

Nutrition and Hydration Current Awareness Bulletin

June 2021

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Title: Comparison of straw and cup for liquid swallowing in poststroke patients.

Citation: International Journal of Rehabilitation Research; Jun 2021; vol. 44 (no. 2); p. 181-184

Author(s): Bae ; Suh, InHyuk; Kim, Jong Keun; Lim, Jong Youb

Abstract: The purposes of this study were to compare poststroke liquid swallowing methods by including a cup and a straw in videofluoroscopic swallowing studies (VFSS) and to test the hypothesis that increased aspiration would be observed with the cup compared to the straw. Eighty-five poststroke patients who had undergone VFSS using a spoon, cup, and straw were included. Penetration-aspiration scale and functional dysphagia scale (FDS) were used for assessment. These scores did not differ significantly between the cup and the straw. Higher FDS scores were found with the cup than with the straw in patients who had penetration/aspiration with both the cup and the straw and with the cup only. However, FDS scores did not differ significantly between the cup and the straw in patients who had penetration/aspiration with the straw only. Although advantages of the straw over the cup were clear, some patients showed penetration/aspiration only with the straw.

Title: Older patients' perspectives on mealtimes in hospitals: a scoping review of qualitative studies.

Citation: Scandinavian Journal of Caring Sciences; Jun 2021; vol. 35 (no. 2); p. 390-404

Author(s): Jonsson ; Nyberg, Maria; Jonsson, Inger M.; Öström, Åsa

Abstract: The increasing age of populations throughout the world means that healthcare services are faced with new challenges, not least regarding the provision of food during hospital stay. There is a lack of knowledge of how hospital mealtimes are experienced by older patients, and so the aim of this article was to review current knowledge regarding mealtimes in hospitals from the perspectives of older patients. A literature search was performed using seven databases: PubMed, Web of Science, Scopus, Sociological Abstracts, SweMed+, ASSIA and CINAHL with no limits regarding publication date. The inclusion criteria were peer-reviewed articles in English or Swedish that used qualitative methods to examine older patients' (>65 years) mealtime experiences. The Five Aspect Meal Model (FAMM) served as a framework for understanding the complexity behind a mealtime experience. Qualitative content analysis was used as a guide when analysing the material. The search produced 415 studies, 14 of which were included in the review. The findings generated three main themes for understanding how older patients experience mealtimes while in hospital: (1) the food and the food service, (2) mealtime assistance and commensality during mealtimes and (3) the importance of retaining one's independence. The review also clearly indicated a shortage of studies that solely focus on older patients' experiences of their mealtime. More research is therefore needed to be fully able to understand the complex task of providing meals in hospitals.

Title: Free Food at Work: A Concept Analysis.

Citation: Workplace Health & Safety; Jun 2021; vol. 69 (no. 6); p. 277-289

Author(s): Horton Dias ; Dawson, Robin M.; Abshire, Demetrius A.; Harris, Diane; Wirth, Michael D.

Background: Employees who spend substantial amounts of time in a workplace away from home are likely to acquire and consume food during work hours. Reportedly, free food at work is a common occurrence in various workplace settings such as business offices and hospitals. Little is known about the nutritional quality, prevalence, or health impact of free food at work. Furthermore, free food at work as a theoretical concept has not been previously analyzed or defined, but it is necessary to differentiate free food from other food sources in the workplace.

Methods: A concept analysis of free food at work was conducted using the 8-step Walker and Avant framework. A literature review in June and July 2020 provided the basis to delineate the concept and identify its defining attributes including antecedents, consequences, and empirical referents.

Findings: Free food at work is defined as food that is available for consumption in the workplace at no financial cost to employees. Critical attributes of free food at work include nutritional value, quantity, frequency, and location within the workplace. Antecedents are sources and reasons for free food provision. Consequences include influence on consumption, behaviors, attitudes, emotions, and health outcomes. Additional measurable aspects of the concept and implications are discussed.

Conclusion/Application to Professional Practice: The concept of free food at work was analyzed; defining attributes and empirical referents were discussed and presented in a conceptual model to encourage further study and theory development. Identifying the health impact of free food at work is an issue requiring consideration for workplace health-promoting programs.

Title: Preoperative Nutrition Support May Reduce the Prevalence of Postoperative Pancreatic Fistula after Open Pancreaticoduodenectomy in Patients with High Nutritional Risk Determined by NRS2002.

Citation: BioMed Research International; May 2021 ; p. 1-7

Author(s): Xu ; Tian, Xiao-Dong; Song, Jing-Hai; Chen, Jian; Yang, Yin-Mo; Wei, Jun-Min

Background: Clinically relevant postoperative pancreatic fistula (CR-POPF) is a severe complication which may be caused by a perioperative nutrition problem. We aimed to study whether patients with high nutritional risk (NRS 2002 score ≥ 5) might benefit from preoperative nutrition support regarding the risk of CR-POPF after open pancreaticoduodenectomy.

Methods: Consecutive patients undergoing open pancreaticoduodenectomy with complete record of NRS2002 at two Chinese institutions between 2013 and 2018 were analysed. CR-POPF was diagnosed following the 2016 ISGPS criteria. Nutrition support included oral nutrition supplement and enteral and parenteral nutrition. Clinical and economic outcomes were analysed.

Results: 522 cases were included. 135 cases (25.9%) were at high nutritional risk (NRS 2002 score ≥ 5), among which 41 cases (30.4%) received preoperative nutrition support. The CR-POPF rate was significantly lower in the preoperative nutrition support group compared with the no nutrition support group (12.2% versus 28.7%, $P = 0.038$). Multivariate analysis showed that preoperative nutrition support was a protective factor for CR-POPF in patients at high risk [OR 0.339, 95% CI (0.115-0.965), $P = 0.039$]. Higher albumin and a larger diameter of the main pancreatic duct were found to be other protectors for CR-POPF.

Conclusions: Patients with high nutritional risk (NRS 2002 score ≥ 5) may profit from preoperative nutritional support manifested in the reduction of CR-POPF.

Title: Examining the association between meal context and diet quality: an observational study of meal context in older adults.

Citation: International Journal of Behavioral Nutrition & Physical Activity; May 2021; vol. 18 (no. 1); p. 1-8

Author(s): Shams-White ; Korycinski, Robert W.; Dodd, Kevin W.; Barrett, Brian; Jacobs, Stephanie; Subar, Amy F.; Park, Yikyung; Bowles, Heather R.

Background: Though a healthy diet is widely associated with reduced risks for chronic disease and mortality, older adults in the U.S. on average do not meet dietary recommendations. Given that few studies have examined the association between meal context on older adult diet quality, the aims of this study were (1) to compare the dietary quality of foods consumed in different meal contexts, as measured by the Healthy Eating Index 2015 (HEI-2015): meal location, the presence of others, and the use of electronic screens; and (2) to examine which components of the HEI-2015 drove differences in HEI-2015 total scores by meal context.

Methods: Interactive Diet and Activity Tracking in AARP study participants (50–74 years) completed the Automated Self-Administered 24-h Dietary Assessment tool (ASA24, version 2011) that included foods and beverages consumed and three meal contexts: "at home" versus "away from home," "alone" versus "with company," and "with screen time" versus "without screen time." A population ratio approach was used to estimate HEI-2015 total and component scores for all food items consumed by meal context. Mean HEI-2015 scores (range: 0–100) for the three meal context variables were compared using t-tests. Where there were significant differences in total scores, additional t-tests were used to explore which HEI-2015 components were the primary drivers. All tests were stratified by sex and adjusted for multiple comparisons.

