Opportunities to Improve Quality Outcomes: Integrating Nutrition Care Into Medicare Advantage to Address Malnutrition and Support Social Determinants of Health

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Abstract
Medicare Advantage (MA) is a public–private healthcare program for older adults and individuals with disabilities in the United States (US). MA enrollees receive their benefits from private health plans and the percentage of Medicare beneficiaries in MA plans continues to increase. MA plan enrollees typically have more socioeconomic risk factors compared to traditional Medicare enrollees. The COVID-19 pandemic has highlighted the importance of MA plans' flexibilities to address socioeconomic risk factors, or social determinants of health (SDOH), and to tailor benefits and services to meet individual MA enrollee needs. Poor nutrition—often termed malnutrition or protein calorie malnutrition—is a problem for many Medicare beneficiaries. Malnutrition can prolong recovery and increase medical complications and readmissions. Up to half of older Americans are at risk for malnutrition or are malnourished. Nutrition-related supplemental benefits offered by MA plans can most effectively help address malnutrition and impact SDOH and quality outcomes as part of multi-modal interventions. Multi-modal interventions integrate quality nutrition care throughout the MA care process. This Editorial explores the issue of older adult malnutrition and SDOH and the nutrition-related supplemental benefits currently offered by MA plans. It also identifies opportunities for further nutrition benefit development and impact, including through integration in MA outcome measurements and quality frameworks.

Keywords
medicare advantage, malnutrition, social determinants of health, benefits, quality outcomes

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What do We Already Know About This Topic?

Despite the importance of good nutrition, many older Americans do not have healthy diets, and malnutrition remains a health concern that has been exacerbated by the COVID-19 pandemic, including through increased food insecurity and health disparities that arise from social determinants of health (SDOH).

How Does Your Research Contribute to the Field?

Medicare Advantage (MA) plans have the flexibility to address SDOH and malnutrition through supplemental benefits and are strengthening their SDOH-related internal capabilities and strategic partnerships which can provide a framework for MA plans to consider additional development of nutrition-related supplemental benefits.

What Are Your Research’s Implications Toward Theory, Practice, or Policy?

MA plans can build on the strong evidence base for nutrition’s ROI by linking nutrition-related supplemental benefits to the MA quality framework and integrating nutrition into MA plan quality improvement programs (QIPs) to help improve care processes and support SDOH and quality outcomes, particularly for high-risk populations including those with chronic conditions.

Introduction

As the United States (US) population ages, the number of Americans participating in Medicare grows. Medicare is the federal government’s healthcare program for older adults and individuals with disabilities that today covers over 61 million lives. Medicare Advantage (MA) is a public–private option where enrollees receive their benefits from private health plans. The percentage of Medicare beneficiaries choosing to enroll in MA plans is over 40% and continues to increase.

The COVID-19 pandemic has brought greater focus on longstanding health equity and disparity issues in the US. Enrollees in MA plans typically have more socioeconomic risk factors compared to traditional Medicare enrollees. COVID-19 reinforced that socioeconomic risk factors, or social determinants of health (SDOH), are important contributors to health inequity and can negatively impact health outcomes and costs. The pandemic also highlighted the importance of MA plans’ flexibilities to address SDOH and tailor benefits and services to meet individual enrollee needs.

MA plans are paid monthly capitated payments to provide care for each enrollee and must deliver at minimum the same benefits as traditional Medicare. Capitation incentivizes decreased healthcare utilization and promotes value-based care as well as positive health outcomes through a focus on primary care. Capitation also incentivizes innovation. MA plans can offer additional supplemental benefits—often at no extra cost to enrollees—to help reduce out-of-pocket costs and address medical/SDOH-related needs. For example, MA plans may offer nutrition-related supplemental benefits, including home-delivered meals for enrollees who have recently been hospitalized or have certain chronic conditions.

Poor nutrition—often termed malnutrition or protein calorie malnutrition—is a problem for many Medicare beneficiaries. Up to half of older Americans are at risk for malnutrition or are malnourished. Malnutrition can prolong recovery and increase medical complications and readmissions. It is best addressed through timely and effective nutrition interventions. Thus, nutrition-related supplemental benefits are important to improve both public health and MA organizational outcomes.

Nutrition-related supplemental benefits can be most effective when part of a multi-modal intervention that integrates quality nutrition care throughout the MA care process to impact SDOH and quality outcomes. This Editorial explores the issue of older adult malnutrition and SDOH and the nutrition-related supplemental benefits currently offered by MA plans. We also identify opportunities for further nutrition benefit development and impact, including through integration in MA outcome measurements and quality frameworks.

