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Screening for nutritional risk

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WHAT IS NUTRITIONAL SCREENING?

Nutritional screening can be defined as the routine use of nutritional assessment to highlight patients at risk of nutrition-related complications. The screening process should be initiated early in a hospital stay to identify at-risk patients and to target nutritional intervention towards those likely to benefit from it. Although the implementation of screening does have some cost implications it can be achieved with minimal effort by existing staff using data easily collected and recorded as part of a routine assessment (Nagel, 1993).

THE RATIONALE FOR NUTRITIONAL SCREENING

It has long been recognized that poor nutritional status is a common occurrence in hospitalized patients (Bistran *et al.* 1976; Hill *et al.* 1977). It is also clear that nutritional status tends to deteriorate during a hospital stay, particularly in those who are already undernourished (McWhirter & Pennington, 1994). Undernutrition has serious implications for health and for recovery from illness or surgery; nutritional support to minimize depletion in at-risk patients, therefore, forms an essential part of health care. The positive effects on patient outcome, in terms of improved nutritional status, reduced post-operative complications and more rapid rehabilitation, achieved by providing nutritional support are well documented (Bastow *et al.* 1983; Larsson *et al.* 1990; Keele *et al.* 1995; Murchan *et al.* 1995). In addition to the clinical benefits, substantial cost savings can potentially be made by reducing length of stay (Lennard-Jones, 1992).

Early identification of patients with poor nutritional status or an inadequate nutrient intake is essential. However, nutritional depletion is often insidious with a multi-factorial aetiology, and abnormalities of nutritional status or food intake are often not even considered in a hospital setting. As a result, nutritional problems often go unrecognized and untreated. In one study (McWhirter & Pennington, 1994) over half the 200 patients found to be undernourished on admission had no mention of nutritional information in their case notes, and only ten of fifty-five of these patients re-assessed on discharge had been referred

for nutritional support. Recognition of undernutrition obviously remains a problem; unless the signs of poor nutritional status and inadequate food intake are specifically looked for as a matter of routine, deterioration in nutritional status is unlikely to be detected and treated until it becomes extreme.

Nutritional screening not only detects undernutrition, it is a valuable means of highlighting obesity which is also common amongst hospitalized patients (McWhirter & Pennington, 1994). Obesity has considerable implications for health, and a hospital admission offers the opportunity to provide reliable, practical advice on healthy lifestyle and eating behaviour for patients with unresolved weight problems. It should be noted also that obesity can mask severe tissue wasting during periods of illness; any patient with a rapid or prolonged decline in nutritional status can be at risk of associated complications and can require nutritional support, regardless of current body weight.

In order that these abnormalities of nutritional status are recognized and treated appropriately, simple assessment of nutritional status should form part of the standard assessment procedure for all hospital patients (Lennard-Jones, 1992).

WHO SHOULD PERFORM NUTRITIONAL SCREENING?

To make progress in the introduction of routine nutritional screening the question of which health professionals should be responsible for performing the assessment must be addressed. Dietitians are specifically trained in nutritional assessment and provision of nutritional support, and have the skills and expertise to facilitate appropriate interpretation of results. However, resources are generally insufficient to expect dietitians to assess all admissions routinely. Nutritional assessment must also become the domain of other health professionals. All patients admitted to hospital in the UK are assessed by both a nurse and a junior doctor, either of these is, therefore, in a position to perform routine screening of all patients in order to highlight those who need further assessment or intervention from a dietitian. Junior medical staff should include simple observations and questions about nutritional status and food intake in their clerking; nursing staff should include questions about weight and food intake in their assessment, and should monitor body weight and observe day-to-day eating habits and functional capacity during the stay in hospital. Dietitians should ensure that mechanisms are in place to trigger necessary action in the case of patients who are identified as having nutritional problems. Dietitians should also identify any shortfall in practice, highlight the importance of simple nutritional assessment, and promote and facilitate its routine use as part of the standard practice of nursing and medical staff.

IS NUTRITIONAL SCREENING CARRIED OUT?

