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# Nutrition studies within Australasian populations: A consolidated regional perspective

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**Short Communication**

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This is a short review focusing on the studies on nutritional status and assessment of nutritional status among the hospitalized patients in Australasian region. This study also takes into consideration relevant aspects such as nutritional labeling and nutritional supplementation.

Determining the nutritional status and dietary consumption among acute care hospital patients was one of the goals of the Australasian Nutrition Care Day Survey. An assessment of the nutritional status and food consumption of adult hospital patients was conducted over the course of 24 hours by dietitians from 56 hospitals in Australia and New Zealand. Using Subjective Global Assessment, the nutritional status of the "at risk" participants was evaluated. The Australian version of the International Classification of Diseases, classifies individuals as malnourished if their body mass index is less than 18.5 kg/m2. Dietitians noted whether participants consumed 0 to 100 Per Cent of the food that was provided. Out of a total of 3122 patients, 41 Per Cent were found to be "at risk" for malnutrition. The prevalence of actual overall malnutrition was 32 Per Cent and 55 Per Cent of participants who were malnourished ingested more than 50 Per Cent of the food. About 35 Per Cent of individuals were well-nourished. The most frequent excuse given for not eating everything provided during the audit was "not hungry." Appropriate measures are warranted to address this issue. Therefore, according to the survey, malnutrition affects one-third of acute care patients in hospitals in Australia and New Zealand [1].

Similarly, one of the reports described the nutrition care practices implemented at acute care hospitals in Australia and New Zealand. The Australasian Nutrition Care Day Survey involved 56 hospitals, whose directors of dietetics departments conducted a survey on nutrition care practices in Australian and New Zealand hospitals covering a total of 234 wards from different specialties. About 16 Per Cent wards used the Malnutrition Universal Screening Tool, 5 Per Cent used local tools, and 79 Per Cent used the Malnutrition Screening Tool. Even after rescreening for nutrition risk in 53 wards with a nutrition intervention strategy and feeding assistance it was revealed that guidelines for the nutritional management of malnourished patients, based on evidence-based practice, are not followed in a significant number of acute care hospital wards in Australia and New Zealand. The hospital wards mostly disregard or differ significantly from evidence-based guidelines concerning nutrition screening, intervention, and tool selection [2].

However, malnutrition and inadequate food consumption were regarded as potential independent risk factors for health-related outcomes including mortality in hospitalized patients in Australia and New Zealand by the Australasian Nutrition Care Day Survey. Phase 1 measured food consumption (0 to 100 Per Cent intake) and nutritional status (Subjective Global Assessment) over a 24-hour period. Ninety days after Phase 1 ended, Phase 2 outcomes data, which included length of hospital stay, readmissions, and in-hospital mortality, were gathered. The results showed that 32 Per Cent of the participants from 56 hospitals were undernourished, and 23 Per Cent had eaten less than 25 Per Cent of the food provided. Evidently the median length of stay and readmission rates was higher among malnourished patients. Patients who consumed less than 25 Per Cent of the meal had a longer median length of stay than those who consumed less than 50 Per Cent. Malnourished patients and those who consumed less than 25 Per Cent of the food the chances of in-hospital mortality is doubled [3].

Another article focused on the consumer decision behavior in response to the nutritional label system known as the "Health Star Rating" on the front of packs in Australia. This system rates the nutritional content of food products from one and a half to five stars on the front facings of the packaging. Although this method has recently been implemented throughout Australasia, no study has been done to determine how it affects dietary choices. In New Zealand, a sample of 1200 customers was gathered as they were leaving supermarkets. The findings showed that the label's presence significantly reduced consumer preference

indicating that the Health Star Rating label significantly failed to perform. The failure's nature is consistent with consumers interpreting the label in a manner similar to how they interpret nominal brand cues, which predominate in retail food packaging [4].

Another report presents evaluation outcome of Guidelines for Provision of Micronutrient Supplementation in Adult Patients Receiving Parenteral Nutrition based on a thorough evaluation of the literature, and recommendations were made in light of the information at hand as well as particular aspects of the practice environments in Australia and New Zealand. The results showed that when compared to the 1999 recommendations, lower doses of manganese, copper, chromium, and molybdenum as well as higher dosages of selenium were advised. At present, there is acknowledgement that the structure of existing multi-trace element formulations poses a challenge to the practical application of these principles. It is accepted that there is a dearth of research on the subject and that the techniques for tracking trace element status that are now in use have limitations. The necessity for research and clinical monitoring in this area of nutrition support practice is highlighted by the presently unknown clinical impact of changes to trace element contamination of parenteral solutions with modern methods. The study recommends that patients undergoing parenteral nutrition should receive trace elements on a daily basis as they are vital. While monitoring is usually only necessary for longer-term parenteral nutrition, each case should be evaluated separately [5].

Nutrition labels on front-of-pack are a commonly used tactic in public goods marketing. The impact of one of these systems, the Australasian Health Star Rating system, on consumer choice in the breakfast cereals category in New Zealand is examined in a field experiment that was conducted. This work is a component of a research stream on time-series replication on this subject. The study used a factorial design with several replications to examine New Zealand customers of retail food who were leaving supermarkets. Shortly after the HSR was launched, the first portion of the time series was conducted, and the results showed that the HSR was useless. Commercial brands in the category heavily advertised the HSR in New Zealand as the foundation for consumer choice. According to the data, the HSR may be starting to have the expected effect on customer choice, but in comparison to other consumer decision inputs offered on the package, the system's influence is still minimal and statistically non-significant [6].

