

Parenteral Nutrition Order Entry Privileges for Registered Dietitians: Unique Approach to Improve Patient Outcomes

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Correlations between Dietary Intake and Quality of Life among Individuals with Multiple Sclerosis

Author(s): K. Pietro, MS, B. Anderson, J. Schumacher, Y. Ma; Family and Consumer Sciences, Illinois State Univ., Normal, IL.

Learning Outcome: Participants will gain an understanding of how macro and micronutrient intake trends and patterns of individuals with Multiple Sclerosis correlated to various measures of disease-specific quality of life.

Research Outcome: This research investigated the possible relationship of dietary intake and self-reported quality of life (QOL) of individuals diagnosed with *multiple sclerosis* (MS). Also examined was *MyPyramid Tracker's* usability for collection of a self-administered 3-day food record. While there is currently no cure for MS, some researchers have indicated success with diet therapies.

Methods: The National MS Society and The MS Foundation were used for recruitment. Participants completed an online survey, demographic questionnaire including supplementation habits, and the MS Quality of Life-54 (Vickrey et al., 1995). Participants also completed their 3-day food record utilizing *MyPyramid Tracker* and follow-up inquiry evaluated strengths and weaknesses of *MyPyramid Tracker*.

Results: Participants, ($n=23$) ranged 24 to 64 years old ($M= 44.3$ years). Majority, white (91.3%), married (73.9%) and diagnosed with Relapsing-Remitting MS (87%). Increased consumption of milk, protein, riboflavin, vitamin B12, calcium, phosphorus and zinc showed a statistically significant positive correlation to overall QOL scores ($p < 0.05$). Participants who met or exceeded their specific Recommended Dietary Allowance (RDA) for vitamin B6, calcium, zinc and selenium also showed higher statistically significant overall QOL scores than individuals who did not meet or exceed the RDA for those micronutrients ($p < 0.05$). Fat consumption (saturated or unsaturated) indicated no significant correlation to overall QOL scores.

Conclusions: Dietary intake studies could assist in producing dietary guidelines for individuals with MS, which are absent from the *Nutrition Care Manual*. Efforts of nutrition professionals could focus on improving the individual's QOL through specific macro and micro-nutrient recommendations.

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The Effects of Gluten and Dairy Intake on Multiple Sclerosis Symptoms

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Learning Outcome: The student will be able to state after reading the abstract that gluten/casein may be related to some individual multisclerosis symptoms.

Multiple sclerosis (MS) is the most common debilitating and aggressive autoimmune diseases among young adults today, yet the cause of the disease remains unknown. Gluten and dairy free diets have been suggested as alternative treatments for the disease yet little research exists to support or refute dietary interventions. The objective of this study was to assess whether or not a relationship existed between gluten and/or dairy intake and multiple sclerosis (MS) symptoms. Subjects were obtained through the Minnesota MS Society Minnesota Chapter support groups as well as two online MS support groups. Through the use of a survey, dietary intake of gluten and dairy as well as MS symptoms of the subjects were evaluated. Results indicated that total MS symptoms did not show a correlation to overall gluten intake ($p = -.129$) or overall dairy intake ($p = .108$). Certain individual MS symptoms did show a statistically significant correlation to gluten intake. Correlations were found for problems with walking ($p = 0.026$) and coordination ($p = 0.037$) with gluten intake. Intake of bread showed statistically significant ($p \leq 0.05$) correlations with the MS symptoms of muscle spasm, depression, and fatigue. Multiple sclerosis is likely multi-factorial in origin. Results from this study do not suggest a cause and effect between overall gluten or dairy intake and all MS symptoms; however, certain correlations with specific MS symptoms and dietary intake were seen warranting further research on MS and diet.

Funding Disclosure: None.

Parenteral Nutrition Order Entry Privileges for Registered Dietitians: Unique Approach to Improve Patient Outcomes

Author(s): J. C. Holaska; Clinical Nutrition, Sodexo at Lehigh Valley Health Network, Allentown, PA

Learning Outcome: To recognize a process for parenteral nutrition ordering that incorporates the knowledge and expertise of the Certified Nutrition Support Dietitian/Clinician in the initiation and monitoring of safe and effective intravenous nutrition therapy.

Provision of safe and cost-effective parenteral nutrition (PN) utilizing evidence-based research is essential to achieve positive patient outcomes. Physicians, physician assistants and nurse practitioners write PN prescriptions but often lack the skill set to initiate and manage this therapy. Many health care institutions and states deny order-writing privileges to the Registered Dietitian, relegating this professional to an advisory or consultant's role. In northeast Pennsylvania, a multi-site institution with 981 acute care beds implemented an electronic PN ordering program in 2006 with Certified Nutrition Support Dietitians/Clinicians (CNSD/C) given order-entry privileges followed by final approval from the prescriber. Disease-specific templates for stress, pancreatitis, renal and liver dysfunction were created for neonates, children and adults. Based on the template selected, fields are populated utilizing clinical practice guidelines published by American Society for Enteral and Parenteral Nutrition. Except for standard PN where only volume can be adjusted, changes can be made in any field as dictated by the patient's clinical status. CNSD/C's collaborate with the prescriber and pharmacist in the initiation and monitoring of PN. On-line educational resource tabs are built into each template for prescriber reference. Electronic PN order entry eliminates clerical error and enables the CNSD/C to be a vital player in this therapy.

Funding Disclosure: None.

A Simple Effective Approach for Reducing the Inappropriate Use of Adult Parenteral Nutrition Therapy

Author(s): S. Zechariah,¹ A. Bryant,¹ W. Farr²; ¹Food & Nutrition Services, University Hospital, Augusta, GA, ²Administration, University Hospital, Augusta, GA

Learning Outcome: To demonstrate that a simple effective approach in reducing the inappropriate use of adult parenteral nutrition therapy is to centralize the monitoring through a Nutrition Support Dietitian.

Parenteral Nutrition (PN), inappropriately utilized creates inherent risks, complications and cost. We successfully used a multidisciplinary Nutrition Support Team (NST) to review all adult PN administrations but this required additional resources in terms of time, cost, labor and team commitment. We revamped and centralized the PN initiation review through a Nutrition Support Dietitian (NSD) with consultant support from a surgeon. This approach has yielded greater results. Our venture began in 2005 when we formed a NST to address our concern of PN overuse as a contributor to avoidable blood stream infections. At that time, the NST consisted of several individuals from 7 different disciplines. We saw remarkable results with declines in PN days, PN initiations and associated cost. Nevertheless, coordination and planning of team meetings were challenging. In 2011, we empowered the NSD to assess all PN initiations for appropriateness using evidence-based guidelines and clinical judgment. If the PN was appropriate, a pharmacist was informed to write orders; if deemed inappropriate, the NSD contacted the ordering physician to discuss alternatives. The NSD was not authorized to discontinue any PN orders. Any ambiguity was conferred with the surgeon who addressed any resistance from the ordering physician. During this period, educational programs for all staff continued as previously implemented. Heightened vigilance and standardized assessment have shown significant improvements with further reduction in PN cases by 25%. We have demonstrated that inappropriate PN use can be minimized with the intervention of a NSD. This simple approach can be equally effective as the NST.

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