It is over 3 years since the King's Fund Report (Lennard-Jones, 1992) highlighted the important role of nutritional screening, and recommended a multidisciplinary approach to achieve its routine use for all hospital patients. The current level of use of nutritional assessment by nurses and junior doctors in the UK has recently been investigated in a survey carried out by a working party of The British Association of Parenteral and Enteral Nutrition (BAPEN; Lennard-Jones *et al.* 1995). A sample of 454 ward nurses and 319 junior doctors in seventy UK hospitals were questioned about the last patient they had

admitted. The sample consisted mainly of staff on acute medical and surgical wards in district hospitals. The availability of weighing scales and equipment for measuring height was also assessed by observers who visited the wards of 107 hospitals. The survey highlighted that nutritional assessment is not carried out as a matter of routine by nursing and medical staff. Patients were asked about recent food intake by approximately two-thirds of doctors and nurses; 53% of the nurses and 73% of the doctors asked about unintentional weight loss; answers to these questions were recorded in the notes on 52–82% of occasions. Weight was measured by 63% of the nurses, but only 11% measured height, approximately 80% of results were recorded; weighing scales were adequately provided, but equipment for measuring height was available in only 17% of wards. Most of the doctors and nurses who asked no questions about nutrition and made no measurements failed to do so because they regarded them as unimportant. This indicates a lack of awareness of the importance of nutritional assessment by some nurses and doctors. Thus, nutritional screening is given a low priority and undernourished patients may be overlooked by busy hospital staff.

In response to these findings it was recommended that weighing scales and equipment for measuring height should be made widely available and that all patients admitted to hospital should be weighed, measured, and asked some basic questions relating to recent unintentional weight loss, altered food intake and usual weight and height. The need for changes to the training of nursing and medical staff was also highlighted; more emphasis needs to be placed on the significance of nutrition, so that undernutrition as a cause or a consequence of illness is shown to be relevant to clinical care.

TOOLS AND TECHNIQUES FOR NUTRITIONAL SCREENING

Various techniques can be used to perform nutritional assessment. All methods have limitations, and measurement of a combination of factors is recommended. Methods chosen for routine nutritional screening must be reliable, practical and convenient to perform, simple to interpret and low in cost. Fortunately, simple methods, suitable for routine clinical assessment at the patient's bedside have consistently been shown to correlate well with sophisticated techniques for assessing body composition and function (Baker *et al.* 1982).

Measurement of a patient's current nutritional status alone identifies only those who have already become undernourished. The key to effective nutritional screening is not just to recognize undernutrition but to anticipate nutritional depletion, and either prevent its onset or rectify it before it reaches a clinically-significant degree. Thus, the success of screening may only be recognizable by acknowledgement of what was prevented (Blackburn, 1995).

The process of nutritional assessment can be divided into two sections: first, assessment of nutritional status, that is, the degree of under- or overnutrition; and second, assessment of nutrient intake to highlight patients whose food intake is inadequate to meet their requirements, and who are, therefore, at risk of depletion.

Measuring nutritional status

Assessment of nutritional status has two components: measurement of body composition, specifically muscle and fat stores; and assessment of the effect of nutritional status on

physiological function. Functional impairment is thought to be more significant than changes in body composition, although clearly the two factors are interlinked (Windsor & Hill, 1988). Numerous physiological functions can be affected by nutritional depletion and the effects are likely to occur when >20% of body protein has been lost (Hill, 1992).

The simplest techniques for assessment of body composition are suitable for use in a clinical setting. Weight and height should be measured, using reliable equipment, and compared with normal values expressed as BMI or ideal body weight. In the absence of oedema or ascites, weight loss is a valuable global marker of nutritional status and is best assessed by comparing current weight, with recalled usual weight, rather than with ideal body weight (Morgan *et al.* 1980). The patient should be questioned about recent weight changes, and weight loss can often be confirmed by asking whether clothes fit more loosely than normal if weight has not been monitored. Clinical assessment should include examination for evidence of recent fat and muscle wasting and for physiological signs associated with undernutrition, for example, poor tissue repair, delayed wound healing and development of pressure sores. To assess functional capacity, skeletal muscle strength can be tested by asking the patient to squeeze your fingers for several seconds, and respiratory function can be assessed by listening to the effort and sound of coughing and shortness of breath, or by testing the ability to move a piece of paper by blowing on it. General observation of the patient's mobility, overall mood, alertness and ability to concentrate also provide valuable information about a patient's strength and their degree of debilitation.