Results: HEI-2015 scores were lower for meals consumed away vs. at home (mean difference (SE), males: – 8.23 (1.02); females: – 7.29 (0.93); both $p < 0.0001$) and for meals eaten with vs. without company (mean difference (SE), males: – 6.61 (1.06); females: – 7.34 (1.18); both $p < 0.0001$). There was no difference comparing with vs. without screen time. When HEI-2015 component scores were examined, fewer total fruits, whole grains, and dairy were consumed away from home or with company; more total vegetables and greens and beans, and less added sugars were consumed with company.

Conclusions: Our findings suggest an association between the behavior cues of meal location and companions and dietary choices among older adults. Future studies can explore the individual and interactive effects of meal context on diet quality and subsequent health outcomes.

Title: Nutrition Care for Poorly Nourished Outpatients Reduces Resource Use and Lowers Costs.

Citation: Journal of Primary Care & Community Health; May 2021 ; p. 1-11

Author(s): Hong ; Sulo, Suela; Wang, William; Kim, Susan; Huettner, Laura; Taroyan, Rose; Kerr, Kirk W.; Kaloostian, Carolyn

Background and Objectives: Over 25% of United States (US) community-dwelling, older adults are at nutritional risk. Health and cost burdens of poor nutrition can be lowered by nutrition programs for hospital inpatients, but few studies have looked at the impact on outpatients. The objective of our study was to assess outcomes of a nutrition focused quality

improvement program (QIP) on healthcare resource use and costs in poorly nourished outpatients.

Methods: This pre-post QIP study was implemented at 3 US healthcare system clinics. Included patients (n = 600) were ≥45 years old, had ≥2 chronic conditions, and were enrolled over a 15-month interval. For comparison, historical (n = 600) and concurrent control (n = 600) groups were used. Assessment of poor nutritional status was performed during each patient's baseline visit. Healthcare resource use (hospitalizations, emergency department visits, and outpatient clinic visits), medication use, and costs were determined for a 90-day interval.

Results: QIP patients (mean age 61.6 years) were predominantly female (62.5%) and overweight/obese (81.7%). The proportion of QIP outpatients presenting for healthcare services was significantly reduced compared to both historical and concurrent controls—relative risk reduction (RRR) versus historical (11.6%, P <.001) and versus concurrent (8.9%, P =.003). Of those who presented, RRR for healthcare resource use by QIP was significant in comparison with historical (12.9%, P =.022) but not concurrent controls. No significant differences were observed for medication usage. Lower resource use among QIP patients yielded total cost savings of \$290 923 or per-patient savings of \$485.

Conclusions: Nutrition QIPs in outpatient clinics are feasible and can reduce healthcare resource use and cut costs. Such findings underscore benefits of nutritional interventions for community-dwelling outpatients with poor nutritional status.

Title: Effect of nutritional and physical exercise intervention on hospital readmission for patients aged 65 or older: a systematic review and meta-analysis of randomized controlled trials.

Citation: International Journal of Behavioral Nutrition & Physical Activity; May 2021; vol. 18 (no. 1); p. 1-14

Author(s): Lærum-Onsager ; Molin, Marianne; Olsen, Cecilie Fromholt; Bye, Asta; Debesay, Jonas; Hestevik, Christine Hillestad; Bjerk, Maria; Pripp, Are Hugo

Background: Unplanned readmission may result in consequences for both the individual and society. The transition of patients from hospital to postdischarge settings often represents a discontinuity of care and is considered crucial in the prevention of avoidable readmissions. In older patients, physical decline and malnutrition are considered risk factors for readmission. The purpose of the study was to determine the effects of nutritional and physical exercise interventions alone or in combination after hospital admission on the risk of hospital readmission among older people.

Methods: A systematic review and meta-analysis of randomized controlled studies was conducted. The search involved seven databases (Medline, AMED, the Cochrane Library, CINAHL, Embase (Ovid), Food Science Source and Web of Science) and was conducted in November 2018. An update of this search was performed in March 2020. Studies involving older adults (65 years and above) investigating the effect of nutritional and/or physical exercise interventions on hospital readmission were included.

Results: A total of 11 randomized controlled studies (five nutritional, five physical exercise and one combined intervention) were included and assessed for quality using the updated Cochrane Risk of Bias Tool. Nutritional interventions resulted in a significant reduction in readmissions (RR 0.84; 95% CI 0.70–1.00, p = 0.049), while physical exercise interventions did not reduce readmissions (RR 1.05; 95% CI 0.84–1.31, p-value = 0.662).

Conclusions: This meta-analysis suggests that nutrition support aiming to optimize energy intake according to patients' needs may reduce the risk of being readmitted to the hospital for people aged 65 years or older.

Title: 'Food for thought': The importance of nutrition to patient care and the role of the junior doctor.

Citation: Clinical Medicine; May 2021; vol. 21 (no. 3)

Author(s): Frost ; Baldwin, Alexander J.

Abstract: Good nutrition is an integral component of patient care. Not only does eating correctly provide substantial physical benefits, it also ensures psychological comfort throughout admission. Nevertheless, our formative years as medical students, and now as junior doctors, have shown us that patient nutrition is frequently neglected both in the clinical setting and in the subject matter of our education. Amid the coronavirus pandemic, this is especially problematic; older, frailer patients, with multiple comorbidities and higher rates of malnutrition, are faring much worse with the virus. Combined with the fact that 40% of patients admitted to hospital are malnourished to some degree, we are looking at a huge population of potential COVID-19 patients facing a further decline in nutritional status and higher mortality as a result of this, making attention to nutrition more important than ever. As junior doctors, we have a role in the nutritional assessment of and support for our patients by ensuring that all patients are suitably assessed using a scoring tool with the appropriate ensuing actions taken. We must also ensure that our knowledge regarding nutritional assessment and support is adequate and aim to supplement this via additional learning to meet the minimum requirements for our curriculum.

Title: Implementing Volume-Based Feeding to Optimize Delivery of Enteral Nutrition.

Citation: Critical Care Nurse; Apr 2021; vol. 41 (no. 2); p. 16-26

Author(s): Bonomo ; Blume, Diane Lynn; Davis, Katie; Kim, Hee Jun

Background: At least 80% of ordered enteral nutrition should be delivered to improve outcomes in critical care patients. However, these patients typically receive 60% to 70% of ordered enteral nutrition volume. In a practice review within a 28-bed medical-surgical adult intensive care unit, patients received a median of 67.5% of ordered enteral nutrition with standard rate-based feeding. Volume-based feeding is recommended to deliver adequate enteral nutrition to critically ill patients.

Objective: To use a quality improvement project to increase the volume of enteral nutrition delivered in the medical-surgical intensive care unit.

Methods: Percentages of target volume achieved were monitored in 73 patients. Comparisons between the rate-based and volume-based feeding groups used nonparametric quality of medians test or the χ^2 test. A customized volume-based feeding protocol and order set were created according to published protocols and then implemented. Standardized education included lecture, demonstration, written material, and active personal involvement, followed by a scenario-based test to apply learning.

Results: Immediately after implementation of this practice change, delivered enteral nutrition volume increased, resulting in a median delivery of 99.8% of ordered volume ($P = .003$). Delivery of a mean of 98% ordered volume was sustained over the 15 months following implementation.

Conclusions: Implementation of volume-based feeding optimized enteral nutrition delivery to critically ill patients in this medical-surgical intensive care unit. This success can be attributed to a comprehensive, individualized, and proactive process design and educational approach. The process can be adapted to quality improvement initiatives with other patient populations and units.