Poor Nutrition and Social Determinants of Health

Consistent evidence indicates healthy dietary patterns and body weight during adulthood are associated with decreased age-related impairments. Randomized clinical trials show disease-specific nutrition interventions slow progression and treat many common, aging-associated conditions. Yet, despite the importance of good nutrition, as identified in the 2020–2025 US Dietary Guidelines for Americans, many older adults do not have healthy diets and malnutrition remains a health concern. It is an issue for both underweight and overweight/obese individuals in part because the loss of lean body mass can decrease immune response and delay wound healing.

Malnutrition is associated with multiple poor health outcomes, including increased length of stay, readmission, frailty, and disability. It can also lead to increased healthcare costs; disease-associated malnutrition in older adults costs an estimated $51.3 billion annually. Malnutrition exists across the spectrum of healthcare, in hospitals, post-acute care settings, and in the community. However, it often remains unidentified and untreated even though it is preventable.

Older adults are at increased risk of malnutrition for many reasons, including those related to disease, functionality,
Food insecurity is the limited or uncertain availability of nutritionally adequate, safe foods and continues to disproportionately impact racial and ethnic minority populations and low-income households. Limited literacy in health and information technology are risk factors for malnutrition too, as they can impact the ability to find and use health information. Malnutrition in older adults was exacerbated by the COVID-19 pandemic in part due to intensified disparities, inequities, social isolation, and increased rates of food insecurity.

The malnutrition risk factors overlay each of the SDOH domains identified by Healthy People 2030 (Figure 1). MA plans are uniquely positioned to address the SDOH impacting malnutrition because their benefit flexibilities—including nutrition-related supplemental benefits—can lead to strong community partnerships with a potential for larger impact on beneficiary outcomes than clinical care alone.

**Medicare Advantage and Nutrition-Related Supplemental Benefits**

The types of nutrition-related supplemental benefits and number of MA plans offering these benefits have grown as MA benefit flexibilities have expanded. The Centers for Medicare & Medicaid Services (CMS) and the US Congress recently granted MA plans new flexibilities in designing benefits with the goal of improving outcomes and lowering costs, particularly for enrollees with chronic conditions. In 2019, CMS expanded the definition of primarily health-related benefits to include nonmedical services, such as broader use of transportation, meal delivery, nutrition, and wellness services. With passage of the Creating High-Quality Results and Outcomes Necessary to Improve Chronic (CHRONIC) Care Act of 2018, MA plans began in 2020 to offer nonmedical supplemental benefits unique to enrollees with specific chronic conditions. These benefits are part of the CHRONIC Care Act of 2018’s newly created Special Supplemental Benefits for the Chronically Ill (SSBCI).

The number of MA plans offering certain nonmedical supplemental benefits—including meals—doubled between 2018 and 2020. By 2021, over half (55%) of MA plans offered a meal benefit. More MA plans offered other nutrition-related services as well, including nutrition and wellness counseling, access to fresh food and produce, and transportation for nonmedical needs (i.e., trips to a grocery store). In 2021, new nutrition-related benefits introduced as part of SSBCI were grocery shopping and door drop, grocery delivery coverage, and gift cards to purchase certain defined healthy foods.

Nonmedical supplemental benefits can be particularly helpful for Special Needs Plans (SNPs). SNPs are for beneficiaries enrolled in MA and specifically focus on managing care of high-cost, high-need beneficiaries with chronic conditions, who are institutionalized, or who are also eligible for Medicaid. SNPs offer meals more frequently than non-SNPs, and SNP meal benefits are more generous both in duration and number of meals provided. Yet, of SNPs offering a meal benefit, most provide meals for 30 days or less per year, which presents an opportunity to further expand this benefit to better address enrollees’ longer-term nutrition needs and SDOH.

Through supplemental benefits, MA plans may also expand an existing Medicare benefit—such as medical
nutrition therapy (MNT)—beyond the standard benefit that MA plans must provide under current law. Medicare defines MNT as “nutritional diagnostic, therapy, and counseling services for the purposes of disease management which are furnished by a RDN [registered dietitian nutritionist]...pursuant to a referral by a physician.”

MNT is evidence-based, individualized nutrition care that helps treat certain medical conditions and supports clinical therapies. It is different from and much more targeted than general nutrition education. Thus, MNT can help address the patient-specific factors that impact malnutrition such as chronic disease and SDOH.

The standard Medicare MNT benefit covers a specified number of RDN visits for individuals with diabetes, kidney disease, or a recent kidney transplant. The Medical Nutrition Therapy Act of 2021 (MNT Act of 2021) has been introduced to expand standard Medicare MNT coverage to additional conditions, including malnutrition, prediabetes, obesity, high blood pressure, high cholesterol, cancer, gastrointestinal disease, and cardiovascular disease. In addition, the MNT Act of 2021 would allow healthcare professionals beyond physicians to refer patients for MNT.