Other measures often proposed for simple assessment of nutritional status are less useful; mid-upper arm anthropometry performed by different examiners is unreliable and usually provides no additional information over that obtained by measurement of body weight. The technique can be useful in specific conditions, particularly in the presence of ascites or oedema, and serial measurements carried out by the same observer can be used to monitor progress, but it is unsuitable as a means of routine, hospital-wide nutritional screening. Plasma protein concentrations, including serum albumin, are poor indicators of nutritional status and are more likely to be affected by other factors, for example sepsis, trauma or infection (Klein, 1990). Plasma protein levels are more effectively used as a measure of severity of illness rather than one of nutritional status. In addition, the cost and impracticality of measuring serum proteins in all patients as a matter of routine make these markers unsuitable for inclusion as routine nutritional-screening tools.

Assessment of nutrient intake

The adequacy of recent and current food intake should be determined in comparison with usual intake and expected requirements. The patient should be questioned about changes in appetite, changes in the pattern or size of meals, and avoidance of particular foods or groups of foods. Increased gastrointestinal losses such as vomiting or diarrhoea should also be noted. Inadequacy of food intake will highlight patients at risk of nutritional depletion.

The most basic techniques of assessment of nutritional status, combined with simple assessment of adequacy of nutrient intake therefore provide sufficient information in a clinical setting to decide whether or not a patient is undernourished or at risk of nutritional depletion. These techniques are sufficient to act as a means of nutritional screening to highlight patients in need of further assessment or nutritional intervention, and are simple and practical enough to be suitable for inclusion in the routine assessment process even on busy hospital wards.

EXISTING NUTRITIONAL SCREENING TOOLS

To facilitate the widespread use of suitable techniques for nutritional screening, a means of standardizing the processes, perhaps by inclusion of a *pro forma* for completion as part of a general assessment, may be useful for training purposes and to act as a reminder for routine use. This also presents the opportunity to provide information on interpretation of findings and guidance for appropriate action. Nutritional assessment techniques have been incorporated into numerous standardized tools which have been recommended as a means to identify patients who are undernourished, or at risk of nutritional depletion and associated complications. Unfortunately, many of the available tools are unsuitable for routine use for nutritional screening, either on grounds of time, practicality or cost.

In one of the best methods, the relevant features of a patient's history and physical examination are elicited using a technique known as the subjective global assessment (SGA) of nutritional status, comprising a nutritional history and a physical examination (Detsky *et al.* 1987). SGA is intended to act as a prognostic tool to identify patients at increased risk of developing nutrition-related complications, who may benefit from nutritional support. The history includes four elements: weight loss in the previous 6 months, dietary intake in relation to usual pattern, presence of gastrointestinal symptoms, and functional capacity. The physical examination assesses loss of subcutaneous fat, muscle wasting and loss of fluid from the intravascular to the extravascular compartment. The features of the history and physical examination are combined subjectively into an overall or global assessment, categorizing patients as well nourished, moderately nourished or suspected of being undernourished, or severely undernourished. Other assessment techniques similar to SGA have also been developed (Windsor & Hill, 1988).

The accuracy of SGA in predicting risk of post-operative complications has been established (Detsky *et al.* 1987). The technique has been shown to correlate with anthropometry, serum albumin and serum total protein (Baker *et al.* 1982), and blinded inter-observer reproducibility of the technique has been demonstrated (Detsky *et al.* 1984). Standardized and reliable use of SGA and other similar assessment methods requires training (Detsky *et al.* 1994). The techniques appear most suited to use by clinicians, incorporating the observations into their clinical examination of a patient. Nursing staff in particular would require a considerable amount of training before they could carry out the physical examination included in the SGA. Implementation of SGA as a routine tool for nutritional screening in a large hospital, therefore, may be impractical.

