Malnutrition Across the Continuum of Care

Authors: J. Settles, S. Lewis, C. Bell, D. Lawhorne; James A. Haley Veterans Hospital

Research Objective/Hypothesis: To determine the impact identifying malnutrition in Veterans has on clinically related outcomes. Hypothesis: Identification of malnutrition in primary care settings will lead to clinical improvements.

Relevance: Malnutrition is of utmost concern as it contributes to the worsening of disease states and increased medical costs associated with malnutrition.

Background: In 2015, the Veterans Affairs (VA) developed the nationwide Nutrition and Food Service Strategic Planning Goals to address the identification and treatment of malnutrition. Consequently, employees extensively trained using the Academy of Nutrition and Dietetics/American Society for Parenteral and Enteral Nutrition (Academy/ASPEN) criteria, which led to a significant increase in malnutrition identification. Since this new standard of practice was initiated, there have been no quality improvement studies conducted to determine the clinical benefits of identification and treatment of malnutrition in the primary care setting.

Methods: This retrospective study measured the impact of registered dietitian nutritionist (RDN) identification of malnutrition on clinical outcomes in a veteran ambulatory setting. The outcomes studied included: Malnutrition clinical characteristics (MCCs), number of dehydration-related emergency room visits, osmolality, number of hospital admissions, length of stay (LOS), Morse fall risk, number of falls, and Zaritt caregiver burden. Data was collected by electronic chart review of 98 patients identified with malnutrition (excluded individuals with active oncology or spinal cord injury treatment, hospice admission, or death within study timeframe) in the home-based primary care (HBPC) or outpatient setting between March 2016 and March 2018.

Results / Outcomes: Outcomes in the HBPC and outpatient settings, individually and combined, provided an overall view of the primary care environment. RDN-identification was associated with statistically significant improvements (p<0.025) in hospital LOS, admissions, and MCCs. No other variables reached statistical significance. There were 43 total hospital admissions before malnutrition identification and 23 admissions afterward. Hospital days reduced from 284 pre-identification to 170 days post-identification. The RDN identified malnutrition by the following characteristics: loss of muscle mass (96%), loss of subcutaneous fat (87%), inadequate energy intake (82%), weight loss (67%), diminished functional status (44%), and fluid accumulation (6%). Interventions utilized in outpatient and HBPC, respectively, was as follows: oral nutrition supplementation, 98%, 93%; education, 100%, 90%; counseling, 76%, 5%; and coordination of care, 51%, 70%. In addition, the percent of MCCs improved for outpatient and HBPC patients.

Conclusions: RDNs have a unique skillset to identify malnutrition and implement interventions based on patients' individual needs. Early identification in primary care may decrease malnutrition morbidity by treating the problem in the ambulatory setting before resolution becomes more difficult in an acute admission. Furthermore, RDN interventions may support quality improvement scores pertaining to LOS and admissions. Future studies with larger sample sizes are needed to determine whether RDN intervention intensity, type and duration between visits has an impact on clinical outcomes.

Implications for Policy or Practice: This study suggests benefits for both the patient and healthcare system for the identification and treatment of malnutrition. The VA’s updated operating standards in primary care settings can serve as a model of best practice for other healthcare settings outside of the VA.

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