, and patients and their families are disappointed and alarmed by slow, stalled, or no recovery from illness or injury. Now more than ever is the time for key health care stakeholders—from providers to patients—to recognize and harness the potential of nutritional care to help prevent and treat malnutrition and to advance value-based medicine in the current health care reimbursement environment.

The numbers of acute care patients who are malnourished or at risk of malnutrition is particularly compelling. The estimated prevalence of malnutrition or its risk at the time of hospital admission ranges from 20% to 50% worldwide.1-4 However, as few as 5% to 8% of patients in the United States received a documented or coded diagnosis of malnutrition during their hospital stay.5,6 Such findings suggest that malnutrition may be underdiagnosed or underdocumented and thus “under the radar” of care in US hospitals, and possibly overshadowed by a focus on acute conditions or high-tech diagnostic and treatment strategies. Lack of attention to nutrition care in different hospitals has many possible etiologies. They include limited nutrition education in medical schools, inadequate training of hospital providers on nutrition screening and assessment, confusion over best-practice processes for nutrition care, deficits in how malnutrition information is documented and tracked in hospital medical records, and lack of awareness when the patient is not eating adequately.7-10

The consequences of malnutrition in hospitalized patients are serious. Malnutrition increases risks for complications including impaired wound healing,11 infections,12 and pressure ulcers13; leads to longer hospital length of stay and hospital readmissions14,15; and is associated with increased risk of mortality.14,15 Older adults are particularly vulnerable because of their higher likelihood of having multiple chronic conditions or diseases along with acute illness or need for surgery, impaired functional or cognitive status, or limited food access.16-20 Notably, conditions such as gastrointestinal and other cancers,21-23 chronic obstructive pulmonary disease,24 and heart disease25 may impair appetite and lower nutrient intake and increase metabolic needs due to inflammatory processes; the overall result of these factors is malnutrition.

Malnutrition also carries a high toll in terms of costs for hospital care. A 2018 analysis of US hospital discharges found that the average cost for all hospital stays (excluding neonatal and maternal) was $12,900, and patients diagnosed with malnutrition had costs averaging up to $22,200.6 Overall, it is estimated that the economic burden of the morbidity, mortality, and direct medical costs associated with disease-associated malnutrition totals $157 billion in the United States, with $51.3 billion attributed to those age 65 and older, who are the most at risk.26

Given the high prevalence, adverse clinical impacts, and excessive costs of malnutrition, hospitals, other health care facilities, payers, regulators, and legislators need better tools and measures to support systematic implementation of malnutrition care best practices.5 Such tools and measures can help ensure appropriate and prompt identification and treatment for patients who are malnourished or at risk of malnutrition.

This special supplement issue of the Journal of the Academy of Nutrition and Dietetics discusses how prevention and treatment of malnutrition present outstanding opportunities to improve the overall quality of patient acute care, enhance quality clinical outcomes, and reduce costs.27,28 To this end, the Academy of Nutrition and Dietetics, along with Avalere Health and other stakeholders, developed and implemented the Malnutrition Quality Improvement Initiative (MQii).29 MQii is a dual-pronged approach to support quality improvement (QI) for malnutrition care based on: (1) a set of four malnutrition-focused electronic clinical quality measures and (2) a complementary MQii Toolkit that includes resources guiding implementation of QI activities (Figure).

Descriptions of the MQii and results of its successful implementation have begun to appear in publications.30-34 This supplement builds on the body
The MQii Toolkit provides practical resources to enable hospitals to achieve optimal nutrition standards of care

Data reported from eCQM will help hospitals demonstrate their success in meeting the standards of care


of literature and provides the first comprehensive report to date. Included in the supplement are: an overview of how QI is integral to today’s health care environment, a history of the MQii, a description of developing the evidence-based MQii Toolkit, and the process for validating a set of malnutrition electronic clinical quality measures. The supplement also profiles the unique results of MQii projects in two acute care institutions. The supplement further highlights leadership behaviors and innovations of clinical nutrition managers leading MQii programs and concludes with a series of abstracts that share real-world experiences and results of using MQii measures and tools.

During the malnutrition project’s inception in 2013, it was realized quickly that the essential steps taken to develop the MQii conceptual framework required ongoing collaborative visionary leadership among various partners and stakeholders. Using hospital nutrition care to improve patient clinical outcomes and reduce costs, the identified measured gaps in malnutrition care demonstrated the need for creative innovations, which translated into learning how to change indicators for malnutrition standards of care. Pivotal to this goal is the ability of interdisciplinary health teams to uptake, adopt, launch, and implement necessary quality-driven improvements through the MQii within their health care delivery system environment whether in the hospital acute care, a next point of care—post-acute care, a transition to community services, and primary care. The future of the MQii for 2020 and beyond will report research outcomes from hospitals participating in the MQii Learning Collaborative and will incorporate continuous QI and innovation endeavors. It will also utilize data for integration into evidence-based practice to build a health learning system for malnutrition care.35-37

In summary, the supplement is designed to provide a guide or template for individuals and organizations interested in continually improving the nutrition care in their respective facility regardless of their particular situation and resources. The editors, authors, and other contributors encourage and welcome your feedback and suggestions.

References
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STATEMENT OF POTENTIAL CONFLICT OF INTEREST
The Malnutrition Quality Improvement Initiative (MQii) is a project of the Academy of Nutrition and Dietetics, Avalere Health, and other stakeholders who participated in and provided guidance and expertise in this collaborative partnership. S. McCauley is an employee of the Academy of Nutrition and Dietetics. A. Barrocas is self-employed, owner of ALMA, LLC. A. Malone is an employee of Mt Carmel Grove City Hospital and the American Society for Parenteral and Enteral Nutrition.

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