Advancing Health Equity through Malnutrition Quality Measurement Roundtable: Practice Applications

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Health Care Stakeholders and policymakers across the United States are increasingly focused on addressing nutrition security (see Key Terms below) as a means of improving health and advancing equity. Indeed, a 2021 perspective in the Journal of the American Medical Association argued that “addressing nutrition security...may be the next needed approach to inform clinical care and public policy” and a 2022 article in the American Journal of Lifestyle Medicine argued that addressing the related issue of food insecurity is necessary for achieving optimal nutrition status.

The Biden Administration has indicated it intends to do this through multiple avenues, including: the 2020–2030 Strategic Plan for National Institutes of Health Nutrition Research; the White House Conference on Hunger, Nutrition, and Health; formation of the National Institutes of Health Nutrition and Health Disparities Implementation Working Group and its research framework; and the multiyear, $10 billion investment to ensure food and nutrition security both in the United States and abroad. The Centers for Medicare and Medicaid Services (CMS) has incorporated an Improvement Activity (IA) focused on addressing food insecurity and nutrition risk into the Merit-Based Incentive Payment System (MIPS) (for which registered dietitian nutritionists [RDNs] can be eligible providers). Whereas all show promise of increased attention on the important role of nutrition in promoting health and the investment to improve it, it remains to be seen how these plans will influence larger payment programs or drive broad improvement in clinical practice addressing malnutrition.

Avalere Health, the Academy of Nutrition and Dietetics, and the National Minority Quality Forum took the lead in addressing these issues by cohosting a Roundtable on March 3, 2022, to identify innovative and successful examples of solutions being implemented in various sectors, many involving RDNs leading the interdisciplinary care teams that address malnutrition and food insecurity. This article presents an overview of the Roundtable, results of the discussion, and implications for RDNs. Full results of the Roundtable discussion are available in the published proceedings.

Background

Malnutrition and food insecurity are interconnected conditions that impair health, worsen outcomes, and exacerbate chronic health concerns for patients and the public and burden our health care system. These are two frequent issues of concern to RDNs working in various settings. Although they are gaining increasing attention from other clinicians and health care stakeholder groups, the growing burden of malnutrition and food insecurity indicates a need for greater attention and indeed prioritization for both prevention and management across the United States. Existing disparities in prevalence of these conditions, related health outcomes, and access to appropriate care across population groups were also intensified by the COVID-19 pandemic.

Malnutrition in the acute care setting likely ranges from 20% to 50%, but only 9% of cases are actually diagnosed. In addition, 10.5% of households experienced food insecurity (or uncertain access to adequate food) in 2020. Food insecurity is a social risk factor that contributes to malnutrition when it impairs a person’s ability to eat enough nutrient-dense foods and maintain muscle mass, and both states can be exacerbated by underlying medical conditions. Therefore, many patients who present with malnutrition in clinical settings may also be food insecure.

The percentage of Americans with multiple lifestyle-related conditions (ie, those largely driven by poor diet) continues to increase and the proportion of older adults with poor diet quality significantly increased from 51% to 61% since 2001. Collectively, these statistics suggest the need for improvement in access to and utilization of quality nutrition care and healthy food to improve Americans’ physical, mental, and social well-being.

Malnutrition and food insecurity would ideally be identified in tandem in clinical care settings by RDNs or their interdisciplinary team members. Although this identification can occur in various settings of care, doing so in an evidence-based manner in the hospital and with interdisciplinary collaboration can offer a consistent and standardized system for identifying and treating patients at risk. Improved identification of malnutrition and food insecurity risk factors in hospitals and other health care institutions can inform more effective and timely interventions both within clinical settings and through community-based partners. Although hospital-based efforts to address these issues exist, they
are typically implemented on a local level, often limiting widespread sharing of best practices. Documented diagnoses also remain far less than the known prevalence, as stated previously. More support for the expanded adoption of viable solutions for improving malnutrition care and addressing food insecurity is therefore needed and these gaps provided the basis for the Roundtable.

