

Nutrition & Hydration

Current Awareness Bulletin

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Supporting patients with meals and snack times while in hospital

Through The Patients Association's project work with NHS England, patients and carers have identified several areas where NHS resources supporting meal and snack times in hospital could be strengthened or improved through minor amendments. Participants in a focus group said that NHS England's existing written resources for patients and staff were clear and helpful, but felt that some changes and additional information on the online portal, where the resources are accessed, could make them even better.

1. The incidence of refeeding syndrome and the nutrition management of severely malnourished inpatients with eating disorders: An observational study

Authors: Brodie, Emily;van Veenendaal, Nicholas;Platz, Emma;Fleming, Judith;Gunn, Hamish;Johnson, Douglas;Griffin, Hilda and Wittholz, Kym

Publication Date: 2024

Journal: International Journal of Eating Disorders 57(3), pp. 661-670

Abstract: Objective: Nutritional rehabilitation and weight restoration are often critical for the treatment of eating disorders (ED), yet are restricted by the potential risk of refeeding syndrome (RFS). The primary objective was to determine the incidence of RFS. Secondary objectives were to explore predictive factors of RFS and describe its impact on treatment goals for patients with ED. Method: This retrospective observational study reviewed the nutrition management for patients admitted to a quaternary hospital for ED treatment from 2018 to 2020. Data were collected during the first 4 weeks of admission and included anthropometry, energy prescription, incidence and severity of RFS, and electrolyte and micronutrient prescription. Outcomes included incidence of RFS, energy prescription and advancement, and weight change. Results: Of 423 ED admissions, 217 patients (median interquartile range, [IQR] age 25 21–30.5] years; 210 97%] female) met inclusion criteria. Median (IQR) body mass index (BMI) on admission was 15.5 (14.1–17.3) kg/m². The mean (standard deviation) length of admission was 35 (7.3) days. Median (IQR) initial energy prescription was 1500 (930–1500) kcal/day. Seventy-three (33%) patients developed RFS; 34 (16%) mild, 27 (12%) moderate, and 12 (5%) severe. There was no association between RFS severity and admission BMI, energy prescription, or prescription of prophylactic electrolytes or micronutrients. Lower admission weight was associated with RFS (odds ratio 0.96, 95% confidence interval 0.93–1.00], $p = .035$). Less than half of the participants met the weight gain target (>1 kg per week) in the first 3 weeks of admission. Discussion: The incidence of severe RFS was low in this cohort and was associated with lower admission weight. Public Significance: This study is one of the largest studies to utilize consensus-defined criteria to diagnose RFS among adult patients admitted for treatment of an ED. This population is still considered to be at risk of RFS and will require close monitoring. The results add to the growing body of research that restriction of energy prescription to prevent RFS may not require the level of conservatism traditionally practiced.

2. Nutrition considerations in the transgender and gender-diverse patient

Authors: Gold, Evelyn;Perez de Bronner, Susana and Goday, Praveen S.

Publication Date: 2024

Journal: Nutrition in Clinical Practice 39(2), pp. 366-372

Abstract: The nutrition professional is increasingly providing care to individuals who identify as transgender. However, there are few definitive guidelines on providing medical nutrition care to this population. It is becoming better understood that this population is at elevated nutrition risk secondary to significant health disparities. More recently, the increasing prevalence of gender-affirming medical intervention has resulted in uncertainty when providing medical nutrition assessments and therapies, as many standardized guidelines and assessment tools are sex-specific. This review aims to provide clarity in exploring various gender-affirming methods to providing nutrition care to the transgender and

gender-diverse population.