Various indices of undernutrition have also been produced and are conceptually attractive since they allow nutritional status to be expressed as a single value rather than as a series of measurements. The prognostic nutritional index (PNI) constructs anthropometry, delayed-hypersensitivity skin tests and plasma protein levels into an index intended for use pre-operatively to identify patients at increased risk of post-operative complications who would benefit from nutritional support (Mullen *et al.* 1980). However, the PNI has been shown to offer no advantage over simple measurement of plasma protein levels in prediction of risk of post-operative complications (Pettigrew & Hill, 1986). The likelihood of malnutrition index (LOM; Weinsier *et al.* 1979) is a multifactorial score, designed for use with general medical patients. It includes serum vitamin concentrations (folate and vitamin C), anthropometrics (triceps skinfold thickness, or weight and height and arm muscle circumference), lymphocyte count, serum albumin, and packed cell volume. A high LOM is significantly associated with a longer length of hospital stay, and with a trend

towards increased mortality (Coats *et al.* 1993). Both these indices include measurements which are not routinely performed on all patients; therefore, nutritional screening using these tools would be costly and impractical. In addition, further evaluation would be required to determine their suitability for widespread use in patient populations other than those for which they were designed.

Other validated screening tools are too lengthy to perform on a routine basis in a busy hospital. The nutrition risk index (Wolinsky *et al.* 1990) is a sixteen item score, validated against a variety of anthropometric, laboratory and clinical markers of poor nutritional status, and against the ability to predict the use of health services. It is designed to tap five important dimensions of nutritional risk, including the mechanics of food intake, prescribed dietary restrictions, morbid conditions affecting food intake, discomfort associated with the outcomes of food intake, and significant changes in dietary habits. The mini nutritional assessment (MNA) has been designed and validated for use with elderly populations to identify patients at risk of undernutrition and to facilitate nutritional intervention (Guigoz *et al.* 1994). It is claimed that cross validation indicates that the tool is sensitive enough to classify 70–75% of patients as well nourished or undernourished without further tests or clinical evaluation. The tool is intended for use by general practitioners and by health-care professionals admitting the patient to hospital. However, it is composed of eighteen questions including detailed anthropometric assessment, medical assessment, a detailed dietary assessment and an assessment made by the patient themselves. Both the MNA and the NRI are too lengthy to be practical for baseline nutritional screening on a hospital-wide basis.

Many individual hospitals have produced their own screening tools that are simple enough for routine use; however, many are targeted only at a specific age-group or clinical speciality, preventing implementation on a hospital-wide basis and, in addition, few have included any attempt at validation. The introduction of routine nutritional screening, therefore, may have been hampered by the lack of a simple standardized nutritional-assessment tool suitable for routine use on a hospital-wide basis.

NUTRITIONAL SCREENING AT BIRMINGHAM HEARTLANDS HOSPITAL (BHH): THE NUTRITION RISK SCORE (NRS)

A project to introduce nutritional screening at BHH was set up in 1992. We recognized that routine nutritional assessment was essential for identification of patients in need of nutritional support; that resources were insufficient for dietitians to assess all patients; and that due to lack of awareness or time this routine screening was not being carried out by medical or nursing staff. Our aim was to introduce nutritional screening by incorporating a simple validated nutritional-assessment tool into the standard nursing assessment document, to be used routinely on all patients, regardless of age and clinical speciality. As the available screening tools were unsuitable for our requirements, we designed and validated a suitable tool, incorporating the basic techniques of assessing nutritional status and food intake, into a structured process to facilitate simple, standardized assessment. A means of providing guidance for interpretation of findings and for relevant action for patients identified as undernourished or at risk of nutritional depletion was also incorporated. The process of development, evaluation and implementation of this NRS is fully described elsewhere (Reilly *et al.* 1995). The NRS is easy to use and applicable to all

patient categories and ages. In a validation study the NRS correlated well with other assessment methods (r 0.68, $P < 0.001$) and with the dietitian's clinical impression of the degree of risk of undernutrition (r 0.83, $P < 0.001$), reproducible scores were obtained between dietitians (r 0.91, $P < 0.001$) and between dietitians and nursing staff (r 0.80, $P < 0.001$). Nutritional screening was implemented at BHH in November 1993 by incorporating the NRS into the standard nursing assessment process. The score is intended to be completed within 24 h of admission and repeated weekly during a hospital stay if the patient's condition has changed. Patients are categorized as at low, moderate or high risk of undernutrition. Guidance for appropriate action is provided in the form of a poster on each ward. Nursing staff are encouraged to implement first-line action in patients at moderate risk, by monitoring weight and offering supplements to replace missed meals. Patients with scores in the high-risk category are highlighted for dietetic referral for more detailed assessment and provision of nutritional support if necessary.

Since the introduction of the NRS over 2 years ago, its use as a nutritional-screening tool and the impact on identification of patients at risk of undernutrition have been the subject of a regular audit.

