Nutritional Assessment - Evidence Update  
September 2011

Welcome to the September Nutritional Assessment Evidence Update Bulletin being produced by the HEFT Library Services. This bulletin is produced to support VITAL for Nurses core skills programme developed in the Trust. This issue will highlight evidence published in the previous four weeks. Full text articles can be accessed with your HEFT Athens ID.

Organisation

Using enter-and-view provision to review hospital nutritional care
Nursing Management UK. June; 18(3) p.26-9
This article reviews adult inpatient nutritional care at North Bristol NHS Trust. It is carried out by LINk which is the South Gloucestershire local improvement network. Included in the report are the enter-and-view process and findings, examples of good practice and recommendations for improvement.

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Screening

Comparison of five malnutrition screening tools in one hospital inpatient sample.
This study compares five commonly used malnutrition screening tools against an acknowledged definition of malnutrition in one hospital inpatient group. The tools used were; Malnutrition Screening Tool (MST), Short Nutritional Assessment Questionnaire (SNAQ) and Mini-Nutritional Assessment Short Form (MNA-SF), Malnutrition Universal Screening Tool (MUST) and Nutritional Risk Screening 2002 (NRS-2002). These were compared to an acknowledged definition of malnutrition (including low Body Mass Index and unintentional weight loss). The results highlighted that the quick-and-easy malnutrition screening tools (MST and SNAQ) are suitable for use in an hospital inpatient setting. They performed as well as the comprehensive malnutrition screening tools (MUST and NRS-2002) on criterion validity. However, MUST was found to be less applicable.
Comparison of the prevalence of malnutrition diagnosis in head and neck, gastrointestinal, and lung cancer patients.
Cancer Nursing. September; 34(5) p.410-6
The purpose of this study is to identify malnutrition indicators. During 1998 Records of 227 patients hospitalised with head and neck, gastrointestinal, or lung cancer were reviewed for malnutrition based on 3 methods: physician-diagnosed malnutrition-related International Classification of Diseases, in-hospital nutritional assessment summaries conducted by registered dieticians and body mass indexes (BMIs). The study concluded that a validated tool that can be used by various healthcare practitioners, including nurses, needs to be considered.

Recognition

Do handheld calorimeters have a role in assessment of nutrition needs in hospitalized patients?
Nutrition in Clinical Practice. August; 26(4) p.426-33
Indirect calorimetry is a noninvasive and reliable means of determining resting metabolic rate in humans. Barriers to obtaining an accurate measure of resting metabolic rate (RMR) in hospitalised patients include the expense and the need for technical expertise for maintenance. This study examines the validity and reliability of handheld calorimeters for measuring resting energy expenditure based on published literature. Handheld calorimeters are more accurate than predictive equations based on gender, age, and ethnicity for determining resting metabolic rate and are therefore a viable alternative for clinical evaluation of the hospitalised patient.

How do disorders related to hospitalisation influence haemodialysis patients' nutrition?
Nefrologia. July; 31(4) p.471-83
Haemodialysis patients spend a lot of time in hospital and often experience nutritional deterioration shown by a loss of weight and a reduction in albumin serum levels. This study observed changes in body weight in haemodialysis patients and other nutritional parameters that are influenced by the illnesses presented during hospitalisation. The study concluded that malnutrition during the hospital stay depends on the duration and the number of disorders that develop during this time, the cause of admission has less impact. Albumin levels decrease earlier in patients that are going to develop more disorders during hospital stay.
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Impact of nutritional status on long-term functional outcomes of post-acute stroke patients in Taiwan.
Archives of Gerontology & Geriatrics. September; 53(2) e.149-52
The main purpose of this study was to evaluate to the prognostic role of nutritional status on long-term functional outcomes among stroke survivors. Patients with poor functional outcomes were more likely to be malnourished. The study concludes that more attentions should be paid to malnutrition to promote quality of stroke care.

Malnutrition as a predictor of poor postoperative outcomes in gynecologic cancer patients.
Archives of Gynecology & Obstetrics. August; 284(2)
Poor nutritional status has been associated with increased postoperative morbidity and mortality in surgical patients. The purpose of this study is to evaluate if decreased nutritional parameters correlate with increased postoperative complications regardless of other risk factors in gynaecologic cancer patients. Results show that decreased albumin is significantly associated with more postoperative complications, hospital readmissions, reoperations, ICU admissions, and cancer recurrence. This nutritional parameter is an important predictor of postoperative morbidity and mortality. Therefore, it is important to assess nutritional status preoperatively and offer nutritional support or alternate treatment options if necessary.
Nutrition During Trimodality Treatment in Stage III Non-small Cell Lung Cancer: Not Only Important for Underweight Patients.