3. Measuring mealtime performance in older adults with suspected oropharyngeal dysphagia: an updated systematic review of psychometric properties

Authors: Hansen, Tina;Rasmussen, Sophia Alberte Fisker;Fabricius, Jesper;Grove, Linda-Maria Delgado and Simpelaere, Ingeborg

Publication Date: 2024

Journal: Disability & Rehabilitation 46(5), pp. 841-855

Abstract: To update a previous review of psychometric properties of performance-based outcome measurement instruments (PerFOMs) for task performance in the context of meal activity of older adults (≥ 65 years) with suspected oropharyngeal dysphagia (OD). Systematic searches were conducted in PubMed, CINAHL, EMBASE, SCOPUS, and Web of Science. Studies on PerFOMs that covers items reflecting skills in the pre-oral, oral, and pharyngeal stages of ingestion during meals were included. Two review authors independently screened, extracted, and evaluated the methodological rigour and quality of the reported psychometric properties in the included studies using the guidelines of the COnsensus-based Standards for the Selection of health Measurement INstruments (COSMIN). Twenty-three articles featuring nine original PerFOMs and five translated versions were included. PerFOM development and content validity were rated with inadequate or doubtful methodological quality across all studies. The quality of the evidence across the additional psychometric properties of the PerFOMs was very low for two, ranged from very low to moderate for six, and from very low to high for five. There is limited evidence of the psychometric properties of available PerFOMs for measuring task performance during meals in older adults with OD, and further validation is warranted. Assessing the mealtime performance of older adults with oropharyngeal dysphagia (OD) provides important information. Performance-based outcome measurement instruments (PerFOMs) need to be valid and reliable. Clinicians need to be careful when choosing PerFOMs to assess the mealtime performance of older adults with OD as there is insufficient evidence on the quality of available instruments. Established guidelines and standards should be used when developing and investigating psychometric properties of PerFOMs assessing mealtime performance of older adults with OD.

4. Nutrition and pressure injury prevention in the intensive care unit: Weighing the evidence

Authors: Hardy, Georgia;Ridley, Emma J. and Tatucu-Babet, Oana

Publication Date: 2024

Journal: Intensive & Critical Care Nursing 81, pp. 103579

Abstract: Competing Interests: Declaration of Competing Interest The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

5. Evaluation of a Nutrition Education and Skills Training programme in vulnerable adults who are at high risk of food insecurity

Authors: Kearsey, Jade L.;West, Elisha;Vairinhos, Nelia;Constable, Nicole;Chu, Angelica;Douglas, Nigel and Charlton, Karen

Publication Date: 2024

Journal: Journal of Human Nutrition & Dietetics 37(2), pp. 418-429

Abstract: Background: In Australia, the prevalence of food insecurity increased by 1.5% between 2014 and 2016 and 2018 and 2020 due to effects of the COVID-19 pandemic. OzHarvest offers a 6-week

Nutrition Education and Skills Training (NEST) programme to adults at risk of food insecurity. NEST provides 2.5-h weekly cooking workshops on simple, healthy and affordable meals. This study aimed to determine the immediate (post) and longer-term (6 months) impacts of participation in NEST. Methods: A quasi-experimental study with pre–post surveys (n = 258) and 6-month follow-up surveys (n = 20) was conducted from June 2019 to July 2022. Survey results were obtained from NEST programme participants (≥18 years) from six major Australian cities. Results: Participants demonstrated immediate improvement in nutrition knowledge (p < 0.001), food preparation behaviours (p < 0.001) and confidence and self-efficacy (n = 222; p < 0.001). Intake of discretionary foods decreased (p < 0.001), whereas fruit, vegetable and water intake increased (p < 0.001). Food security improved from 57% to 68% immediately after the completion of the programme (p < 0.001). Participants demonstrated longer-term improvements in nutrition knowledge (p < 0.001), cooking confidence (n = 8; p = 0.03), food preparation behaviours (p = 0.003) and increased vegetable (p = 0.03) and fruit intake (p = 0.01). Conclusions: Participation in OzHarvest's NEST programme results in short-term improvements in food security levels and dietary behaviours. Over the longer term, these changes were sustained but to a lesser degree, indicating that systemic changes are required to address underlying socio-economic disadvantages. Key points: NEST is a 6-week programme that provides nutrition education and skills training on cooking simple, healthy and affordable meals to adults at risk of food insecurity. Participation in the programme resulted in significant beneficial impacts for food security, food literacy and dietary intake. Over the longer term, these changes were sustained but to a lesser degree, indicating that systemic changes are required to address underlying socio-economic disadvantages. It is recommended that food literacy programmes such as NEST be accompanied with financial programmes and job placement schemes.