Title: Comparison of malnutrition and malnutrition screening tools in pediatric oncology patients: A cross-sectional study

Citation: Nutrition; Jun 2021; vol. 86

Author(s): Bicakli, Derya Hopanci; Kantar, Mehmet

Objectives: The aim of this study was to determine the prevalence of malnutrition, to compare nutritional evaluation tools, and to highlight the importance of nutritional status in pediatric oncology patients.

Methods: This study evaluated the nutritional status, based on height, weight, and midupper arm circumference, of 170 patients ages 5 months to 18 years who were hospitalized at the Ege University Hospital Pediatric Oncology Clinic. The prevalence of malnutrition was determined using the malnutrition screening tools, STRONGkids (SK) and Pediatric Yorkhill Malnutrition Score (PYMS). Correlations, sensitivity, specificity, and the positive and negative predictive values between the screening tools were calculated.

Results: In all, 68.2% of the patients were diagnosed with a solid tumor. According to SK, 59.4% had a moderate risk of malnutrition, and 40.6% had a high risk. According to PYMS, 30.6% of patients had a low to moderate risk of malnutrition, and 69.4% had a high risk of malnutrition. Minimal agreement was noted between SK and PYMS (Kappa value: 0.40 and 0.18, respectively). The sensitivity of PYMS was higher than that of SK (92.68 and 78.05, respectively). In total, 22.9% of the patients had a body mass index of <5%, and 21.2% had a midupper arm circumference of <5.

Conclusions: The present findings show that, in general, pediatric oncology patients have a high risk of malnutrition. Although SK and PYMS do not differ significantly, PYMS has higher sensitivity for detecting malnutrition. The nutritional status of pediatric oncology patients should be monitored using appropriate screening techniques throughout their treatment.

Title: Status of Nutrition In Hemodialysis Patients Survey (SNIPS): Malnutrition risk by diabetes status.

Citation: Diabetic Medicine; Jun 2021; vol. 38 (no. 6); p. 1-8

Author(s): Boaz ; Azoulay, Odile; Kaufman-Shriqui, Vered; Weinstein, Talia

Background: Increased malnutrition risk has been observed in more than 40% people on haemodialysis in Israel. It is not clear that this risk is homogeneously distributed among people with versus without diabetes.

Objectives: To examine the influence of diabetes on malnutrition risk among people on haemodialysis.

Methods: This cross-sectional study included a representative sample of 375 individuals on haemodialysis treated in hospital dialysis centres throughout Israel. Of these, 126 had diabetes. Dietary intake, biochemistry, anthropometric and hemodynamic measures were recorded. Malnutrition risk categories were defined: "minimal": body mass index (BMI) ≥ 23

kg/m² and serum albumin ≥ 38 mmol/L; "mild": BMI < 23 kg/m² and albumin ≥ 38 mmol/L; "moderate": BMI ≥ 23 kg/m² and albumin < 38 mmol/L; "severe": BMI < 23 kg/m² and serum albumin < 38 mmol/L. These categories were dichotomized to "minimal" versus elevated malnutrition risk.

Results: Despite greater BMI, elevated malnutrition risk was identified in 58.8% of individuals with versus 39.3% without diabetes. Adherence to International Society for Renal Nutrition and Metabolism nutrition guidelines was poor regardless of diabetes status. In multivariable logistic regression analysis, diabetes: OR 2.15; C-reactive protein (nmol/L): OR 1.02; delivered dialysis dose (Kt/V): OR 6.07; and haemoglobin (g/L): OR 0.79, predicted elevated malnutrition risk, even after controlling for age, sex and years on haemodialysis.

Discussion: Individuals on haemodialysis who have diabetes have elevated malnutrition risk compared to those without diabetes despite greater BMI.

Title: The Nutritional Assessment and Management of Patients With Gastrointestinal Cancer.

Citation: Journal of Nursing; Jun 2021; vol. 68 (no. 3); p. 7-14

Author(s): Case Manager, Department of Nursing, Chang Gung Memorial Hospital, Linkou Branch, and Graduate Student, Graduate Institute of Nursing, College of Nursing, Chang Gung University of Science and Technology; Yi-Hsiang Lee; Ya-Lan Chang; Li-Yun Lee; Hsi-Ling Peng; Shu-Ching Chen

Abstract: The gastrointestinal dysfunction and nutrient malabsorption associated with gastrointestinal tumors and related treatments may result in malnutrition in gastrointestinal (GI) cancer patients. Malnutrition has been associated with decreased treatment tolerance, poor quality of life, and increased mortality in this patient population. In this article, the relevant literature is reviewed and the factors, assessment tools, and management strategies related to malnutrition are summarized. In clinical care, healthcare providers should conduct early assessments of nutritional status and provide individualization nutritional counselling to promote treatment that effectively prolongs patient survival. This article may be used by nurses as a reference in caring for GI cancer patients.

Title: Nutritional Care of Older Adult Residents Living in Long-Term Care Facilities.

Citation: Journal of Nursing; Jun 2021; vol. 68 (no. 3); p. 26-32

Author(s): Associate Professor, Department of Nursing, I-Shou University

Abstract: An estimated one-fifth to one half (17.5%--50.5%) of the older adult residents living in long-term care facilities are either malnourished or at risk of malnourishment. Malnutrition in older adults is related to frailty, sarcopenia, anemia, falls, morbidity, and mortality. Monitoring nutritional status and instituting appropriate nutritional care plans in long-term care facilities can help prevent the development of disabilities in older adult residents and reduce long-term healthcare expenditures. In this article, after introducing the primary diagnostic tests for malnutrition, the three main nutritional care principles are presented in the following categories: non-specific health problems, specific-health problems, and dehydration are presented. Next, the behavioral-environmental factors of nutritional care are defined. Finally, the related challenges and practical recommendations are discussed.

Title: Comprehensive Application of the Malnutrition Quality Improvement Initiative (MQII) Toolkit to Pediatric Malnutrition Care.

Citation: Journal of the Academy of Nutrition & Dietetics; Jun 2021; vol. 121 (no. 6); p. 1021-1034

Author(s): Phillips, Wendy; Becker, Patricia J.; Wong Vega, Molly; Smith, Elizabeth; Konek, Sue; Bailer, Judy; Carvalho-Salemi, Jenni

Abstract: As pediatric registered dietitian nutritionists (RDNs) make addressing malnutrition a critical part of their nutrition care process (NCP) and integrate malnutrition quality improvement into their health care facilities, they have looked to the Pediatric Nutrition Practice Group (PNPG) for guidance on how to best achieve this goal in the care of infants, children, and adolescents. The Malnutrition Quality Improvement Initiative (MQii) was developed by the Academy of Nutrition and Dietetics (Academy), Avalere Health, and other stakeholders to provide guidance for malnutrition quality improvement efforts through key technical expert and advisory roles. MQii is a dual-pronged approach to support quality improvement (QI) for malnutrition care based on a set of four malnutrition-focused electronic clinical quality metrics (eCQMs) and a malnutrition QI toolkit with resources to guide implementation of QI activities. The MQii Toolkit is a well created and comprehensive framework developed for patients aged 65 years and older. The goals of the MQii include reducing variation in clinical practice for malnutrition care across different care providers and settings; improving clinicians' knowledge of the importance of malnutrition and best practices for optimal malnutrition care delivery; and exploring how optimal malnutrition care impacts cost of care proxies such as average length of stay and 30-day all-cause readmissions for patients who are malnourished or at risk for malnutrition. This publication provides guidance for pediatric nutrition practitioners to implement malnutrition QI activities and evaluate the eCQMs in pediatrics, providing age-appropriate nutrition screening, assessment, care plan, and documentation resources where needed.