UNDERSTANDING KEY TERMS

Health equity refers to the state in which all individuals have the opportunity to achieve their full health potential, whereas health disparities are differences in health outcomes or access to care among individuals that are often preventable and stem from inequities. Understanding these definitions is important because they are often confused or used interchangeably. Additional definitions of key factors related to malnutrition and food insecurity are provided in the box below.15–19

Although RDNs are aware of the difference between malnutrition and food insecurity, these terms are often conflated by those less familiar with nutrition. They are related and often coexisting issues, but they are distinct. Similarly, the state of food security does not necessarily imply nutrition security; someone can have adequate access to and availability of food without it being nutritious and health-promoting. Indeed, the latter far too often drives malnutrition via the overconsumption of calories and unhealthy foods amidst underconsumption of key nutrients that people need to be resilient and thrive.

ROUNDTABLE OVERVIEW

To support the adoption of viable solutions for improving malnutrition care and addressing food insecurity beginning in the hospital, a group of national experts and stakeholders convened for a 3-hour virtual Roundtable on March 3, 2022. Recognizing that a multidisciplinary and multisector set of solutions is needed to meet the needs of communities across the country, a diverse set of 23 participants representing local, regional, and national organizations and agencies in both health care and community health were invited to share their expertise and ideas and to align on priority solutions. Participants represented groups, including:

- Advocacy organizations
- Community food and nutrition organizations
- Federal government
- Foodservice organizations
- Health care providers
- Health plans
- Professional organizations
- Research/academia

The Roundtable sought to achieve three objectives:

- increase awareness of the connections between health equity, hospital malnutrition care, and food insecurity, and identify the most effective ways to communicate those connections to inspire action;
- identify opportunities that hospitals can pursue to target and address malnutrition and food insecurity through malnutrition quality measurement; and
- determine pathways that manage and address malnutrition, food insecurity, and health disparities across transitions of care.

To begin the conversation, participants were presented with Figure 1, which illustrates an optimal pathway for addressing nutrition and food insecurity risk from a community perspective. The pathway centers around the use of the Global Malnutrition Composite Score (GMCS)—an electronic clinical quality measure developed by Avalere Health and stewarded by the Academy of Nutrition and Dietetics for use in the inpatient setting—and it accounts for the nutrition and food insecurity risk factors that are known to contribute to health disparities. Quality measurement is an important tool in healthcare that enables providers to measure or quantify and track improvement in health care processes, outcomes, and other aspects of care. Initiating quality measurement in acute care settings through use of the GMCS can serve as an anchor for health care providers to create opportunities for food insecurity to be more effectively identified, addressed, and monitored after patients are discharged.

Indeed, systematically identifying and addressing nutrition and food insecurity risk factors in the hospital that lead to clinical malnutrition can advance health equity for higher-risk communities facing significant health disparities along this continuum.

The next portion of the Roundtable included case study presentations by two long-time members of the Malnutrition Quality Improvement Initiative (MQii) Learning Collaborative. The MQii is a multiyear effort that seeks to advance evidence-based, high-quality, patient-driven care for hospitalized adults who are malnourished or at risk for malnutrition through use of a comprehensive toolkit; four accompanying malnutrition-focused electronic clinical quality measures, which provided a baseline for the framework of the GMCS components; and support for a 315+-member
Learning Collaborative of health care institutions across the country.\textsuperscript{22} Teams from Learning Collaborative members New Hanover Regional Medical Center (New Hanover) and Memorial Hermann Health System (Memorial Hermann) presented their quality improvement initiatives seeking to address malnutrition and food insecurity while closing gaps in care for their patient populations. They also discussed how those initiatives aligned with overarching hospital or system values and goals.

New Hanover’s Transitions of Care program, depicted in Figure 2, has been presented in previous publications.\textsuperscript{23,24} The hospital’s chief medical officer, clinical nutrition manager, and clinical outreach dietitian described how awareness of the problem of malnutrition in their patient population led them to develop this program, with a clinical outreach dietitian performing in-home visits with patients (in and around Wilmington, NC) who were identified as malnourished during their hospital stays. Patients also identified as food insecure received a box of food upon discharge (in addition to the RDN in-home visit). This program has remained a key component of the hospital’s strategy to achieve health equity in its community; it has also led to a reduction in hospital readmissions, average length of stay, and other key metrics for its malnourished population. And, it highlights the key role of RDNs—including those in unconventional or innovative roles—in improving patient outcomes and leading quality improvement initiatives.