MA plans already have the ability to expand coverage for the number of visits, conditions, or both by offering MNT as a supplemental benefit. In 2020, 467 out of 4264 MA plans offered a supplemental MNT benefit; in 2021, the number decreased to 203 out of 4826 MA plans. The reason for the decrease is uncertain but offers MA plans an area to explore further. There may also be need for additional beneficiary and provider education about MNT benefits since even traditional Medicare has historically very low MNT referral rates.

Opportunities for Further Nutrition Benefit Development and Impact

Nutrition-related supplemental benefits address important SDOH, and MA plans have a clear interest in offering these benefits. MA plans are strengthening their SDOH-related internal capabilities and strategic partnerships across 3 primary competencies: data sources and beneficiary identification, interventions, and evaluation. These same areas can provide a framework for MA plans to consider opportunities for additional nutrition benefit development and impact too.

Data Sources and Beneficiary Identification. An estimated 1 in 2 older adults is at risk of malnutrition or is malnourished, and nutritionally vulnerable older adults have reduced physical reserves that limit their recovery when faced with acute health threats or stressors. Thus, it makes sense that MA plans target nutrition-related supplemental benefits like meals to enrollees recently discharged from the hospital. However, malnutrition is often not included among hospital discharge diagnoses. This is because malnutrition frequently goes unnoticed; malnutrition affects more than 30% of hospitalized patients but is only diagnosed in 8% of hospital stays.

One way to identify beneficiaries at risk for malnutrition is to look for the risk factors outlined earlier in this Editorial, specifically those related to disease, function, social and mental health, hunger and food insecurity, and health and information technology literacy. Screening tools can also be used. The Academy of Nutrition and Dietetics recommends the Malnutrition Screening Tool for screening adults regardless of age, medical history, or setting. Hunger Vital Sign™ is a food insecurity screening tool validated for use with older adults.

Interventions. Nutrition interventions should be provided once malnutrition risk is identified. Many of the nutrition-related supplemental benefits MA plans offer are meals and/or nutrition services. A number of community-based organizations (CBOs), health systems, and other service providers already deliver these types of nutrition interventions (Table 1). Identifying such providers and pathways can help ease the burden MA plans may face in developing and aligning networks in local communities. However, some CBOs may not have the resources or capacity to contract with MA plans. Reimbursement for services is another potential

Table 1. Community-Based Providers of Nutrition Interventions.

| Provider                                      | Business Model | Meal Services Offered | Nutrition Services Offered                  |
|-----------------------------------------------|----------------|-----------------------|----------------------------------------------|
| Not-for-profit organizations (older Americans Act home-delivered meal providers) | Not-for-profit | Hot and/or frozen meals, food | Medical nutrition therapy (MNT), nutrition/wellness counseling |
| Medically tailored meal providers             | Not-for-profit | Hot and/or frozen meals | MNT, nutrition/wellness counseling           |
| Commercial organizations                      | For-profit     | Frozen meals           | MNT, nutrition/wellness counseling           |
| Local hospitals/health systems                | Not-for-profit or for-profit | Hot and/or frozen meals, food | MNT, nutrition/wellness counseling |
| Independent providers, telehealth companies   | For-profit     | Medical nutrition therapy (MNT), nutrition/wellness counseling |

*May not be available in some communities.
Evaluation. Evaluation of MA plans’ nutrition-related supplemental benefits can take several forms. First is utilization rate. Even as more MA plans offer nutrition-related supplemental benefits, there is uncertainty in utilization of the benefit. It takes time for MA plans to evaluate utilization, as multiple factors may have influence, including demographics, availability of community resources, and MA plans’ promotion of specific benefits to targeted enrollees. However, some nutrition-related supplemental benefits do appear to be popular. A recent survey of over 1200 Medicare enrollees receiving home-delivered meals reported 77% “enjoyed eating healthy meals significantly more
than other health-related activities, such as taking medications [and] visiting the doctor.\textsuperscript{35}

A second form of evaluation to consider is the return on investment (ROI) of nutrition-related supplemental benefits. While there is variation in who and how ROI is assessed, including by MA plans, nutrition interventions have strong and documented evidence of ROI and slow the progression of, and in some cases treat, many age-associated conditions.\textsuperscript{8}

Further, nutrition interventions in hospital settings are associated with reduced length of hospital stay/episode costs and positive returns on investments.\textsuperscript{36} There is also a body of literature supporting MNT as cost-effective for treating chronic conditions, including obesity, diabetes, renal disease, hypertension, dyslipidemia, HIV infection, and unintended weight loss.\textsuperscript{37}