Title: The importance of nutrition in wound management: new evidence from the past decade.

Citation: Wound Practice & Research; Mar 2021; vol. 29 (no. 1); p. 18-40

Author(s): Kurmis ; Woodward, M.; Ryan, H.; Rice, J.

Abstract: Malnutrition is known to contribute to wound development and impair wound healing through reduction in the availability of nutrients to maintain optimal cell maintenance and repair. This review examines studies from the last decade identified via a search of PubMedTM and systematic review databases to identify evidence for the effectiveness of nutritional interventions in wound healing. Studies reported identified via the search included 61 primary studies and six systematic reviews. Generally, single nutrient interventions were found to be less effective than interventions utilising multiple nutrients. Immune modulating supplements containing arginine (Arg) were shown in 13 studies to result in significant improvements in at least one outcome measure for the intervention groups. There was also support for the use of arginine combined with anti-oxidant nutrients in malnourished individuals with pressure injuries (PI), and this intervention was found to be cost effective. The administration of glutamine (Gln) via the enteral nutrition (EN) route appears to convey a beneficial effect, particularly in burns and trauma patients, compared to parenteral nutrition (PN) administration. Omega-3 fatty acids were found to improve healing of diabetic foot ulcers. Encouraging further large-scale, multi-centre, prospective nutritional intervention research in areas of evidence deficiency is recommended.

Title: Malnutrition, low diet quality and its risk factors among older adults with low socio-economic status: a scoping review.

Citation: Nutrition Research Reviews; Jun 2021; vol. 34 (no. 1); p. 107-116

Author(s): Nazri ; Vanoh, D.; Leng, S. K.

Abstract: Low socio-economic status (SES) is often associated with various health-related problems. Therefore, the present paper aims to review the available literature to identify the prevalence of malnutrition, prevalence of poor diet quality and its associated risk factors among older adults with low SES. A literature search was performed using four databases, namely PubMed, Google Scholar, Springer and Science Direct. The search terms used were 'diet quality', 'nutritional status', 'dietary intake', 'overweight', 'obesity', 'underweight', 'older people' and 'low socioeconomic status (SES)'. The overall prevalence of undernutrition among older adults with low SES worldwide was in the range of 28.9 to 48 %, while overnutrition was reported to be between 8.1 to 28.2 %. In Asia, the prevalence of undernourished older adults ranged from 3 to 64.9 %, while 2.5 to 32.8 % were overnourished. Most of the studies (60 %) included in the present review used BMI as the tool to identify malnutrition, but none of the nutritional screening tools were considered to be the 'gold standard'. For dietary assessment, FFQ and multiple 24 h dietary recall improved the estimation of individual dietary intake. Risk factors for poor diet quality included financial hardship, functional limitation, sex, place of residence, smoking and oral health. Poor nutritional status, especially lack of good-quality diet, and thinness are prevalent among older adults with low SES. Hence, it is important to establish nutrition-related programmes and intervention studies among this group of individuals for improving their health status and quality of life.

Title: Enteral and supplemental parenteral nutrition enriched with omega-3 polyunsaturated fatty acids in intensive care patients – A randomized, controlled, double-blind clinical trial.

Citation: Clinical Nutrition; May 2021; vol. 40 (no. 5); p. 2544-2554

Author(s): Singer ; Bendavid, Itai; Mesilati-Stahy, Ronit; Green, Pnina; Rigler, Merav; Lev, Shaul; Schif-Zuck, Sagie; Amiram, Ariel; Theilla, Miriam; Kagan, Ilya

Abstract: Enteral nutrition (EN) and parenteral nutrition (PN) enriched with omega-3 polyunsaturated fatty acids (PUFA) have beneficial effects in critical illness. This study aimed to assess the combined effect of EN and supplemental PN enriched with omega-3 PUFA on blood oxygenation in intensive care unit (ICU) patients. Single-center, prospective, randomized, controlled, double-blind, phase III trial conducted from 10/2013 to 11/2017. A total of 100 ICU patients (18–85 years, APACHE II score > 15) requiring mechanical ventilation were randomly assigned to received combined EN and PN either with omega-3 PUFA (omega-3 group) or without (control group) for up to 28 days. Primary endpoint: 'change of PaO₂ /FiO₂ from day (D) 1 to D4'. Secondary endpoints: lung function parameters, ICU complications, length of hospital stay, days free of ICU care/ventilation/sedation/catecholamine treatment, mortality, erythrocyte fatty acid composition, inflammatory parameters. Safety parameters: standard laboratory assessment, vital signs, physical examination, SOFA score, adverse events. Combined EN and PN covered energy requirements to more than 80%. Blood oxygenation (Δ PaO₂ /FiO₂ from D1 to D4: -1.3 ± 83.7 , n = 42, and 13.3 ± 86.1 , n = 39, in omega-3 and control group, respectively, p = 0.7795) and other lung function parameters did not differ between groups but days free of catecholamine treatment were significantly higher in the omega-3 group (~4

days, $p = 0.0481$). On D6, significantly more patients in the omega-3 group tolerated EN alone (51.0% vs. 29.8%, $p = 0.0342$). Eicosapentaenoic acid (EPA) content in erythrocytes was significantly increased in the omega-3 group at last observation compared with the control group (Δ EPA: $0.928 \pm 0.808\%$ vs. $-0.024 \pm 0.190\%$, $p < 0.0001$). No further significant group differences were detected. Enteral and supplemental PN both enriched with omega-3 PUFA did not improve lung function but allowed earlier weaning from catecholamine treatment and PN. Supplemental PN succeeded to adequately cover energy requirements in critically ill patients. www.clinicaltrials.gov, registration number: NCT01162928.

Title: Admission kidney function is a strong predictor for the response to nutritional support in patients at nutritional risk.

Citation: Clinical Nutrition; May 2021; vol. 40 (no. 5); p. 2762-2771

Author(s): Bargetzi ; Emmenegger, Nora; Wildisen, Simone; Nickler, Manuela; Bargetzi, Laura; Hersberger, Lara; Segerer, Stephan; Kaegi-Braun, Nina; Tribolet, Pascal; Gomes, Filomena; Hoess, Claus; Pavlicek, Vojtech; Bilz, Stefan; Sigrist, Sarah; Brändle, Michael; Henzen, Christoph; Thomann, Robert; Rutishauser, Jonas; Aujesky, Drahomir; Rodondi, Nicolas

Abstract: Patients with chronic kidney disease (CKD) are at substantial risk of malnutrition, which negatively affects clinical outcomes. We investigated the association of kidney function assessed at hospital admission and effectiveness of nutritional support in hospitalized medical patients at risk of malnutrition. This is a secondary analysis of an investigator-initiated, randomized-controlled, Swiss multicenter trial (EFFORT) that compared individualised nutritional support with usual hospital food on clinical outcomes. We compared effects of nutritional support on mortality in subgroups of patients stratified according to kidney function at the time of hospital admission (estimated glomerular filtration rates [eGFR] <15 , 15–29, 30–59, 60–89 and ≥ 90 ml/min/1.73 m²). We included 1943 of 2028 patients (96%) from the original trial with known admission creatinine levels. Admission eGFR was a strong predictor for the beneficial effects of nutritional support in regard to lowering of 30-day mortality. Patients with an eGFR <15 , 15–29 and 30–59 had the strongest mortality benefit (odds ratios [95%CI] of 0.24 [0.05 to 1.25], 0.37 [0.14 to 0.95] and 0.39 [0.21 to 0.75], respectively), while patients with less severe impairment in kidney function had a less pronounced mortality benefits (p for interaction 0.001). A similar stepwise association of kidney function and response to nutritional support was found also for other secondary outcomes. In medical inpatients at nutritional risk, admission kidney function was a strong predictor for the response to nutritional therapy. Initial kidney function may help to individualize nutritional support in the future by identification of patients with most clinical benefit. Registered under ClinicalTrials.gov Identifier no. NCT02517476.

