

Title: The Mini Nutrition Assessment Tool: A step in the right direction.

Abstract: The aim of this study was to determine the percentage of patients at risk of malnutrition in a sub-acute hospital ward. Also, to evaluate the efficiency and appropriateness of using the Mini Nutrition Assessment (MNA) on a sub-acute rehabilitation/geriatric ward. One hundred and eight patients admitted to the ward were enrolled in the study. The screening part of the MNA tool was performed according to the directions outlined and patients were classified as being "at risk" or "not at risk" based on the score obtained. Those at risk had the assessment part of the MNA completed by the dietitian. The combined screening and assessment scores determined whether the patient was malnourished or not with dietetic intervention applied accordingly. The percentage of patients referred to the dietitian during this study was compared with statistics prior to the study. Focus groups were conducted with the nursing, allied health and medical staff to assess the appropriateness of implementing this tool as standard screening procedure on the ward. Seventy Two patients (67%) on the ward were classified as "at risk" of malnutrition and 50% were malnourished. Prior to this study only 23.5% of patients on the ward were seen by a dietitian. Results of the focus groups favoured the use of the tool on the ward. Sixty seven percent of patients admitted to the ward were at risk of malnutrition. The MNA tool appears to be a simple, non-invasive and cost effective tool for assessing nutritional status of rehabilitation/geriatric hospital inpatients.

Aim: To determine the percentage of patients malnourished or at risk of malnutrition on a geriatric/rehabilitation hospital ward. The stretch goal was to ensure that by the end of 2007, 100% of all patients in a sub-acute hospital ward who are at risk of malnutrition are referred to the dietitian for further assessment.

Nature of the problem: It is well documented that malnutrition in Australian hospitals is a continuing health concern and associated with increased length of stay. Due to inadequate referral systems and/or identification, some patients who were malnourished or at risk of malnutrition were not being referred to the ward dietitian for further assessment and nutrition support (*Middleton et al and Gordon et al*). The use of a standardised nutritional screening tool, the MNA tool, was an effective method of identifying patients who are malnourished or at risk of malnutrition. Patients at risk were identified and nutritional intervention applied by the ward dietitian. Previous studies in Sydney hospitals show that the level of malnutrition is approximately 40% (*Middleton et al*). This level is even higher when looking at geriatric/rehabilitation wards only. Furthermore, the time the patient gets admitted to the ward until the time a patient is referred to the ward dietitian was variable which may have an impact on the patient's nutritional status.

Extent of the problem: Prior to this project, all occasions of service by the dietitian were based on a referral received. If no referral was made to the dietitian, then no patients would be seen. Statistics collected over a three month period showed an average of 23.5% of patients on the ward being seen by the dietitian prior to this project. These figures indicated better identification of high risk patients was essential.

Strategic importance: This project relates specifically to the NSW strategic direction 7: *Be ready for new risks and opportunities* as well as one of the four goals of NSW health which is *to keep people healthy*. It also relates to strategic direction 1: *Make prevention everybody's business* and additional NSW Health goals of *delivering a quality service and managing health services well*. Prevention and early detection of health problems is the clinical indicator used to assess this goal as early nutrition intervention can help prevent malnutrition in our hospitals. With the

use of standardised screening tools and regular training and teaching, staff are better able to manage risk of malnutrition more effectively.

Planning and implementing solutions: Educational sessions were held on several occasions to instruct all nursing staff on the ward on how to use the screening section of the MNA tool. Over 12 weeks, all patients in the ward (108 patients) were screened on admission. The screening score identified patients as at risk or not and a referral would be made to the dietitian accordingly. The dietitian would then complete part two of the MNA, the assessment, and another score is given. The total of two scores (screening and assessment) indicated if the patient was malnourished or not and specific dietetic intervention would be put in place. All patient screening scores were tabulated on an excel spreadsheet with other information including: medical diagnosis, age, BMI (if applicable) and Dietetic intervention. The percentage of patients at risk of malnutrition and the percentage malnourished were calculated. 67% of patients on the ward were classified as at risk of malnutrition and 50% of patients were malnourished. These results indicated that prior to this study, the dietitian was not being referred all patients requiring nutritional assessment. Discussions were held with nursing staff regarding the use of the MNA tool as part of a standard procedure of screening. Nursing staff all agreed that it helped identify patients at risk of malnutrition including those who may not look obvious. All agreed that it takes relatively little time. Some concerns were raised about the consistency of questioning patients and that some nurses may give different scores for the same patient. This problem would be resolved through ongoing training for nursing staff to ensure they all interpret patient responses similarly and therefore provide accurate scores.

