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January 2013

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Enquiry Details
Completion of food record charts - how can this be improved.
What is the importance of this?
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**Word documents**
Select Edit from the menu, the Find and type in your term in the search box which is presented. The search function will locate the first use of the term in the document. By pressing 'next' you will jump to further references.
All Wales food record chart and nutritional care pathway
The **All Wales food record chart and nutritional care pathway** has been introduced into all hospital settings.

Free to lead free to care – all Wales food record chart & nutritional care pathway

### Specific Research

**Title:** Food record charts.
**Citation:** Nursing Times, August 2002, vol./is. 98/34(53-4), 0954-7762;0954-7762 (2002)
**Author(s):** Freeman L

**Title:** NTplus. Food record charts.
**Citation:** Nursing Times, 20 August 2002, vol./is. 98/34(53-54), 09547762
**Abstract:** Lesley Freeman explains why food record charts are an important component of nutritional assessment.

Full text at: [www.nursingtimes.net/food-record-charts/206431.article](http://www.nursingtimes.net/food-record-charts/206431.article)

**Title:** Are food record charts useful components of nutritional assessment?
**Citation:** Journal of Human Nutrition & Dietetics, 01 June 2009, vol./is. 22/3(256-256),
**Author(s):** Cartlidge M, Fujiwara T, Richardson R

**Attached**

**Title:** Dietary intake of older patients in hospital and at home: the validity of patient kept food diaries.
**Citation:** Journal of Nutrition, Health & Aging, February 2008, vol./is. 12/2(102-6), 1279-
**Author(s):** Gariballa SE, Forster SJ
**Abstract:** OBJECTIVE: To investigate the validity of a patient kept food diary in relation to weighted intakes and to measure dietary intakes of older people both in hospital and after discharge at home.DESIGN: A randomly selected cohort of hospitalised elderly patients was recruited. All patients were instructed how to keep a record of all food and drink consumed and any leftovers. Food diaries were kept for up to seven days in hospital and for seven days in the community. In 18 consecutive patients dietary records were compared with weighed intake.SETTING: Associate Teaching Hospital, United Kingdom.RESULTS: A total of 116 patients participated in the study (median age 77 years, range 66-86 yrs; 49 female). We found significant correlations between food diary and weighted macronutrient intakes both in hospital and in the community. Overall the food diary predicted within+/-17% weighted energy intakes in 70% of individuals. Compared with the National Diet and Nutrition Survey for free-living elderly people in the UK (1998), we found more or less similar energy and micronutrient intakes in hospital, but lower intakes at home.CONCLUSION: Patients kept food diaries can be used to identify those at risk of undernutrition and monitor those on nutritional support. It can also be used for nutritional education and for achieving dietary goals.

**Title:** Assessment and documentation of patients' nutritional status: perceptions of registered nurses and their chief nurses.
**Citation:** Journal of Clinical Nursing, Aug 2008, vol. 17, no. 16, p. 2125-2136, 0962-1067
**Author(s):** Persenius, M, Hall-Lord, M, Baath, C
**Abstract:** Research in Sweden in municipal and council care, on chief nurses' and registered nurses' perceptions of patients' nutritional status and assessment tools, and registered nurses' perceptions of nutritional documentation, including the value of a documentation model. Interviews and questionnaires examined perceptions of the incidence of malnutrition, performance of assessment and the advantages and disadvantages of the VIPS model of documentation. [(BNI unique abstract)] 59 references
Available from EBSCOhost in Journal of Clinical Nursing
Title: Introducing a nutrition screening tool: an exploratory study in a district general hospital.
Citation: Journal of Advanced Nursing, Oct 2003, vol. 44, no. 1, p. 12-23, 0309-2402
Author(s): Jordan, S, Snow, D, Hayes, C
Abstract: Research to evaluate the Nursing Nutritional Screening Tool and its impact on nutrition-related documentation, patient care at mealtimes, and referrals to dietitians. [(BNI unique abstract)] 87 references
Available from EBSCOhost in Journal of Advanced Nursing

Title: Estimation of energy intake in clinical practice: a comparison between a food record protocol and a precoded food record book.
Citation: Journal of Clinical Nursing, Sep 2002, vol. 11, no. 5, p. 688-694, 0962-1067
Author(s): Lorefalt, B, Unosson, M
Abstract: Quantitative research with older people in Sweden. [(BNI unique abstract)] 20 references
Available from EBSCOhost in Journal of Clinical Nursing