Title: An investigation of community-dwelling older adults' opinions about their nutritional needs and risk of malnutrition; a scoping review.

Citation: Clinical Nutrition; May 2021; vol. 40 (no. 5); p. 2936-2945

Author(s): Castro ; Reynolds, Ciara ME.; Kennelly, Sharon; Geraghty, Aisling A.; Finnigan, Karen; McCullagh, Laura; Gibney, Eileen R.; Perrotta, Carla; Corish, Clare A.

Abstract: Understanding how older adults perceive their nutritional needs and malnutrition risk is important to inform strategies to improve prevention and management of the

condition. This scoping review aimed to identify, characterize and summarize the findings from studies analysing community-dwelling older adults' opinions and perceptions towards their nutritional needs and malnutrition risk. An electronic literature search was carried out using three databases, Pubmed, Embase, and CINAHL up to January 2020. Articles were reviewed following PRISMA guidelines. A total of 16,190 records were identified and reviewed with 15 studies being included, all of which were conducted in high income countries. Common conceptual categories that were identified included; older community-dwelling adults consider that a healthy diet for them is the same as that recommended for the general population, consisting of fruits, vegetables, reduced fat and reduced sugar. Weight loss was seen as a positive outcome and a normal component of the ageing process. Lack of appetite was identified by participants in the majority of studies as a barrier to food intake. This review shows how older community-dwelling adults, with a high risk of malnutrition, follow dietary public health recommendations for the general population and have a greater awareness of the risks of overweight. The implementation of nutritional guidelines that consider the nutritional needs of all older adults and education of non-dietetic community healthcare professionals on providing appropriate nutritional advice to this population are warranted.

- Older adults' views of their nutritional needs and malnutrition risk were reviewed.
- 16,190 records were screened with 15 studies included.
- Older adults see a healthy diet as being high in fruits and vegetables and low in fat and sugar.
- Weight loss was seen as a normal, and positive, component of ageing. • Findings suggest a low awareness of the risks of malnutrition in older adults.

Title: Ultra-processed food consumption and type 2 diabetes incidence: A prospective cohort study.

Citation: Clinical Nutrition; May 2021; vol. 40 (no. 5); p. 3608-3614

Author(s): Levy ; Rauber, Fernanda; Chang, Kiara; Louzada, Maria Laura da C.; Monteiro, Carlos A.; Millett, Christopher; Vamos, Eszter P.

Abstract: Ultra-processed foods account for more than 50% of daily calories consumed in several high-income countries, with sales of ultra-processed foods soaring globally, especially in middle-income countries. The objective of this study is to investigate the association between ultra-processed food (UPF) consumption and risk of type 2 diabetes (T2D) in a UK-based prospective cohort study. Participants of the UK Biobank (2007–2019) aged 40–69 years without diabetes at recruitment who provided 24-h dietary recall and follow-up data were included. UPFs were defined using the NOVA food classification. Multivariable Cox proportional hazards regression models were used to evaluate the association between UPF consumption and the risk of T2D adjusting for socio-demographic, anthropometric and lifestyle characteristics. A total of 21,730 participants with a mean age of 55.8 years and mean UPF intake of 22.1% at baseline were included. During a mean follow-up of 5.4 years (116,956 person-years), 305 incident T2D cases were identified. In the fully adjusted model, compared with the group in the lowest quartile of UPF intake, the hazard ratio for T2D was 1.44, 1.04–2.02 in the group with the highest quartile of UPF consumption. A gradient of elevated risk of T2D associated with increasing quartiles of UPF intake was consistently observed (p value for trend < 0.028). A significantly increased risk of T2D was observed per 10 percentage points increment in UPF consumption ([adjusted HR]: 1.12, 95% confidence interval [CI]: 1.04–1.20). Our findings demonstrate that a diet high in UPFs is associated with a clinically important increased risk of T2D. Identifying and implementing

effective public health actions to reduce UPF consumption in the UK and globally are urgently required.

Title: Effectiveness of eHealth Nutritional Interventions for Middle-Aged and Older Adults: Systematic Review and Meta-analysis.

Citation: Journal of medical Internet research; May 2021; vol. 23 (no. 5); p. e15649

Author(s): Robert, Caroline; Erdt, Mojisola; Lee, James; Cao, Yuanyuan; Naharudin, Nurhazimah Binte; Theng, Yin-Leng

Background: The risk of development of chronic diseases related to poor nutrition increases with age. In the face of an aging population, it is important for health care sectors to find solutions in delivering health services efficiently and effectively to middle-aged and older adults.

Objective: The aim of this systematic review and meta-analysis was to consolidate the literature that reported the effectiveness of eHealth apps in delivering nutritional interventions for middle-aged and older adults.

Methods: A literature search from five databases (PubMed, CINAHL, Cochrane, Web of Science, and Global Health) from the past 5 years was performed. Studies were selected for inclusion that used eHealth to deliver nutritional interventions to adults aged 40 years and above, and reported health and behavioral outcomes. Two independent reviewers searched for research articles and assessed the eligibility of studies to be included in the review. A third reviewer resolved disagreements on study inclusion. We also assessed the quality of the included studies using the CONSORT 2010 checklist.

Results: A total of 70 studies were included for analysis. The study quality ranged from 44% to 85%. The most commonly used eHealth intervention type was mobile apps (22/70, 31%). The majority of studies (62/70, 89%) provided multicomponent health interventions, which aimed to improve nutrition and other health behaviors (eg, exercise, smoking cessation, medication adherence). Meta-analysis results indicated high and significant heterogeneity; hence, conclusions based on these results should be considered with caution. Nonetheless, the results generally showed that eHealth interventions improved anthropometric and clinical outcomes, but not behavioral outcomes such as fruit and vegetable consumption.

Conclusions: The use of eHealth apps to deliver health interventions has been increasing in recent years, and these apps have the potential to deliver health services to a larger group of people. Our findings showed that the effectiveness of eHealth apps to deliver health interventions for middle-aged to older adults was supported by the improvement of anthropometric and clinical outcomes. Future work could aim to develop research frameworks in administering eHealth interventions to address heterogeneity in this field of research.

Title: Development of a competency model for placement and verification of nasogastric and nasoenteric feeding tubes for adult hospitalized patients.

Citation: Nutrition in clinical practice : official publication of the American Society for Parenteral and Enteral Nutrition; May 2021

Author(s): Powers, Jan; Brown, Britta; Lyman, Beth; Escuro, Arlene A; Linford, Lorraine; Gorsuch, Kim; Mogensen, Kris M; Engelbrecht, Jessica; Chaney, Amanda; McGinnis, Carol; Quatrara, Beth A; Leonard, Jennifer; Guenter, Peggi

Abstract: Nasogastric/nasoenteric (NG/NE) feeding tube placements are associated with adverse events and, without proper training, can lead to devastating and significant patient harm related to misplacement. Safe feeding tube placement practices and verification are critical. There are many procedures and techniques for placement and verification; this paper provides an overview and update of techniques to guide practitioners in making clinical decisions. Regardless of placement technique and verification practices employed, it is essential that training and competency are maintained and documented for all clinicians placing NG/NE feeding tubes. This paper has been approved by the American Society for Parenteral and Enteral Nutrition (ASPEN) Board of Directors.