6. Food, nutrition and the dining experience in aged care settings: Findings of a nationwide survey

Authors: Mellow, Maddison L.; Luscombe-Marsh, Natalie; Taylor, Pennie J.; Kenny, Peter and Lushington, Kurt

Publication Date: 2024

Journal: Australasian Journal on Ageing 43(1), pp. 100-111

Abstract: Objective: Previous research on food, nutrition and dining practices in Australian residential aged care (RAC) homes has been based on a limited sample of single-home or multiple-home providers, but a nationwide study has not been conducted. The aim of this study was to provide a preliminary overview of current food, nutrition and dining practices across Australian RAC facilities using a nationwide survey. Methods: A survey was distributed to Australian RAC homes in August–September 2020, as part of the National Congress on Food, Nutrition and the Dining Experience in Aged Care (February 2021). The survey, administered via an online portal, consisted of 38 semistructured questions including yes/no or multiple-choice responses, free text, frequency scales and number entry. Six key topics were explored, including 'food service system and environment', 'catering style', 'menu planning and evaluation', 'nutrition planning and requirements', 'nutrition-related screening and assessment' and 'training and additional information', which were informed by the Australian Government Department of Health and reflected the interests of the Congress. Results: The final sample included 292 respondents (204 individual homes and 88 multiple-home proprietors) representing 1152 homes and 125,393 residents, encompassing approximately 43% of RAC homes (of a possible 2671) and 57% of residents (of a possible 219,965) in Australia. Survey respondents representing RAC homes included service managers, catering managers, Chief Executive Officers, cooks, chefs, dietitians or staff from other roles within homes. A number of potential areas of need were identified, included increasing the autonomy of residents to select the foods they desire, increasing the variety and choice (including timing) of meals, enhancing the dining environments in homes to stimulate food intake and increasing staff training and the number of trained chefs in homes, so that meals are prepared which address diverse nutritional needs of residents. Conclusions: This study provides insight into the food service and mealtime practices of over a third of Australian RAC homes. The findings of this survey may help to identify key targets for intervention to improve the food, nutrition and quality of life of aged care residents.

7. Nutrition practices in hospitalized adults receiving noninvasive forms of respiratory support: A scoping review

Authors: Page, Kaitlyn;Viner Smith, Elizabeth and Chapple, Lee-Anne S.

Publication Date: 2024

Journal: Nutrition in Clinical Practice : Official Publication of the American Society for Parenteral and Enteral Nutrition 39(2), pp. 344-355

Abstract: The use of noninvasive respiratory support is increasing, with noninvasive ventilation (NIV) and high-flow nasal cannula providing unique barriers to nutrition support. Limited data related to nutrition management for these patients in the intensive care unit (ICU) exist; however, the literature in non-critically ill patients is not well described, and its improvement may help to inform practice within the ICU. Therefore, a scoping review was conducted of MEDLINE, EmCare, and Cumulative Index of Nursing and Allied Health Literature (CINAHL) databases on August 18, 2022, to identify original publications that included adult patients receiving noninvasive respiratory support in a hospital setting with data related to nutrition management. Data were extracted on study design, population, details of respiratory support, and concepts relating to nutrition management (grouped into nutrition screening, assessment, delivery route, intake, and anthropometry). Eleven studies were included, most of which were small (<100 patients), single-center, observational trials in patients receiving NIV only. Five studies reported results related to route of nutrition and nutrition assessment, two on anthropometry, and one each on quantifying intake and nutrition screening; some studies reported multiple parameters. There was a lack of consensus regarding the ideal method for nutrition assessment and route of nutrition. Oral nutrition was the route most frequently reported, yet calorie and protein delivery via this route were inadequate, and barriers to intake included poor appetite, fatigue, and patient cognition. Future research should address barriers pertinent to this population and the impact of nutrition on outcomes. (© 2023 The Authors. Nutrition in Clinical Practice published by Wiley Periodicals LLC on behalf of American Society for Parenteral and Enteral Nutrition.)