Generally a BMI of 30 kg/m2 or higher is considered as obese. Obesity could potentially be protective effects against mortality from certain conditions. However, this association is complicated in critically ill obese patients due to their malnourished condition. One of the studies determined whether there is a proven correlation between inadequate food intake, poor nutritional status, and unfavorable health-related outcomes in obese acute care hospital patients who are not critically sick and comprised of a secondary analysis of the prospective cohort research, Australasian Nutrition Care Day Survey dataset which was carried out in hospitals across Australia and New Zealand. Hospital nutritionists measured participants' BMI, assessed their nutritional status using the Subjective Global Assessment, and noted how much food they consumed in a 24-hour period (from 0 to 100 Per Cent of the food that was supplied). The study included bivariate and regression analysis to examine potential correlations between BMI, nutritional status, inadequate food intake, and health-related outcomes. Malnutrition was observed in 14 Per Cent of the obese patients more than 25 Per Cent of the malnourished obese patients only ate less than 25 Per Cent of the meals that were provided. The study concluded that the risks of in-hospital mortality within 90 days of hospital admission were independently tripled by malnutrition and ingestion of less than 25 Per Cent of the supplied meals, even after adjusting for confounders such as age, disease type, and severity. This study proves that nutritional status cannot be determined solely by BMI, and that all hospital patients should undergo routine nutritional screening. Patients who are malnourished should then receive additional nutritional assessment and care [7].

The guidelines for Provision of Micronutrient Supplementation in Adult Patients Receiving Parenteral Nutrition are being gradually reviewed. One of the studies conducted a comprehensive assessment of the literature and made suggestions taking into account particular aspects of the practice environment in Australia and New Zealand. Every recommendation's level of support from the available data was evaluated. The guidelines were subjected to external reviewers and a multidisciplinary steering committee for comment. According to a review of the literature outcomes, parenteral multivitamin preparations that are currently prescribed for adults receiving parenteral nutrition in Australia and New Zealand seem to be adequate to prevent deficiency without causing toxicity in the majority of clinical situations. The most susceptible vitamin for the people in Australia and New Zealand is vitamin D. It is unlikely that patients receiving regular parenteral multivitamin formulations will require routine monitoring of their vitamin levels, with the exception of vitamin D, which should be checked annually. When evaluating, prescribing, and keeping track of

patients receiving PN, clinical judgment plays a crucial role [8].

The prevalence of underweight, overweight, and low and high waist-to-height ratios were ascertained. The study evaluated the impact of birth weight, maternal body mass index, socioeconomic position, and distance on weight status creating a long-term birth cohort research on Australian Indigenous people. Outcomes revealed that overweight/obesity frequency rose with age by nearly 12 Per Cent in childhood and 35 Per Cent in adulthood, but underweight prevalence was also noted 38 Per Cent in childhood and 24 Per Cent in adulthood. In rural and economically backward locations, underweight people were more common. The study suggested that given the variability in nutritional status and its behavior over time among the Indigenous population, socioeconomic factors, remoteness, and gender must be taken into consideration when examining nutrition-related concerns in Indigenous communities [9].

According to ICD-10-AM a BMI <18.5 kg/m2 or unintentional weight loss of ≥5 Per Cent with evidence of suboptimal intake resulting in subcutaneous fat loss and/or muscle wasting" is the definition of malnutrition according to ICD-10-AM. A thorough survey was conducted to assess the prevalence of malnutrition in acute care patients from Australian and New Zealand hospitals is the Australasian Nutrition Care Day Survey. Acute care patients were gathered by the survey from 56 hospitals. The study revealed that thirty percent of the cohort had malnutrition. The results point to deficiencies in the reporting and/or subsequent coding of malnutrition. Dietitians must lead the way in developing structured processes for malnutrition identification, documentation and coding [10].

## Conclusions

Malnutrition is not only related to the quantity of the food intake but also the balance of the nutrients and the overall composition of the food. Inadequate food intake and malnutrition are considered as independent risk factors even among obese patients. The dietary intake and the nutritional status also determine the recovery potential and the length of the Hospital stays. Therefore, appetite and balanced diet both are essential. This review study presents a consolidated perspective of the nutritional status and the associated quantitative factors particularly among the hospitalized patients in Australasian region. A robust and common malnutrition screening tool is found to be essential for obtaining the desired clinical outcomes. Nearly one third of the patients were malnourished and out of them about half of the patients took less than half of the food given due to lack of hunger. Malnourished patients who take less food are subject to higher length of the hospital stays and their chances of recovery are minimal. Therefore, ways and means for increasing the appetite and bioavailability of the nutrients need to be focused upon among other interventional strategies. A greater attention is also required on the education of the consumer regarding health star rating on the food products so that they are able to correctly choose the type and portion of their food intake. Some studies have recommended that clinical nutritional status among patients receiving parenteral nutrition should be evaluated less frequently and individually with greater focus on the trace elemental composition and vitamin D level. The overall general nutritional status cannot be exclusively determined by the BMI alone. Children were more susceptible to underweight and the adults were more prone to overweight or obesity. Even obese patients could be malnourished and might take less food exposing to risk of longer hospital stays and lesser recovery chances. Nutritional factors are more diverse than just food intake, it also relates to the socioeconomic status, gender and accessibility of food and amenities.

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