Title: Clinical nutrition and human rights. An International position paper.

Citation: Nutrition in clinical practice : official publication of the American Society for Parenteral and Enteral Nutrition; May 2021

Author(s): Cardenas, Diana; Correia, Maria Isabel Toulson Davisson; Ochoa, Juan B; Hardy, Gil; Rodriguez-Ventimilla, Dolores; Bermúdez, Charles E; Papapietro, Karin; Hankard, Régis; Briend, André; Ungpinitpong, Winai; Zakka, Katerina Mary; Pounds, Teresa; Cuerda, Cristina; Barazzoni, Rocco

Abstract: The International Working Group for Patients' Right to Nutritional Care presents its position paper regarding nutritional care as a human right intrinsically linked to the right to food and the right to health. All people should have access to food and evidence-based medical nutrition therapy including artificial nutrition and hydration. In this regard, the hospitalized malnourished ill should mandatorily have access to screening, diagnosis, nutritional assessment, with optimal and timely nutritional therapy in order to overcome malnutrition associated morbidity and mortality, while reducing the rates of disease-related malnutrition. This right does not imply there is an obligation to feed all patients at any stage of life and at any cost. On the contrary, this right implies, from an ethical point of view, that the best decision for the patient must be taken and this may include, under certain circumstances, the decision not to feed. Application of the human rights-based approach to the field of clinical nutrition will contribute to the construction of a moral, political, and legal focus to the concept of nutritional care. Moreover, it will be the cornerstone to the rationale of political and legal instruments in the field of clinical nutrition.

Title: Nutritional screening based on objective indices at admission predicts in-hospital mortality in patients with COVID-19.

Citation: Nutrition journal; May 2021; vol. 20 (no. 1); p. 46

Author(s): Song, Feier; Ma, Huan; Wang, Shouhong; Qin, Tiehe; Xu, Qing; Yuan, Huiqing; Li, Fei; Wang, Zhonghua; Liao, Youwan; Tan, Xiaoping; Song, Xiuchan; Zhang, Qing; Huang, Daozheng

Background: Could nutritional status serve as prognostic factors for coronavirus disease 2019 (COVID-19)? The present study evaluated the clinical and nutritional characteristics of COVID-19 patients and explored the relationship between risk for malnutrition at admission and in-hospital mortality.

Methods: A retrospective, observational study was conducted in two hospitals in Hubei, China. Confirmed cases of COVID-19 were typed as mild/moderate, severe, or critically ill. Clinical data and in-hospital death were collected. The risk for malnutrition was assessed

using the geriatric nutritional risk index (GNRI), the prognostic nutritional index (PNI), and the Controlling Nutritional Status (CONUT) via objective parameters at admission.

Results: Two hundred ninety-five patients were enrolled, including 66 severe patients and 41 critically ill patients. Twenty-five deaths were observed, making 8.47% in the whole population and 37.88% in the critically ill subgroup. Patients had significant differences in nutrition-related parameters and inflammatory biomarkers among three types of disease severity. Patients with lower GNRI and PNI, as well as higher CONUT scores, had a higher risk of in-hospital mortality. The receiver operating characteristic curves demonstrated the good prognostic implication of GNRI and CONUT score. The multivariate logistic regression showed that baseline nutritional status, assessed by GNRI, PNI, or CONUT score, was a prognostic indicator for in-hospital mortality.

Conclusions: Despite variant screening tools, poor nutritional status was associated with in-hospital death in patients infected with COVID-19. This study highlighted the importance of nutritional screening at admission and the new insight of nutritional monitoring or therapy.

Title: Nutritional support during the hospital stay reduces mortality in patients with different types of cancers: Secondary analysis of a prospective randomized trial.

Citation: Annals of oncology : official journal of the European Society for Medical Oncology; May 2021

Author(s): Bargetzi, L; Brack, C; Herrmann, J; Bargetzi, A; Hersberger, L; Bargetzi, M; Kaegi-Braun, N; Tribolet, P; Gomes, F; Hoess, C; Pavlicek, V; Bilz, S; Sigrist, S; Brändle, M; Henzen, C; Thomann, R; Rutishauser, J; Aujesky, D; Rodondi, N; Donzé, J; Laviano, A; Stanga, Z; Mueller, B; Schuetz, P

Introduction: Nutritional support in patients with cancer aims at improving quality of life. Whether use of nutritional support is also effective in improving clinical outcomes remains understudied.

Methods: In this preplanned secondary analysis of patients with cancer included in a prospective, randomized-controlled, Swiss, multicenter trial (EFFORT), we compared protocol-guided individualized nutritional support (intervention group) to standard hospital food (control group) regarding mortality at 30-day (primary endpoint) and other clinical outcomes.

Results: We analyzed 506 patients with a main admission diagnosis of cancer, including lung cancer (n=113), gastrointestinal tumors (n=84), hematological malignancies (n=108) and other types of cancer (n=201). Nutritional risk based on Nutritional Risk Screening [NRS 2002] was an independent predictor for mortality over 180 days with a (age-, sex-, center-, type of cancer-, tumor activity- and treatment-) adjusted hazard ratio of 1.29 (95% CI 1.09 to 1.54; p=0.004) per point increase in NRS. In the 30-day follow-up period, 50 patients (19.9%) died in the control group compared to 36 (14.1%) in the intervention group resulting in an adjusted odds ratio of 0.57 (95% CI 0.35 to 0.94; p=0.027). Interaction tests did not show significant differences in mortality across the cancer type subgroups. Nutritional support also significantly improved functional outcomes and quality of life measures.

Conclusion: Compared to usual hospital nutrition without nutrition support, individualized nutritional support reduced the risk for mortality and improved functional and quality of life outcomes in cancer patients with increased nutritional risk. These data further support the inclusion of nutritional care in cancer management guidelines.

Title: The impact of a nutrition counseling program on the use of hospital services for Meals on Wheels clients.

Citation: Journal of prevention & intervention in the community; Jun 2021 ; p. 1-13

Author(s): Cho, Jinmyoung; Marishak-Simon, Sherry; Smith, Donald R; Stevens, Alan B

Abstract: Home-delivered meals have shown considerable promise in overcoming nutritional challenges among homebound older adults facing food insecurity and the risk of diabetes, while nutrition counseling provides knowledge and skills for diabetes management. The purpose of this study was to identify the impact of a program combining nutrition counseling with home-delivered meals by examining the use of hospital services 6 months before and after participating in the program. This study included 1009 clients who are at risk for diabetes and who received home-delivered meals and nutrition counseling via Meals on Wheels in Fort Worth, Texas. Hospital service data were extracted from a regional claims database. Generalized linear models were performed to examine changes in use of hospital services 6 months before and after program participation. The mean number of emergency department visits and hospitalizations decreased from 0.69 to 0.50 ($p < .001$) and from 0.35 to 0.22 ($p < .001$), respectively. The findings of this study indicate that combining structured nutritional counseling with home-delivered meals may contribute to reducing healthcare use among older adults facing the challenges of diabetes and food insecurity.

Title: Influence of nutritional status on clinical outcomes among hospitalized patients with COVID-19.