8. Smartphone applications for nutrition Support: A systematic review of the target outcomes and main functionalities

Authors: Pala, Daniele;Petrini, Giorgia;Bosoni, Pietro;Larizza, Cristiana;Quaglini, Silvana and Lanzola, Giordano

Publication Date: 2024

Journal: International Journal of Medical Informatics 184, pp. 105351

Abstract: Introduction: A proper nutrition is essential for human life. Recently, special attention on this topic has been given in relation to three health statuses: obesity, malnutrition and specific diseases that can be related to food or treated with specific diets. Mobile technology is often used to assist users that wish to regulate their eating habits, and identifying which fields of application have been explored the most by the app developers and which main functionalities have been adopted can be useful in view of future app developments.; Methods: We selected 322 articles mentioning nutrition support apps through a literature database search, all of which have undergone an initial screening. After the exclusion of papers that were already reviews, not presenting apps or not focused on nutrition, not relevant or not developed for human subjects, 100 papers were selected for subsequent analyses that aimed at identifying the main treated conditions, outcome measures and functionalities implemented in the Apps.; Results: Of the selected studies, 33 focus on specific diseases, 24 on obesity, 2 on malnutrition and 41 on other targets (e.g., weight/diet control). Type 2 diabetes is the most targeted disease, followed by gestational diabetes, hypertension, colorectal cancer and CVDs which all were targeted by more than one app. Most Apps include self-monitoring and coaching functionalities, educational content and artificial intelligence (AI) tools are slightly less common, whereas counseling, gamification and questionnaires are the least implemented. Body weight and calories/nutrients were

the most common general outcome measures, while glycated hemoglobin (HbA1c) was the most common clinical outcome. No statistically significant differences in the effectiveness of the different functionalities were found.; Conclusion: The use of mobile technology to improve nutrition has been widely explored in the last years, especially for weight control and specific diseases like diabetes; however, other food-related conditions such as Irritable Bowel Diseases appear to be less targeted by newly developed smartphone apps and their related studies. All different kinds of functionalities appear to be equally effective, but further specific studies are needed to confirm the results.; Competing Interests: Declaration of competing interest The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper. (Copyright © 2024 The Authors. Published by Elsevier B.V. All rights reserved.

9. Nutrition essential for wound healing

Authors: Palmer, Sarah Jane

Publication Date: 2024

Journal: British Journal of Community Nursing 29, pp. S32-S36

Abstract: Sarah Jane Palmer describes the powerful impact diet can have on the capability of a wound to heal itself. A wide range of nutrients can improve healing, yet malnutrition in everyday diet, regardless of a person's weight, can significantly delay or prevent healing. This article explores wound types, such as chronic wounds and burns, and discusses immunonutrition.

10. Proposal of a nutrition screening algorithm for patients with incurable cancer receiving palliative care: Data from a prospective cohort

Authors: Rosa, Karla Santos da Costa;Wiegert, Emanuely Varea Maria and Oliveira, Livia Costa de

Publication Date: 2024

Journal: Nutrition in Clinical Practice : Official Publication of the American Society for Parenteral and Enteral Nutrition 39(2), pp. 485-499

Abstract: Objective: To propose and evaluate the clinical utility of a new nutrition screening algorithm, NutriPal, to detect the degree of nutritional risk in patients with incurable cancer receiving palliative care.; Methods: It is a prospective cohort conducted in an oncology palliative care unit. The NutriPal algorithm was used in a three-step process: (i) administration of the Patient-Generated Subjective Global Assessment short form; (ii) calculation of the Glasgow Prognostic Score; and (iii) application of the algorithm to classify patients into four degrees of nutritional risk. The higher the degrees of NutriPal, the worse the nutritional risk, comparing nutritional measures, laboratory data, and overall survival (OS).; Results: The study included 451 patients that were classified using the NutriPal. They were allocated to the degrees: 1 (31.26%), 2 (27.49%), 3 (21.73%), and 4 (19.71%). Statistically significant differences were found in most of the nutritional and laboratory parameters and in OS with each increment in the NutriPal degrees, and OS was reduced (log-rank <0.001). In addition, NutriPal was able to predict a 120-day mortality: there was a significantly higher risk of death in the patients classified as degrees 4 (hazard ratio HR], 3.03; 95% confidence interval 95% CI], 2.18-4.19), 3 (HR, 2.01; 95% CI, 1.46-2.78), and 2 (HR, 1.42; 95% CI; 1.04-1.95) than in those classified as degree 1. It also showed good predictive accuracy (concordance statistic, 0.76).; Conclusion: The NutriPal is associated to nutritional and laboratory parameters and can predict survival. It could therefore be incorporated into clinical practice for patients with incurable cancer receiving palliative care. (© 2023 American Society for Parenteral and Enteral Nutrition.)