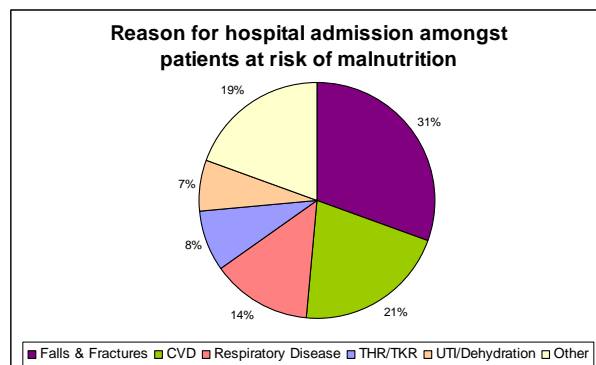


Figure 1. The reason for hospital admission, shown as a percentage, amongst patients who are at risk of malnutrition.

Outcomes and evaluation: Results showed a significant improvement in identifying patients who are at risk of malnutrition with 67% of patients referred to the dietitian for assessment and dietetic intervention, compared to only 23.5% prior to the study. The MNA tool was found to be a cost efficient, non-invasive, fast and easy to use tool for identifying and assessing patients at risk of malnutrition.

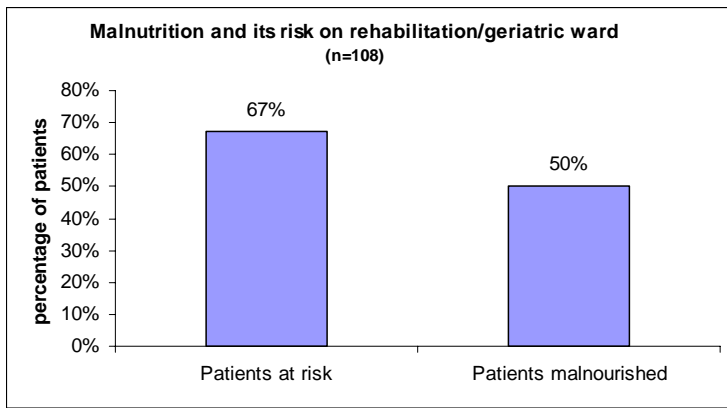


Figure 2. The percentage of patients found to be at risk of malnutrition and the percentage malnourished

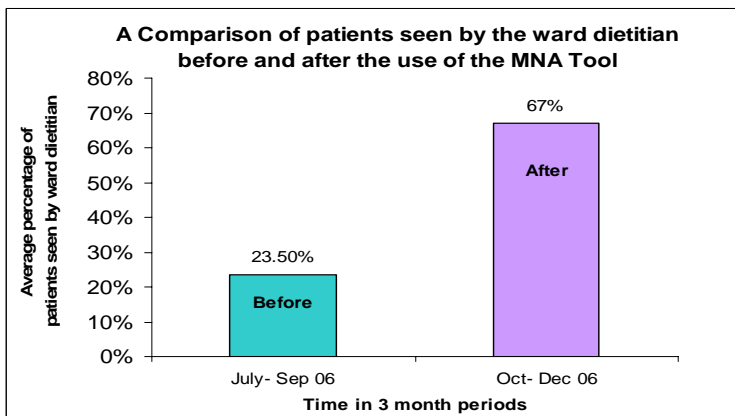


Figure 3. A comparison of the percentage of patients seen by the ward dietitian before and after the study.

Sustaining change: To ensure that all patients who are at risk of malnutrition are identified and referred to the dietitian, the MNA tool will become a standard form placed in the patient medical record. Regular training will be provided to ensure that the screening is carried out correctly and consistently amongst the nurses. The MNA tool and screening procedure will remain a set agenda item on all ward meetings to ensure any issues or opportunities for improvement are addressed.

Future scope: The use of a standardised screening tool is an effective method for early identification of malnutrition and the risk of malnutrition. The MNA tool was tested on this rehabilitation/geriatric ward and found to be cost efficient, non-invasive, easy and quick to use. It can be applied to all rehabilitation/geriatric wards in NSW hospitals as well as aged care facilities.

References:

1. M. H. Middleton, G. Nazarenko, I. Nivison-Smith, P. Smerdely (2001) Prevalence of malnutrition and 12-month incidence of mortality in two Sydney teaching hospitals. *Internal medicine Journal* 31 (8), 455-461.
2. Gordon S. Sacks, PharmD, Kaye Dearman, PharmD, William H. Replogle, PhD, Viginia L. Cora, DSN, RNCS, Mark Meeks, MD and Todd Canada, PharmD. Use of Subjective Global Assessment to Identify Nutrition-Associated Complications and Death in Geriatric Long-Term Facility Residents. *Journal of the American College of Nutrition*, Vol. 19, No. 5, 570-577 (2000).et al