Community-level nutrition interventions can have a positive ROI too. The Review of Evidence report for The Commonwealth Fund's ROI calculator for partnerships to address the SDOH concludes “there is strong evidence that ensuring people have access to healthy food can significantly lower healthcare utilization and costs and result in an ROI.” The review specifically highlights findings of studies with home-delivered, medically tailored meals, home-delivered meals that are not medically tailored, and non-delivered food support programs, such as food pharmacies and the federal Supplemental Nutrition Assistance Program (SNAP).\textsuperscript{38}

A third form for evaluating MA nutrition-related supplemental benefits is related to MA quality programs. MA quality is measured using the Star Rating System as well as quality improvement programs (QIPs) developed by individual MA plans in accordance with CMS regulations.\textsuperscript{39} There are multiple quality measures which can be impacted by nutrition (Table 2). Unfortunately, there are no MA quality measures specific to malnutrition. It has been recommended that CMS work with the healthcare community to identify potential quality measures for addressing SDOH within MA and the broader Medicare program.\textsuperscript{22} Malnutrition risk screening could be an opportunity for a MA SDOH-related measure. The Global Malnutrition Composite Score measure\textsuperscript{51} for acute care recently endorsed by the National Quality Forum includes malnutrition risk screening—this component could serve as a model for a MA quality measure.

In addition to clinical effectiveness measures, the Star Rating System and QIPs also use patient satisfaction measures, which document enrollees’ opinions on a range of topics, including receiving needed care and rating of healthcare quality and health plans. Nutrition-related supplemental benefits could play an important role in impacting patient satisfaction measures. Older adults are interested in nutrition; a good understanding of and attitude towards nutrition can strongly and positively influence health status and quality of life.\textsuperscript{52} In a 2018 survey of over 1000 Americans aged 50 years and older, most (77%) reported they were making at least some effort to eat the right amount of certain nutrients and the majority (60%) said they had better diet and lifestyle behaviors compared to their habits 20 years ago.\textsuperscript{53} Yet in the same survey, low-income respondents were more likely than high-income respondents (50% and 41%, respectively) to report difficulty in eating a healthy diet, further underscoring the need to address health and nutrition inequities.\textsuperscript{54}

Lastly, there is an opportunity for MA plans to integrate nutrition-related supplemental benefits into their ongoing QIPs, including those specific to the chronic care improvement program (CCIP). CCIP initiatives are clinically focused and designed to improve the health of specific enrollees with chronic conditions.\textsuperscript{55} These groups are likely to have the greatest need for and gain the most from effective nutrition screening, assessment, and intervention. Nutrition-focused QIPs that target care pathways and transitions can help improve care processes for these high-risk populations.

Although nutrition-focused QIPs specific to MA have not been identified in the literature, lessons from other care settings may be beneficial. An example of a successful nutrition-focused QIP model includes nutrition risk screening at healthcare institution admission, prompt initiation of oral nutrition supplements for at-risk patients, and nutrition education and follow-up. Such interventions have proven effective and are associated with cost-savings of $3186 per patient in the hospital setting\textsuperscript{56} and cost-savings of $1558 per patient treated in the home health setting.\textsuperscript{57} In the outpatient clinic setting, patients participating in a similar nutrition-focused QIP are associated with an 11.6% reduction in use of healthcare resources and net savings of $485 per patient treated.\textsuperscript{58}

Other examples of nutrition-focused QIPS include those based on the quality measures and tools developed by the Malnutrition Quality Improvement Initiative (MQii). The MQii quality measures focus on optimizing malnutrition risk screening, nutrition assessment, documentation of malnutrition diagnoses, and development of nutrition care plans for malnourished patients, including recommended treatment plans.\textsuperscript{59} As a result of implementing QIPs using MQii measures and tools, hospitals have significantly improved the identification of malnutrition and documented improved outcomes,\textsuperscript{60} such as a 25% reduction in length of stay and 35.7% reduction in infection rates among patients who were malnourished or at risk of malnutrition.\textsuperscript{51}

**Conclusion**

Malnutrition is a common problem for older Americans, negatively impacting healthy aging and health outcomes. Malnutrition is exacerbated by food insecurity and health disparities that arise from SDOH. MA plans have the flexibility to address SDOH and malnutrition through supplemental benefits. MA plans can leverage their primary
competencies in data sources and beneficiary identification, interventions, and evaluation. This includes building on the strong evidence base for nutrition’s ROI by linking nutrition-related supplemental benefits to the MA quality framework and required quality measures that can be impacted by nutrition. In addition, integrating nutrition into MA plan QIPs can help improve care processes and support SDOH and quality outcomes, particularly for high-risk populations including those with chronic conditions.

**Author Contributions**

MBA, KSR, KK, and WP outlined the approach as well as identified content and sources for this editorial. MBA drafted the initial manuscript. MBA, KSR, KK, and WP reviewed and revised the manuscript, approved the final manuscript as submitted, and agreed to be accountable for all aspects of the work.

**Declaration of Conflicting Interests**

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