Use of the nutrition risk score by nursing staff

Completion rates by nursing staff have been audited on a 6-month basis and results have been mixed. On some wards the NRS has been well accepted and is used as a part of the routine assessment process as intended; however, on other wards it is not completed routinely. Considerable training has been carried out, and there has been a documented improvement in knowledge of the NRS techniques and in the availability of the necessary equipment and charts. Despite this, the NRS is not filled in routinely by nursing staff as a standard part of the admission procedure for all patients (Fig. 1). Even in the acute unit of the hospital the average completion rate is only 33% and this is only exceeded on eleven of thirty wards. Reasons given for failure to complete the NRS include lack of time, and a perception that nutritional assessment is not important or useful.

Identification of patients at risk of undernutrition: before and after the introduction of nutritional screening

Despite the failure to complete the NRS paperwork for all patients admitted to the hospital it was thought possible that the level of awareness of the type of patients who need nutritional support had improved and that identification of at-risk patients had increased since the NRS had been introduced. Before the introduction of nutritional screening a sample of 150 in-patients was assessed using the NRS and action taken to monitor or improve nutritional status, either by referral to a dietitian or by intervention by nursing staff at ward level (Reilly *et al.* 1995). To evaluate changes in practice since the introduction of nutritional screening this survey of 150 patients was repeated.

A sample of 150 in-patients had been selected for the pre-screening survey (18% of the hospital in-patient population). To reflect the diverse range of patients admitted to the hospital, the proportion of the sample taken from each speciality had been chosen to correspond with the proportion of the hospital's total annual admissions taken by that speciality in the previous year. The relevant number of patients were then selected by taking

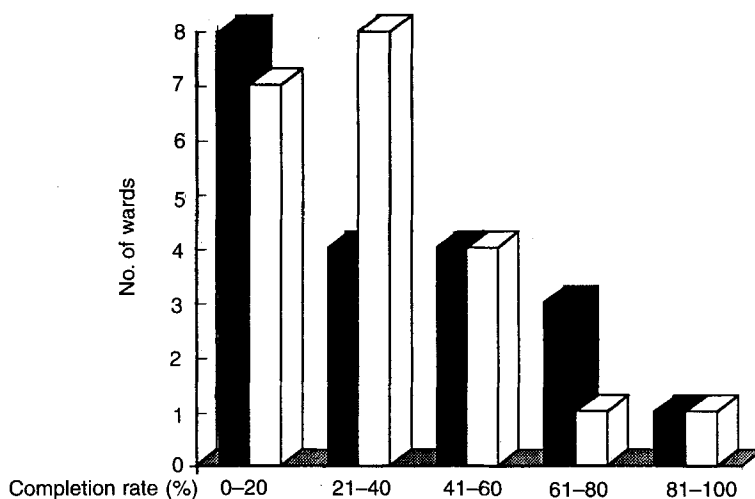


Fig. 1. Completion of nutrition risk scores (NRS) by nursing staff in November 1994 (■) and in June 1995 (□). There were twenty wards involved in the evaluation of completion rates carried out in November 1994 because one ward was temporarily closed and could not be assessed. This ward completed the NRS in the June 1995 evaluation. For details of procedures, see pp. 847–848.

consecutive admissions to that speciality (Table 1). Where possible, all patients assessed had been in-patients for at least 5 d so that a fair assessment of the recognition and intervention at ward level could be made. Twelve dietitians participated in the study and all patients were assessed within a 5 d period. For each patient, the NRS was completed and any dietetic referral, nursing intervention or monitoring of nutritional status at ward level was noted (Reilly *et al.* 1995).

In the repeat survey the methodology of the pre-screening survey was reproduced, with assessment of the same number of patients from each speciality as before, to allow direct comparison of the referral pattern and nursing intervention before and after the introduction of nutritional screening. In the repeat survey nutritional assessment by medical staff was also evaluated by looking for documentation of information about food intake or nutritional status in the medical notes.

The distribution of patients by speciality is shown in Table 1. The risk categories of the patient sample are shown in Table 2 and the action taken in Table 3. Frequency of documentation of nutritional assessment by medical staff is shown in Table 4.