Title: Nutrition in advanced age: dietary assessment in the Newcastle 85+ study.
Citation: European Journal of Clinical Nutrition, February 2009, vol./is. 63 Suppl 1/(S6-18),
Author(s): Adamson AJ, Collerton J, Davies K, Foster E, Jagger C, Stamp E, Mathers JC,
Abstract: BACKGROUND/OBJECTIVES: Assessing food choice and/or nutrient intake in older people, particularly the oldest old (85 years and over), presents particular challenges. In some cases the respondent may have little or no involvement in food acquisition or preparation, in others, cognitive/memory impairment may restrict the ability to recall intake, or physical limitations may affect the ability to record intake. The assessment may therefore need to involve whoever provides care for the older person, of whom there may be more than one. For these reasons, there is a need for validated methods for dietary assessment in large populations within this age range. The need is particularly acute in view of the secular increase in the numbers of older people and the interest in the role of nutrition in maintaining health and ameliorating age-related decline. This paper describes a comparison of two different methods of dietary assessment within the Newcastle 85+ Study; a UK cohort study of health and ageing in the oldest old.METHODS: Two methods, the food frequency questionnaire (FFQ) (based on broad recall of the previous 12 months intake) and the repeated multiple pass recall (MPR) tool (based on detailed recall of the previous day's intake on two separate occasions), were applied in two different groups of approximately 85 individuals aged 85 years. FFQ data were collected during a pilot study conducted between 2003 and 2004, MPR data were collected in the main Newcastle study in 2006. Relative validity was measured by calculation of the ratio of reported energy intake to estimated basal metabolic rate (EI/BMR) and by comparison with dietary intakes reported for subjects of similar age in the UK National Diet and Nutrition Survey.RESULTS: EI/BMR ratios for MPR were 1.56 and 1.39 for men and women, respectively, and for FFQ were 2.18 and 2.14. The FFQ was found to overestimate energy and nutrient intake considerably. The MPR gave more realistic estimates of energy and nutrient intakes, and was found to be acceptable for use in this population group. However, use of this tool required greater investigator (nurse) time, extra resources for training and quality assurance and additional time and expertise in data processing.CONCLUSIONS: In the Newcastle 85+ Study, where the overall aims include detailed investigation of diet in relation to many variables describing biological, clinical and psychosocial status, we concluded that MPR was the preferable method, although there remains a need for non-subjective methods for assessing dietary intake, that is, biomarker approaches, which can give a comprehensive and objective assessment of dietary exposure.
Available from EBSCOhost in European Journal of Clinical Nutrition
Title: Nutritional intake monitoring for nursing home residents: a comparison of staff documentation, direct observation, and photography methods.
Citation: Journal of the American Geriatrics Society, 01 February 2000, vol./is. 48/2(209-48)
Author(s): Simmons SF, Reuben D
Abstract: BACKGROUND: The current approach to assessing nutritional intake requires nursing home (NH) staff to document total percentage of food and fluid consumed at each meal. Because NH staff tend to significantly overestimate total food intake, methods need to be developed to improve the accuracy of food intake measurement. OBJECTIVE: To compare three methods of assessing the nutritional intake of NH residents. RESEARCH DESIGN: Validation Study. SUBJECTS: Fifty-six NH residents in one facility. MEASURES: Total percentage of food and fluid intake of each resident for each of nine meals, or all three meals for 3 consecutive days, was assessed by: (1) Nursing home staff chart documentation, (2) Research staff documentation according to direct observations, and (3) Research staff documentation according to photographs of residents' trays before and after each meal. RESULTS: Research staff documentation of total intake and intake of all individual food and fluid items was similar for the direct observation and photography methods. In comparison with these two methods, NH staff documentation reflected a significant overestimate (22%) of residents' total intake levels. In addition, NH staff failed to identify the more than half (53%) of those residents whose intake levels were equal to or below 75% for most meals. CONCLUSIONS: The photography method of nutritional assessment yielded the same information as direct observations by research staff, and both of these methods showed the intake levels of NH residents to be significantly lower than the intake levels documented by NH staff. The photography method also has several advantages over a documentation system that relies on an observer to be present to record food and fluid intake levels.