11. A collaborative approach to designing an online nutrition education program for people with multiple sclerosis

Authors: Russell, Rebecca D.;Black, Lucinda J.;Purdue, Justine;Daly, Alison and Begley, Andrea

Publication Date: 2024

Journal: Disability & Rehabilitation 46(5), pp. 947-956

Abstract: People with multiple sclerosis (pwMS) want disease-specific dietary advice to reduce the confusion around diet. This study used co-design principles to develop an online nutrition education program for pwMS. Mixed-methods (multiphase sequential design). Phase 1: online survey (n = 114 pwMS) to explore preferred content and characteristics of a nutrition program and develop a draft program. Phase 2: feedback on the draft program from stakeholders (two meetings; n = 10 pwMS and multiple sclerosis (MS) health professionals) and pwMS (two workshops; n = 6) to produce a full program prototype. Phase 3: cognitive interviews (n = 8 pwMS plus 1 spouse) to explore acceptability and ease of comprehension of one module of the program, analysed using deductive content analysis. Preferred topics were included in the program, which were further developed with consumer feedback. Cognitive interviews produced four themes: (1) positive and targeted messaging to motivate behaviour change; (2) "not enough evidence" is not good enough; (3) expert advice builds in credibility; and (4) engaging and appropriate online design elements are crucial. Positive language appears to improve motivation to make healthy dietary changes and engagement with evidence-based nutrition resources. To ensure acceptability, health professionals can use co-design to engage consumers when developing resources for pwMS. Co-designed nutrition education programs can help people achieve high-quality diets in line with recommendations, but very few programs exist for people with multiple sclerosis (MS), and none were co-designed. The participatory research in this study was instrumental in ensuring that important information regarding program acceptability was identified. Co-design can ensure that the language is appropriate for the target audience, and positive language appeared to improve motivation in people with MS to engage with the online nutrition education program. Where practical and feasible, health professionals should collaborate with MS consumers when developing resources, and use positive, empowering language.

12. The future of artificial intelligence in clinical nutrition

Authors: Singer, Pierre;Robinson, Eyal and Raphaeli, Orit

Publication Date: 2024

Journal: Current Opinion in Clinical Nutrition & Metabolic Care 27(2), pp. 200-206

13. Nutrition therapy in critically ill patients with severe acute pancreatitis

Authors: Sun, Jia-Kui;Lv, Cheng;Gao, Lin;Mao, Wenjian;Li, Weiqin and Ke, Lu

Publication Date: 2024

Journal: Nutrition in Clinical Practice : Official Publication of the American Society for Parenteral and Enteral Nutrition 39(2), pp. 271-280

Abstract: A significant proportion of patients (10%-20%) with acute pancreatitis develop severe acute pancreatitis characterized by pancreatic necrosis, systemic inflammation, and organ failure, commonly requiring intensive care unit (ICU) admission. In this specific population, nutrition therapy is more challenging than that in the general ICU population, primarily because of inevitable gastrointestinal involvement by pancreatic inflammation. In this review, we discussed several key aspects of nutrition therapy in this population, including key pathophysiology that may impede nutrition therapy, the timing and implementation of enteral nutrition and parenteral nutrition, the importance of specific nutrient supplements, and the long-term outcomes that may be addressed by nutrition therapy. (© 2024 American Society for Parenteral and Enteral Nutrition.

Sources Used:

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

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