**Figure 1.** Optimal pathway for nutrition care that reflects both food insecurity and nutrition risk identification and intervention across the continuum of care.\textsuperscript{8}

**Figure 2.** Overview of New Hanover’s Transitions of Care Program to support patients identified as malnourished and food insecure.
The Memorial Hermann team, which consisted of the clinical nutrition manager, director of clinical nutrition, and director of hospital operations for the system's Transformation Hub, presented their strategy to address food insecurity and malnutrition across Southeast Texas. They described a case study of a patient experiencing both conditions and burdened by other social risk factors. With adequate and appropriate care, the patient was able to improve his nutritional status and overall health. This was in part due to the comprehensive referral and resource platform offered by the system's Community Resource Centers (CRCs) (see Figure 3). The CRC model has been described previously and the early inspiration for this model has been presented in other publications. They also described findings from a study on food insecurity prevalence among their community-dwelling disabled patients and a recent study on the influence of malnutrition on clinical outcomes across the system, which helped the system better understand the burden on patients and their health care system. In addition, the team reviewed goals to increase the effectiveness of their CRCs through strategies such as addressing patients' barriers to accessing resources and further integrating nutrition services into these CRCs, which are staffed primarily by community health workers. This example highlighted the important and sequential steps of measuring prevalence of malnutrition and food insecurity, understanding available resources and patients' access to those resources, and collaborating across disciplines to develop solutions based in the hospital that reflect needs of the local population. It also highlights why it is advisable to track both process and outcome measures over time.

The final portion of the Roundtable was a facilitated discussion that focused on three topics:

- measurement of malnutrition in the hospital to inform effective solutions in the community;
- overcoming barriers in hospital settings to connect hospitals to community organizations that provide access to food resources; and
- policy and education initiatives that can raise awareness of these issues and feasible interventions to connect patients to resources.

Throughout the discussion, participants suggested solutions to help advance health equity by addressing malnutrition and food insecurity; these were based on their professional experiences and informed by what they learned during the Roundtable. Most participants agreed on the benefits of following a structured care process and tracking performance based on standardized measures—which would serve as a key step to begin, and then underpin, most other strategies. Many of the solutions offered, therefore, represent programs, processes, and other key tactics that have been successful in certain settings and could be implemented more broadly across health care and/or community health settings. When asked to prioritize the entire list of suggested solutions, Roundtable participants identified the items presented in Figure 4.

Additional comments on these solutions suggested promoting nutrition beginning with children in primary education to instill knowledge and healthy behaviors beginning at a young age, looking to expertise from community organizations when addressing food insecurity, ensuring food insecurity interventions are part of a broader strategy to address social risk factors, and prioritizing early screening for malnutrition and food insecurity with validated tools in both hospital and ambulatory settings. Importantly, many of the solutions focusing on the role of RDNs were offered by non-RDN participants.

**NEXT STEPS AND ACTIONABLE SOLUTIONS FOR RDNs AND PARTNERS**

Although all solutions presented above clearly have implications for RDNs working in various settings, some have more immediately actionable steps by those taking leadership roles in research and quality improvement in their respective practice settings. Applications for RDNs working in various practice settings are presented below.
Clinical Settings
Findings from the 2021 Academy of Nutrition and Dietetics’ Compensation and Benefits Survey indicated that 39% of practicing RDNs work in acute care. In hospitals, RDNs play a key role in identifying malnutrition and food insecurity; documenting pertinent signs and symptoms to support diagnoses; developing and implementing nutrition care plans, including appropriate and evidence-based interventions; educating other providers about nutrition; addressing food- and nutrition-related needs in discharge plans; and following up after discharge (when possible). They can independently collect data and track performance on the four malnutrition electronic clinical quality measures (as MQii Learning Collaborative members have been doing for many years) as well as the GMCS. CMS has adopted the GMCS into the Hospital Inpatient Quality Reporting program and will be available for hospitals to adopt and report to CMS in 2024 to inform appropriate Medicare reimbursement for the necessary care provided. This data collection can generate evidence to show improvements identifying and documenting presence of malnutrition, clinical outcomes, and care utilization resulting from such initiatives. As another solution prioritized by Roundtable participants, publishing and disseminating results can share knowledge with other practitioners, expand the evidence base for existing disparities related to food access and intake as well as nutritional status, and track improvement over time.