Citation: Clinical nutrition ESPEN; Jun 2021; vol. 43 ; p. 223-229

Author(s): Nicolau, Joana; Ayala, Luisa; Sanchís, Pilar; Olivares, Josefina; Dotres, Keyla; Soler, Ana-Gloria; Rodríguez, Irene; Gómez, Luis-Alberto; Masmiquel, Lluís

Background and Aims: Several factors that worsen the prognosis of the new coronavirus SARS-CoV-2 have been identified, such as obesity or diabetes. However, despite that nutrition may change in a lockdown situation, little is known about the influence of malnutrition among subjects hospitalized due to COVID-19. Our study aimed to assess whether the presence of malnutrition among patients admitted due to COVID-19 had any impact on clinical outcomes compared with patients with the same condition but well nourished.

Methods: 75 patients admitted to hospital due to COVID-19 were analyzed cross-sectionally. Subjective Global Assessment (SGA) was completed by phone interview. Clinical parameters included were extracted from the electronic medical record.

Results: According to the SGA, 27 admitted due to a COVID-19 infection had malnutrition. Patients not well nourished were older than patients with a SGA grade A (65 ± 14.1 vs 49 ± 15.1 years; $p < 0.0001$). Length of hospital stay among poorly nourished patients was significantly higher (18.4 ± 15.6 vs 8.5 ± 7.7 days; $p = 0.001$). Mortality rates and admission to ICU were greater among subjects with any degree of malnutrition compared with well-nourished patients (7.4% vs 0%; $p = 0.05$ and 44.4% vs 6.3%; $p < 0.0001$). CRP (120.9 ± 106.2 vs 60.8 ± 62.9 mg/l; $p = 0.03$), D-dimer (1516.9 ± 1466.9 vs 461.1 ± 353.7 ng/mL; $p < 0.0001$) and ferritin (847.8 ± 741.1 vs 617.8 ± 598.7 mcg/l; $p = 0.03$) were higher in the group with malnutrition. Haemoglobin (11.6 ± 2.1 vs 13.6 ± 1.5 g/dl; $p < 0.0001$) and albumin (3.2 ± 0.7 vs 4.1 ± 0.5 g/dl; $p < 0.0001$) were lower in patients with any degree of malnutrition.

Conclusions: The presence of a poor nutritional status is related to a longer stay in hospital, a greater admission in the ICU and a higher mortality.

Title: Putting Quality Food on the Tray: factors associated with patients' perceptions of the hospital food experience.

Citation: Journal of human nutrition and dietetics : the official journal of the British Dietetic Association; Jun 2021

Author(s): Trinca, Vanessa; Duizer, Lisa; Keller, Heather

Introduction: Perceptions of hospital meal quality can influence patient food intake. Understanding what patients prioritize and what they think of current meals can support menu development. This study assessed patients' food and food-related priorities for hospital meals and their sensory experience using the Hospital Food Experience Questionnaire (HFEQ). Factors independently associated with the HFEQ were determined.

Methods: Cross-sectional study (n= 1,087 patients; 16 Ontario hospitals). Patients completed the HFEQ at a single meal. Descriptive statistics determined the importance of food traits and ratings of a served meal using 22 HFEQ questions (5-point Likert scales total score 110). Bivariate and multivariable linear regression tested the association between patient and hospital characteristics and HFEQ score.

Results: Most food traits were rated as "important" (4) or "very important" (5) by two-thirds or more of patients. Patients typically rated served meal items as "good" (4). Average HFEQ score was 90.60 (SD 10.83) and was associated with patient and hospital traits in multivariable analyses. ($F(42, 556) = 2.34$, $p < 0.10$) was associated with lower HFEQ, while larger hospitals had a higher score.

Conclusion: Patients prioritized taste, freshness and food that met their dietary needs. Meal sensory ratings were average. A gap exists between what patients want in hospital meals and what they receive. Attention to patient demographics and food delivery that retains sensory properties and supports choice may increase HFEQ score.

Title: A systematic review of food waste audit methods in hospital foodservices.

Citation: Journal of human nutrition and dietetics : the official journal of the British Dietetic Association; Jun 2021

Author(s): Cook, Nathan; Collins, Jorja; Goodwin, Denise; Porter, Judi

Background: To understand, monitor and compare the scope of food waste in hospital foodservices, it is essential to measure food waste using a standardised method. The aims of this systematic review were to: (1) describe and critique the methodological features of waste audits used in hospital foodservice settings which measure aggregate food and food-related waste; and (2) develop a consensus tool for conducting a food waste audit in a hospital foodservice setting.

Methods: Seven electronic databases were searched for peer reviewed literature and 17 Google Advanced searches located grey literature that described food waste audit methods previously used or developed for hospital foodservices. Study selection and quality assessment occurred in duplicate. Data describing the audit method, its feasibility and strengths and limitations were extracted and synthesised by authors to develop a consensus tool.

Results: Eight peer reviewed and nine grey literature documents describing a variety of food waste audit methods were found. The most common practices were: two-week data collection (n=5); foodservice staff collecting data (n=6); measuring food waste only (n=11); measuring food waste at main meals (n=5); and using electronic scales to measure waste (n=12). A consensus tool was developed that proposes a method for preparing, conducting and analysing data from a food waste audit.

Conclusion: This review used published evidence to develop the first ever food waste audit consensus tool for hospital foodservices to use and measure food and food-related waste. Future research is needed to apply and test this tool in practice.

Title: Malnutrition signs aren't limited to the scale: There are several indicators of malnutrition--even for children with normal growth.

Citation: Contemporary Pediatrics; Jun 2021; vol. 38 (no. 6); p. 32-33

Author(s): Zimlich, Rachael

Abstract: The article discusses how to identify signs of malnutrition in children, even those with normal growth. Among the malnutrition signs are low energy, pallor, skin rashes and low weight gain. Other topics include the tips from Doctor Praveen Sundaraj Goday on how to introduce children to a good vegetarian diet, and the guidelines from the American Academy of Pediatrics on the appropriate micronutrient requirements of children.

Title: Patient, family and carer experiences of nutritional screening: a systematic review.

Citation: Journal of Human Nutrition & Dietetics; Jun 2021; vol. 34 (no. 3); p. 595-603

Author(s): Bullock ; Greenley, S. L.; Patterson, M. J.; McKenzie, G. A. G.; Johnson, M. J.

Background: Despite recommendations for nutritional risk screening of all inpatients, outpatients and care home residents, as well as work to assess clinician's experiences and the validity of tools, little attention has been paid to the experiences of patients undergoing nutritional screening. This review aims to synthesise systematically the current evidence regarding nutritional risk screening with respect to the experiences and views of patients, their families and carers.

Methods: A systematic search was performed in MEDLINE, Embase, PsychINFO, CINAHL, Web of Science and British Nursing Database (inception – July 2019); with screening terms related to malnutrition, screening tools and experience. Titles, abstracts and full-text papers were independently reviewed by two reviewers and then quality-appraised. Qualitative papers and quantitative surveys were included. A narrative review of surveys and a thematic framework synthesis of interviews were used to identify themes.

Results: Nine studies, including five qualitative interview papers, were included. Qualitative and quantitative study results were combined using a matrix chart to allow comparison. Surveyed participants reported processes of nutritional screening as acceptable. Three key themes emerged from qualitative data: (i) experience of nutritional screening; (ii) misunderstanding of malnutrition: of causes, role of screening and poor self-perception of risk; and (iii) barriers to and opportunities for change.

