Nutrition and Hydration
Current Awareness Bulletin
March 2018

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Forgotten not fixed: a blueprint to tackle the increasing burden of malnutrition in England

This report reflects on the increasing number of cases of malnutrition in hospital and associated deaths. It draws on malnutrition data for 2015/16 broken down by NHS trust and finds that more than half the hospital trusts in England are under-reporting malnutrition rates compared to accepted national estimates.

Journal Articles:

Title: "Meal realities" — An ethnographic exploration of hospital mealtime environment and practice.

Citation: Journal of Advanced Nursing; Mar 2018; vol. 74 (no. 3); p. 603-613
Author(s): Ottrey, Ella; Porter, Judi; Huggins, Catherine E.; Palermo, Claire

Aim: To explore and understand patterns of mealtime culture, environment and social practice from the perspective of staff, volunteers and visitors on the hospital ward. Background: Inadequate food intake is a common and complex problem in hospital and can lead to malnutrition. Mealtime interventions have been implemented to address this problem with limited success. A better understanding of mealtime environment and practice is needed to ascertain which interventions are more likely to be effective in addressing inadequate food intake in hospital.

Design: A qualitative, ethnographic approach was used to promote a comprehensive understanding of mealtime environment and practice. Methods: Sixty-seven hours of fieldwork was conducted August–October 2015. More than 150 participants were observed and 61 unique participants were interviewed in 75 interviews. Data analysis followed an inductive, thematic approach, informed by systems and complexity theory.

Findings: Themes of "patient centredness" and "system" and their disharmonious interrelationship emerged. Staff, volunteers and visitors strive for patient centredness at mealtimes. The routine and structured nature of the meal and care systems was constantly in tension with providing patients the care they needed.

Conclusion: The findings of this study expose the challenges associated with maintaining patient centredness at mealtimes in complex healthcare and foodservice systems. This facilitates a better understanding of why inadequate food intake is difficult to address in the hospital setting and highlights the need to support strategies that approach foodservice processes and nutritional care as complex and non-linear.

Title: Comparison of three methods for measuring height in rehabilitation inpatients and the impact on body mass index classification: An open prospective study.

Citation: Nutrition & Dietetics; Feb 2018; vol. 75 (no. 1); p. 123-128
Author(s): McDougall, Karen E.; Stewart, Alison J.; Argiriou, Alison M.; Huggins, Catherine E.; New, Peter W.
Aim: To compare standing height, estimated current height and demi-span estimated height and examine their impact on body mass index (BMI) classification.

Methods: Cross-sectional data was collected on 104 patients admitted to an adult rehabilitation ward and seen by the dietitian. Patient's standing, estimated current height and demi-span estimated height were collected and grouped by age: 19–64 and ≥65 years.
**Results:** The limits of agreement (95% confidence interval) for estimated current height compared with standing height were +9.9 cm and −7.9 cm, in contrast to +8.7 cm and −14.3 cm for demi-span estimated height. Demi-span underestimated height when compared with standing height in both age groups, 19–64 years: (mean ± SD) 3.0 ± 6.5 cm (P = 0.001, n = 68) and ≥ 65 year age group 4.0 ± 6.0 cm (P < 0.001, n = 36), resulting in a significantly greater mean BMI (analysis of variance P < 0.001, P = 0.02). In the 19-64 and ≥65 year age groups, 3% (2/68) and 10% (4/36) of patients, respectively, had a different BMI classification using demi-span estimated height compared with standing height.

**Conclusions:** Estimated current height is a simple and practical alternative if standing height is unable to be obtained when performing a nutrition assessment. Demi-span estimated height should be used with caution when calculating BMI to assess nutritional status, particularly in the elderly.

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**Title:** Malnutrition in Older Adults: An evidence-based review of risk factors, assessment, and intervention.

**Citation:** AJN American Journal of Nursing; Mar 2018; vol. 118 (no. 3); p. 34-43

**Author(s):** Reed Mangels, Ann

**Abstract:** Older adults are at risk for compromised nutritional status because of physical changes associated with aging, as well as cognitive, psychological, and social factors such as dementia, depression, isolation, and limited income. Malnutrition negatively affects quality of life, increases health care costs, and increases the risk of short-term mortality. Nurses and other members of interdisciplinary health care teams play important roles in preventing malnutrition in community-dwelling older adults and in older adults in long-term care settings. This article provides an overview of screening tools and interventions nurses can use to minimize the risk of malnutrition in older adults.