Related Research

Title: Availability of nutrition screening parameters: in New Brunswick hospitals and nursing homes.
Citation: Canadian Journal of Dietetic Practice & Research, 01 March 2012, vol./is. 73/1(35-48)
Author(s): Caisse, Isabelle, Villalon, Lita, Carrier, Natalie, Laporte, Manon
Abstract: We explored the availability of parameters for a nutrition screening system among elderly people in New Brunswick (NB) health care facilities. Patients aged 65 or older were asked to participate in the study; each participant had been admitted to one of four hospitals or lived in one of six nursing homes. Availability of nutrition screening parameters (weight, height, weight change, serum albumin level, appetite, and food intake record) was assessed by auditing the participants' medical charts. When data were not available, the feasibility of obtaining them was determined. Additional data related to nutrition screening were also obtained. In total, 421 participants were recruited for the study: 140 (33.2%) who lived in nursing homes and 281 (66.8%) who were in hospitals. Parameters needed to conduct nutrition screening, such as weight upon admission, were available for 83.6% of participants; usual weight was available for 43.0%, height for 86.0%, and serum albumin level for 47.5%. Our findings show that basic parameters for nutrition screening are available, and that implementation of a nutrition screening system is feasible for patients in NB health care facilities.
Available from EBSCOhost in Canadian Journal of Dietetic Practice and Research
Title: Nutritional Status, Energy, Protein, and Micronutrient Intake of Older Service House Residents.
Citation: Journal of the American Medical Directors Association, 01 May 2011, vol./is. 12/4(302-307), 15258610
Author(s): Vikstedt, Tiina, Suominen, Merja H., Joki, Anu, Muurinen, Seija, Soini, Helena,
Abstract: Objectives: To examine the nutritional status and energy, protein, and micronutrient intake of aged residents living in service houses and to compare how they meet official recommendations. Design: Cross-sectional study. Participants: Service house residents (n = 375) in the metropolitan region of Helsinki, Finland. Measurements: The nutritional status of residents was assessed with the Mini Nutritional Assessment. Residents' energy, protein, and nutrient intake were calculated from 1-day food diaries and compared with the nutrition recommendations. Results: The mean age of participants was 83 years; 82% were females. According to the Mini Nutritional Assessment, 65% were at risk for malnutrition and 21% were malnourished. Energy, protein, and nutrient intake varied greatly among residents. Inadequate energy, protein, and micronutrient intake was common among the oldest residents. Of the whole group, 46% received less than 1570 kcal/d of energy and 47% received less than 60 g/d of protein. Their intake of fiber, vitamin E, vitamin D, and folic acid was especially low. The percentages of residents receiving less than the recommended intake of these nutrients were 98%, 98%, 38%, and 86%, respectively. Conclusions: Taking into account the large number of aged residents suffering from malnutrition or being at risk for malnutrition, low energy, protein, and micronutrient intake was very common. Assessment-based nutritional care should be a significant part in supporting frail older people in service houses.

Title: Impact of protected mealtimes on ward mealt ime environment, patient experience and nutrient intake in hospitalised patients.
Citation: Journal of Human Nutrition & Dietetics, 01 August 2011, vol./is. 24/4(370-374),
Author(s): Hickson, M., Connolly, A., Whelan, K.
Abstract: Background: Malnutrition is a common problem in hospitalised inpatients, resulting in a range of negative clinical, patient-centred and economic sequelae. Protected mealtimes (PM) aim to enhance the quality of the mealt ime experience and maximise nutrient intake in hospitalised patients. The present study aimed to measure mealt ime environment, patient experience and nutrient intake before and after the implementation of PM. Methods: PM were implemented in a large teaching hospital through a range of different approaches. Direct observations were used to assess ward-level mealt ime environment (e.g. dining room use, removal of distractions) (40 versus 34 wards) and individual patient experience (e.g. assistance with eating, visitors present) (253 versus 237 patients), and nutrient intake was assessed with a weighed food intake at lunch (39 versus 60 patients) at baseline and after the implementation of PM, respectively. Results: Mealtime experience showed improvements in three objectives: more patients were monitored using food/fluid charts (32% versus 43%, P = 0.02), more were offered the opportunity to wash hands (30% versus 40%, P = 0.03) and more were served meals at uncluttered tables (54% versus 64%, P = 0.04). There was no difference in the number of patients experiencing mealtime interruptions (32% versus 25%, P = 0.14). There was no difference in energy intake (1088 versus 837 kJ, P = 0.25) and a decrease in protein intake (14.0 versus 7.5 g, P = 0.04) after PM. Conclusions: Only minor improvements in mealtime experience were made after the implementation of PM and so it is not unexpected that macronutrient intake did not improve. The implementation of PM needs to be evaluated to ensure improvements in mealt ime experience are made such that measurable improvements in nutritional and clinical outcomes ensue.
Available from EBSCOhost in Journal of Human Nutrition and Dietetics
Title: Statistical methods used for the evaluation of reliability and validity of nutrition assessment tools used in medical research.