Journal of Thoracic Oncology. September; 6(9) p.563-8

Trimodality treatment consisting of chemoradiotherapy followed by surgery, is associated with treatment-related toxicity, malnutrition, and postoperative complications. This retrospective study investigates the predictive value of nutritional parameters on postoperative morbidity, mortality, and survival in stage III non-small cell lung cancer (NSCLC) patients. This study indicates that malnutrition especially in overweight patients negatively influences survival outcomes of trimodality treatment for stage III NSCLC.

Interventions

A.S.P.E.N. position paper: Parenteral nutrition glutamine supplementation.

Nutrition in Clinical Practice. August; 26(4) p.479-494

The A.S.P.E.N. recommendations are: Parenteral glutamine administration is associated with a decrease in infectious complications, decrease in hospital length of stay, and possibly a decrease in mortality in critically ill postoperative or ventilator dependent patients requiring parenteral nutrition (PN). Parenteral glutamine may be beneficial in certain other adult surgical patients, such as patients undergoing major abdominal surgery, or critically ill non-ventilated patients requiring PN. However, the practicality of compounding free L-glutamine for use in or with PN should be weighed with the benefits that may be gained with its use. A.S.P.E.N. recommends that a FDA-approved parenteral glutamine dipeptide solution should be made available for use based on the professional judgment of prescribers.

Contributions of intestinal bacteria to nutrition and metabolism in the critically ill.

Surgical Clinics of North America. August 91(4) p.771-85

This paper discusses important advances in the study of bacteria associated with the human gastrointestinal tract and the implications for clinicians striving to meet the metabolic and nutritional needs of critically ill patients. It gives a broad overview of the importance of the host-microbe relationship, discusses what is currently known about the role of gut microbes in nutrition and metabolism in the healthy human host, reviews how gut microbes are affected by critical illness, and discusses interventions that have already been used to manipulate the gut microbiome in patients in the intensive care unit.

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The effects of an oral supplement enriched with fish oil, prebiotics, and antioxidants on nutrition status in Crohn's disease patients.

Nutrition in Clinical Practice. August; 26(4) p.463-473 Research in the treatment of Crohn's disease (CD) supports anti-inflammatory benefits of n-3 fatty acids from fish oil, prebiotics, and antioxidants. A nutritionally balanced inflammatory bowel disease nutrition formula (IBDNF) enriched with these compounds has the potential to improve nutrition status and disease activity in CD. IBDNF has the potential to deposit fat-free and fat mass, improve vitamin D status, and improve quality of life in CD patients.

An Essential Infusion for an Essential Organ.

Nutrition in Clinical Practice. August; 26 p.434-439

This paper looks at research into essential amino acid-based parenteral nutrition (PN) to determine whether this should be offered to patients with acute renal failure.

Nutrition in Clinical Practice. August; 26 p.374-381

This paper discusses optimal nutrition management in acute kidney injury. This includes providing adequate macronutrient support to correct underlying conditions and prevent ongoing loss, supplementing micronutrients and vitamins during renal replacement therapy, and adjusting electrolyte replacement based on the degree and extent of renal dysfunction.

Nursing Role

Cup of tea and a chat.

Nursing Standard. 25(41) p.22-3

Leighton Hospital in Crewe introduced a project to improve the welfare and diet of older inpatients. The introduction of nurse specialist-run twice-weekly memory clubs with tea and cake and objects designed to promote reminiscence and the implementation of malnutrition screening and pictorial menus to aid in food choices are described.

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Ensuring hydration.

Nursing Times. July; 107(28) p.8-9

In this article, dehydration in hospital patients and its consequences are discussed. Skills and strategies for the assessment of hydration status are described and signs and symptoms of dehydration are identified. Opportunities for nurses to provide fluids are suggested.

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A half-empty glass does not prove your patient can drink.

Nursing Times. July 107(28) p.11

This brief article comments on adequate hydration for patients, suggesting that nurses should do more to recognise dehydration and ensure that patients are getting enough to drink. The problems of dehydration in hospital patients are discussed.

Available in fulltext at ProQuest (Legacy Platform)

Further Information

Multiple sources – websites, journals and healthcare databases – have been searched for evidence published in the last four weeks.

For further information please contact Sue.Clayton@heartofengland.nhs.uk or ext 45195 (Solihull Hospital)

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