Care coordination and data collection are equally important in outpatient and skilled and long-term care settings. However, the appropriate tools and incentive programs to do so differ. Another tool that RDNs and other clinicians can use in outpatient settings to support these processes is the new MIPS IA focused on nutrition and food insecurity risk identification and treatment, which became available for reporting by MIPS-eligible providers (including RDNs) in 2022. This IA gives providers the flexibility to implement quality improvement efforts and clinical activities that improve clinical practice, care delivery, and outcomes specific to these issues and are one component used to help calculate their Medicare reimbursement. For RDNs, this could include referring patients to appropriate community programs or providing services such as food prescriptions and healthy cooking classes to patients. By assigning the IA to the Achieving Health Equity subcategory, CMS also acknowledged the importance of identifying food insecurity and nutrition risk and then intervening to improve these interrelated issues among patients with the highest risk.

Community Settings
Ten percent of RDNs work in community and public health nutrition, providing education, counseling, and other food- and nutrition-related services to improve food access and dietary quality among community-dwelling adults and families. Such
services frequently target individuals at greatest risk of poor health outcomes and most vulnerable to social risk factors such as unemployment, homelessness, and lack of transportation. The work of RDNs in these settings may involve implementing public programs or developing new and innovative models to meet their communities’ unique needs. They also often collect data to evaluate the effectiveness of such programs for justification to funding organizations (including government agencies). RDNs working in community settings could benefit from better linkages to clinical settings to ensure clear lines of communication, referral pathways, and data sharing, ultimately leading to improved outcomes.

Advocacy and Policy
RDNs working across settings can—and are encouraged to—engage in advocacy and both learn about and inform policy changes to ensure patients and the public have access to quality nutrition care as well as food resources to achieve their best health. Advocacy opportunities can include the Academy of Nutrition and Dietetics annual Advocacy Summit; state affiliate public policy activities and licensure initiatives; engagement with Dietetic Practice Groups and Affinity Groups; writing blogs and commentaries about key pieces of legislation; submitting comments on CMS rules, research by the Agency for Healthcare Research and Quality, and recommendations and research plans by the US Preventive Services Task Force; and educating students and interns. These actions all provide ways to share knowledge, expand practice opportunities, and push for a healthier and more equitable food system. Current areas of advocacy pertinent to malnutrition and food insecurity among adults include passage of the Medical Nutrition Therapy Act (which is a tactic to help achieve another of the solutions prioritized by Roundtable participants), extended benefit limits for the Supplemental Nutrition Assistance Program and other nutrition programs funded through the 2023 farm bill, and more.32

RDNs need to collaborate with various partners to develop, implement, improve, and evaluate each of these solutions effectively. Such partners were reflected by the diverse participants in the Roundtable. They can also include allied health professionals like care coordinators and social workers (as identified in the Roundtable’s proposed solutions) to ensure continuity of care. The various stakeholder groups represented by these Roundtable participants can also continue to lead in their respective settings to improve care quality and advance health equity as well as act upon the recommendations presented and discussed in Figure 4.

Finally, the MQi leadership, together with various advisors and partners, continues to work to support increased adoption of malnutrition quality measurement, evidence generation, and relationship building to most efficiently and effectively improve care and health outcomes through quality nutrition care. They also support members of the growing MQi Learning Collaborative13 to implement and evaluate their own quality improvement projects, disseminate findings, and learn from each other.

CONCLUSIONS
This article presents an overview of the connections between malnutrition, food insecurity, and health equity; insights shared by Roundtable participants with diverse expertise on necessary steps to improve policy and clinical practice to address these issues; and suggestions about how RDNs can take a leadership role in moving many of those changes forward. The continued need to follow evidence-based practice, collect data on process outcomes that indicate malnutrition identification and documentation as well as patient outcomes, and conduct quality improvement efforts will also further help improve care for patients and close gaps in care to better achieve equity. Collecting such data and comparing to standard quality measures in clinical settings can reveal gaps and target areas for intervening to address malnutrition and/or food insecurity for patients with highest risk and need.

References


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STATEMENT OF POTENTIAL CONFLICT OF INTEREST
The Malnutrition Quality Improvement Initiative 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. M. McCauley is an employee of the Academy of Nutrition and Dietetics. C. Badaracco, M. Bruno, and K. Mitchell are employees of Avalere Health.

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