Citation: Current Pharmaceutical Design, 2010, vol./is. 16/34(3770-675), 1381-6128;1873-

Abstract: The contribution of diet to the development of several chronic diseases, such as vascular disease, diabetes or lipid abnormalities has been established. Therefore, clinical trials dealing with these diseases need to adjust for individual dietary habits in order to account for potential confounding. Common practice in the majority of studies that collect dietary information is to record individual habits using specific questionnaires (e.g. Food Frequency questionnaires, FFQ). Nevertheless, a major challenge in nutrition assessment is the correct measurement of dietary exposure. This can be expressed as the reliability and validity of the retrieved information. These issues refer to how close the food records and the energy intake estimated by a tool represent actual food intake. To establish accuracy of a tool is of major importance in order to avoid inconsistent estimates of dietary intake that can distort any potential relation between diet, pharmacological treatment and disease. The aim of this review is to critically present commonly used statistical methods in reliability and validity studies.

Available from EBSCOhost in Current Pharmaceutical Design

Title: Dietary assessment methods for micronutrient intake in elderly people: a systematic review.

Citation: British Journal of Nutrition, December 2009, vol./is. 102 Suppl 1/(S118-49), 0007-

Author(s): Orth-Andrellucchi A, Sanchez-Villegas A, Doreste-Alonso J, de Vries J, de Groot

Abstract: The European micronutrient recommendations aligned (EURRECA) Network of Excellence seeks to establish clear guidelines for assessing the validity of reported micronutrient intakes among vulnerable population groups. A systematic literature review identified studies validating the methodology used in elderly people for measuring usual dietary micronutrient intake. The quality of each validation study selected was assessed using a EURRECA-developed scoring system. The validation studies were categorised according to whether the reference method applied reflected short-term intake ( < 7 d), long-term intake ( > or = 7 d) or used biomarkers (BM). A correlation coefficient for each micronutrient was calculated from the mean of the correlation coefficients from each study weighted by the quality of the study. Thirty-three papers were selected, which included the validation of twenty-five different FFQ, six diet histories (DH), one 24-h recall (24HR) and a videotaped dietary assessment method. A total of five publications analysed BM, which were used to validate four FFQ, and one 24HR, presenting very good correlations only for vitamin E. The analysis of weighted correlation coefficients classified by FFQ or DH showed that most of the micronutrients had higher correlations when the DH was used as the dietary method. Comparing only FFQ results showed very good correlations for measuring short-term intakes of riboflavin and thiamin and long-term intakes of P and Mg. When frequency methods are used for assessing micronutrient intake, the inclusion of dietary supplements improves their reliability for most micronutrients.
Title: Measuring dietary intake in nursing research.
Citation: Canadian Journal of Nursing Research, 01 June 2007, vol./is. 39/2(147-165),
Author(s): Fowles ER, Sterling BS, Walker LO
Abstract: Accurately assessing dietary intake is an essential component of international
health research to identify nutritional deviations that may place people at risk for developing
chronic diseases. Accurate assessment may be hampered by failure to address known
measurement problems with traditional dietary assessment tools. This article describes the
application and advantages and disadvantages of 5 frequently used dietary assessment
methods, discusses the management of measurement error common to each, and
recommends use of these methods in community-based health research. Using
complementary assessment methods at multiple measurement points enhances the
reliability of the findings. Assessing overall dietary quality is consistent with a holistic
approach to interventions designed to improve health and is a valuable methodology for
nutritional research. Using innovative approaches may more accurately identify dietary
patterns that contribute to disease development. Although complex, examining nutritional
intake in health research is essential to determining an individual's disease risk status and
response to treatment.

Title: Nutritional status: key to preventing functional decline in hospitalized older
adults.
Citation: Topics in Geriatric Rehabilitation, 01 March 2002, vol./is. 17/3(40-71), 08827524
Author(s): Gary R, Fleury J
Abstract: Despite the fact that protein energy malnutrition (PEM) occurs in as many as 60%
of hospitalized older adults, it often goes undetected in many acute care settings. Older
patients who have PEM are at significantly higher risk for functional status decline,
complications, nursing home placement, and death. If recognized early and treated
effectively, the adverse outcomes associated with malnutrition during hospitalization may be
alleviated. Increased awareness among health care providers of the significant role
nutritional status plays in reducing the negative outcomes associated with hospitalization in
older patients is essential. This article reviews key nutritional screening and assessment
findings important to consider for the older hospitalized patient. Copyright © 2002 by Aspen
Available from EBSCOhost in Topics in Geriatric Rehabilitation