Conclusions: Although the screening process is acceptable, patients' misunderstanding and poor knowledge regarding causes and consequences of malnutrition result in reduced risk perception and disbelief or disregard of nutritional screening results. Findings should

inform policy and clinical practice, as well as highlight the known paucity of data regarding the effectiveness of screening on clinical outcomes.

Title: Nutrition and oncology: best practice and the development of a traffic light system.

Citation: British Journal of Nursing; May 2021; vol. 30 (no. 10)

Author(s): Atkinson ; Atkinson, Judith

Abstract: Malnutrition is common in oncology patients, with age, disease stage and tumour type all influencing malnutrition risk. There are several detrimental effects of malnutrition in oncology patients, including weight loss, which is associated with negative oncological outcomes, and reduced survival. The causes of malnutrition in this group may be multifactorial and include effects from the tumour itself, altered metabolism, increased nutritional requirements, and cancer treatments and their associated side effects, which can impact on an individual's ability and desire to eat. Nutritional screening to identify early nutritional risk is essential and should involve the use of a validated screening tool, with commonly used tools usually assessing nutritional risk and weight loss over a period of months, for example a 3- to 6-month period. It is also important to consider weight changes over a shorter time period to identify rapid weight changes. Multidisciplinary teamworking is essential in tackling malnutrition, with collaborative working between the dietitians and the nutrition nurses shown to be beneficial in the authors' practice to develop community pathways and improve their service and manage increasing patient numbers. Malnutrition within oncology can often be managed with additional supplementation with oral nutritional supplements or enteral nutrition, where indicated. A low-volume, energy-dense, high-protein supplement can help to meet nutritional needs and to achieve dietetic aims, with compliance improved by the use of a low-volume product.

Title: Comparing the prognostic significance of nutritional screening tools and ESPEN-DCM on 3-month and 12-month outcomes in stroke patients.

Citation: Clinical Nutrition; May 2021; vol. 40 (no. 5); p. 3346-3353

Author(s): Zhang ; Ye, Shenglie; Huang, Xuerong; Sun, Leqiu; Liu, Zhipeng; Liao, Chengwei; Feng, Renqian; Chen, Haoman; Wu, Yanzhi; Cai, Zhongmin; Lin, Qunli; Zhou, Xudong; Zhu, Beilei

Abstract: Malnutrition is prevalent among individuals with acute ischaemic stroke (AIS) and may worsen clinical outcomes. There is no consensus on the best tool for nutritional screening in this population. The present study compared four screening tools and one diagnostic tool in terms of their prognostic significance in predicting short-term and long-term outcomes in AIS patients. We included patients admitted to five major hospitals in Wenzhou and diagnosed with a primary diagnosis of AIS from October 1 to December 31, 2018. The Controlling Nutritional Status (CONUT) score, the Geriatric Nutritional Risk Index (GNRI), the Malnutrition Universal Screening Tool (MUST), the Nutritional Risk Screening Tool 2002 (NRS-2002) and the European Society for Clinical Nutrition and Metabolism diagnostic criteria for malnutrition (ESPEN-DCM) were assessed at admission. The clinical outcomes were evaluated by the modified Rankin Scale (mRS) and mortality at 3 months and 12 months after discharge. Five hundred and ninety-three patients were included in our prospective study. The mean age was 67.3 ± 12.0 years. Based on the mRS score, 125 patients exhibited poor functional recovery (an mRS ≥ 3) at 3 months after discharge.

Seventeen patients died during the 3-month follow-up period, and the other 25 did not survive 12 months. Multivariate binary logistic regression revealed that inadequate nutritional status at admission, as determined by the CONUT, GNRI, MUST, NRS-2002 and ESPEN-DCM, were independently associated with poor outcomes in AIS patients 3 months after discharge. Both MUST ≥ 2 and NRS-2002 ≥ 3 showed significant associations with poor outcomes at 12-month post-discharge. Further analysis with the receiver operator characteristic (ROC) curve showed similar results, where all the tools predicted the poor outcomes at 3 months while only the NRS-2002 and MUST scores were significantly associated with the mRS at 12 months post-discharge. Moreover, the area under the curve (AUC) of MUST and NRS-2002 were significantly larger than those for the other tools. The optimal cut-off values of the MUST and NRS-2002 to predict poor outcomes were scores of ≥ 2 and ≥ 3 points, respectively. Our data supported a deleterious effect of inadequate nutrition, as evidenced by the nutrition screening tools or ESPEN-DCM, on clinical outcomes during and beyond the acute phase of AIS. We recommended the use of the MUST and NRS-2002 in guiding nutritional support in AIS patients, as they have higher predictive power and can predict both short-term and long-term outcomes.

Title: Choice of access route for artificial nutrition in cancer patients: 30 y of activity in a home palliative care setting

Citation: Nutrition; Oct 2021; vol. 90

Author(s): Ruggeri E.; Giannantonio M.; Ostan R.; Agostini F.; Pannuti R.; Sasdelli A.S.; Pironi L.; Valeriani L.

Objectives: Malnutrition negatively affects the quality of life, survival, and clinical outcome of patients with cancer. Home artificial nutrition (HAN) is an appropriate nutritional therapy to prevent death from cachexia and to improve quality of life, and it can be integrated into a home palliative care program. The choice to start home enteral nutrition (HEN) or home parenteral nutrition (HPN) is based on patient-specific indications and contraindications. The aim of this observational study was to analyze the changes that occurred in the criteria for choosing the access route to artificial nutrition during 30 y of activity of a nutritional service team (NST) in a palliative home care setting, as well as to compare indications, clinical nutritional outcomes, and complications between HEN and HPN.

Method(s): The following parameters were analyzed and compared for HEN and HPN: tumor site and metastases; nutritional status (body mass index, weight loss in the past 6 mo); basal energy expenditure and oral food intake; Karnofsky performance status; access routes to HEN (feeding tubes) and HPN (central venous catheters); water and protein-calorie support; and survival and complications of HAN.

Result(s): From 1990 to 2020, HAN was started in 1014 patients with cancer (592 men, 422 women; 65.6 \pm 12.7 y of age); HPN was started in 666 patients (66%); and HEN was started in 348 patients (34%). At the end of the study, 921 patients had died, 77 had suspended HAN for oral refeeding and 16 were in the progress of HAN. The oral caloric intake was $<50\%$ basal energy expenditure in all patients: 721 (71.1%) were unable to eat at all (HEN 270, HPN 451), whereas in 293 patients (28.9%), artificial nutrition was supplementary to oral intake. From 2010 to 2020, the number of central venous catheters for HPN, especially peripherally inserted central catheters, doubled compared with that in the previous 20 y, with a decrease of 71.6% in feeding tubes for HEN. At the beginning, patients on HEN and HPN had comparable nutrition and performance status, and there was no difference in nutritional outcome after 1 mo of HAN. In 215 patients who started supplemental parenteral nutrition to oral feeding, total protein-calorie intake allowed a significant increase in body mass index and Karnofsky performance status. The duration of

HEN was longer than that of HPN but was similar to that of supplemental parenteral nutrition.

Conclusion(s): Over 30 y of nutritional service team activity, the choice of central venous catheters as an access route to HAN increased progressively and significantly due to personalized patient decision-making choices. Nutritional efficacy was comparable between HEN and HPN. In patients who maintained food oral intake, supplemental parenteral nutrition improved weight, performance status, and survival better than other types of HAN. Copyright © 2021 Elsevier Inc.

Sources Used:

The following databases are used in the creation of this bulletin: Amed, British Nursing Index, Cinahl & Medline.

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