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**Title:** Interventions for maintaining nasogastric feeding after stroke: An integrative review of effectiveness and acceptability.

**Citation:** Journal of Clinical Nursing; Feb 2018; vol. 27 (no. 3/4)

**Author(s):** Mahoney, Catherine; Veitch, Linda

**Aims and objectives:** To investigate the effectiveness and acceptability of interventions for maintaining nasogastric tubes in adult stroke patients. Background: Internationally, incidence of cerebral vascular disease continues to increase and stroke is the largest cause of complex disability in adults. Dysphagia is common following a stroke which necessitates feeding via a nasogastric tube. Nasogastric tubes are not well tolerated by stroke patients and may be frequently dislodged. Hence, interventions such as tape, the nasal bridle/loop or hand mittens may be used to maintain nasogastric tube position. However, evidence around the effectiveness and acceptability of these interventions has not been reviewed and synthesised.

**Design:** Integrative literature review. Method: Database searches in MEDLINE, PubMed, CINAHL, Scopus, Cochrane and EMBASE; manual reference list searches.

**Results:** Seven studies met the eligibility criteria and were included in the review. Evidence for the effectiveness of nasal bridle/loop and hand mittens to maintain nasogastric tube position in patients after a stroke is sparse and methodologically poor, and especially limited around hand mittens use. There is insufficient evidence about the acceptability of both nasal bridle/loop and hand mittens among stroke patients.
**Conclusion:** Current clinical practice is underpinned by assumptions around the acceptability of nasal bridle/loop and hand mittens to secure nasogastric tubes. This results in reliance on consensual judgement between professional, patients and their families to guide their use among individuals with dysphagia after stroke. Further research is required to assess the effectiveness of hand mittens and acceptability of both nasal bridle/loop and hand mittens among stroke patients to inform guideline development.

**Relevance to clinical practice:** Given the lack of evidence on the acceptability of hand mittens and nasal bridle/loop among stroke patients to inform evidence-based guidelines and protocols, healthcare professionals should reach consensus on their use by exercising clinical judgement and through consultation with patients (if possible) and their families.

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**Title:** Evaluating the effectiveness of five screening tools used to identify malnutrition risk in hospitalized elderly: A systematic review.

**Citation:** Geriatric Nursing; Jan 2018; vol. 39 (no. 1); p. 95-102

**Author(s):** Cascio, Brooke L.; Logomarsino, John V.

**Abstract:** This systematic review investigated 5 frequently used nutrition screening tools (NSTs) used in hospitals and their effectiveness at identifying malnutrition risk in the elderly. A literature review was conducted to obtain research articles focused on malnutrition screening in hospitalized elderly and effectiveness of the NST used. Twenty six articles were reviewed and evaluated, resulting in 8 that met inclusion criteria. The Mini Nutritional Assessment-Short Form, designed for use in the elderly, resulted in overestimation of malnutrition. Four screening tools did demonstrate more effectiveness in identifying malnutrition risk; however, several different biochemical and anthropometric parameters were used, which prevented meaningful comparisons. There is a need for a universal NST "gold standard" for use in the elderly, and further research is indicated.

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**Title:** Association between dehydration on admission and postoperative complications in older persons undergoing orthopaedic surgery.

**Citation:** Journal of clinical nursing; Mar 2018

**Author(s):** Chan, Helen Y L; Cheng, Anthony; Cheung, Susana; Pang, Wai-Wah; Ma, Wai-Yiu; Mok, Long-Chau; Wong, Wai-Kuen; Lee, Diana T F

**Aim and Objectives:** This study aimed to examine the prevalence of dehydration upon hospital admission and its association with postoperative complications in older persons undergoing orthopaedic surgery.

**Background:** Ageing-related physiological and pathological changes, as well as suboptimal care quality, can render older persons vulnerable to dehydration. However, few empirical studies have been conducted to examine the association between dehydration and care outcomes in this population.

**Design:** Retrospective documentary review.

**Methods:** The medical records of patients who were aged 65 years or above and admitted for orthopaedic surgery at an acute hospital in Hong Kong over the period of January 2013 to June 2013 were reviewed. The sociodemographic characteristics, health conditions, laboratory results during index hospitalization, postoperative care, and 1-month survival were analyzed. Dehydration status was defined on the basis of the ratio of blood urea nitrogen to creatinine upon admission.

**Results:** Out of 310 reviewed records, 216 records were included in the analysis. A total of 21.8% of the patients in the included cases were defined as dehydrated and 35.2% were defined as at
risk of dehydration. There were significantly more patients in the dehydrated group who were female, having diuretic medication, swallowing difficulty, oedema, tube feeding, diaper or urinary catheter use, with postoperative complications in respiratory, gastrointestinal and haematological systems, and died within 30 days than those in the euhydrated group.

Conclusions: The findings of this study reveal that dehydration is highly prevalent among older persons on admission. Female gender and swallowing difficulty was found to be significantly associated with dehydration, although causal inference could not be delineated through this retrospective study.

Relevance to Clinical Practice: Given its significant influence on care outcomes and postoperative recovery, hydration care that promotes early recognition and timely management of dehydration is an integral part of fundamental care for older persons. This article is protected by copyright. All rights reserved.

Title: Measuring Nutrition-Related Unmet Needs in Recently Hospital-Discharged Homebound Older Adults.

Citation: Journal of nutrition in gerontology and geriatrics; Mar 2018 ; p. 1-19
Author(s): Vaudin, Anna; Song, Hee-Jung; Mehta, Mira; Sahyoun, Nadine

Abstract: Functional limitations in homebound older adults may cause difficulties with obtaining and preparing adequate healthy food. Services exist to help with these difficulties, however, not all individuals who could benefit receive them. This secondary analysis of observational data, obtained via questionnaires from homebound, recently hospital discharged older adults (n = 566), aimed to identify the prevalence and correlates of unmet need for such services, and to examine the disagreement between self-reported need for a service and functional limitation that could be addressed by that service. One-fifth of respondents reported unmet need for vision services and oral health services, and one-tenth reported unmet need for transportation services and physical therapy. There was a significant association between reported need and functional limitation (p

Title: Development of a modified swallowing screening tool to manage post-extubation dysphagia.

Citation: Nursing in critical care; Mar 2018; vol. 23 (no. 2); p. 102-107
Author(s): Christensen, Martin; Trapl, Michaela

Abstract: Post-extubation dysphagia is a condition that is becoming a growing concern. The condition occurs in 3-62% of extubated patients and can be related to mixed aetiologies, such as neuromuscular impairment, critical illness and laryngeal damage. The risk factors for developing dysphagia in critically ill patients are under-diagnosed and perhaps underestimated. Recent studies recommend the implementation of a standardized swallowing screen to prevent aspiration and decrease pneumonia rate and mortality. The aim of this quality improvement initiative was the development of a bedside swallowing screening tool to assess effective swallowing post-endotracheal extubation. Post-extubation dysphagia can result in a delay in re-feeding, with the potential for malnutrition as well as overt and covert aspiration if swallowing is not effectively screened. It is apparent that ICU nurses commence the initial screen for swallowing in the absence of an evidence base of care. A review of current local and international practice guidelines excludes the process of an effective swallowing screen of the extubated patient. Previously, a referral to speech and language therapists would be required to assess swallowing only after an initial review by the ICU medical team. This often leads to delays if the referral is made outside normal working practice, such as weekends or evenings. The initial development of a swallowing screening tool is the first step to promoting a nurse-led/initiated bedside swallow screening tool
that will enhance patient care and patient safety. There is growing body of evidence regarding the incidence of post-extubation dysphagia. Currently, there are very few recognized bedside swallowing screening tools to identify patients at risk. The most serious complication associated with post-extubation dysphagia is aspiration pneumonia, which is the leading cause of nosocomial infection in the critically ill patient.

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

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