In the pre-screening survey it was demonstrated that in 64% of moderate-risk patients and 30% of high-risk patients, no action was taken to improve nutritional status (Reilly *et al.* 1995). The repeat survey suggests that although 37% of moderate-risk patients and 17% of high-risk patients are still missed, the identification of patients in need of nutritional intervention has considerably improved since the introduction of nutritional screening (moderate-risk patients χ^2 14, $P=0.0002$, high-risk patients χ^2 8, $P=0.0045$). Increased knowledge of the NRS assessment process has already been documented, despite failure to complete the paper work, this improvement in action and intervention by nursing staff is, therefore, presumably due to increased awareness of nursing staff of the indicators of nutritional risk. The use of first-line intervention by nursing staff at ward level in patients

Table 1. Survey of nutritional risk at Birmingham Heartlands Hospital: distribution of patient sample by speciality

Speciality	No. of patients selected		No. of patients selected (% total)	
	Pre-screening survey*†	Post-screening survey†	Pre-screening survey*	Post-screening survey
General medicine	29	29	19.0	19.3
General surgery	28	28	18.5	18.7
Paediatrics	26	23	17.0	15.3
ENT	16	16	10.5	10.7
Geriatric medicine	16	16	10.5	10.7
Infectious diseases	12	12	8.0	8.0
Thoracic medicine	11	11	7.0	7.3
Orthopaedics	10	10	6.5	6.7
Nephrology	3	3	2.0	2.0
Gastroenterology	2	2	1.0	1.3
Total	153	150		

ENT, ear, nose and throat.

* Reilly *et al.* (1995).

† Mean age pre-screening sample 55.9 years (range 8.5 months–92 years), post-screening sample 55.8 years (range 1 month–94 years).

Table 2. Nutrition risk scores* of patients pre- and post-introduction of nutritional screening at Birmingham Heartlands Hospital†

Risk category	Pre-screening survey* (n 153)		Post-screening survey (n 150)	
	% total	No. of patients	% total	No. of patients
Low risk	50	77	46	69
Moderate risk	24	36	18	27
High risk	26	40	36	54

* Reilly *et al.* (1995).

† For details of patient samples, see Table 1.

with risk factors for nutritional depletion has considerably increased since nutritional screening was introduced.

Review of the medical case notes revealed that nutritional assessment was not mentioned in the medical records of 60% of the patients included in the repeat survey. Some mention of food intake, weight loss or nutritional status was more common in patients at higher risk, but medical staff made no documentation of nutritional problems in half the patients in the sample with a moderate or high risk of nutritional depletion. This failure to include nutritional measurements and questions in medical evaluation reflects the findings of the large-scale BAPEN survey (Lennard-Jones *et al.* 1995). As medical staff in our hospital are not routinely carrying out nutritional assessment, the role of nursing staff in identification

Table 3. Survey of nutritional risk at Birmingham Heartlands Hospital*: action taken

Risk category	Pre-screening survey†		Post-screening survey	
	% total	No. of patients	% total	No. of patients
Low-risk patients				
<i>n</i>		77		69
Referred to dietitian for nutritional support	8	6	0	
Monitored by nursing staff, (weight checked/food charts completed/supplements given)	13	10	3	2
No action taken	79	61	97	67
Moderate-risk patients				
<i>n</i>		36		27
Referred to dietitian for nutritional support	19	7	26	7
Monitored by nursing staff	17	6	37	10
No action taken	64	23	37	10
High-risk patients				
<i>n</i>		40		54
Referred to dietitian for nutritional support	60	24	61	33
Monitored by nursing staff	10	4	22	12
No action taken	30	12	17	9

* For details of patient sample, see Table 1.

† Reilly *et al.* (1995).

of patients who are undernourished or at risk of nutritional depletion is vital.

The results of this survey are very encouraging and provide evidence to support our perception that among nursing staff the level of awareness of the type of patients who need nutritional support has improved, and that identification of 'at-risk' patients has increased. Although the NRS is not always completed as a routine part of the admission procedure, perhaps partly due to nursing shortages and pressures of time, the introduction of a routine nutritional-screening process has improved the pattern of intervention for patients at risk of undernutrition. Some 'at-risk' patients are still missed; 37% of moderate-risk patients and 17% of high-risk patients still have no action taken to prevent a deterioration in their nutritional status, but the improvement is encouraging and our efforts to promote nutritional screening will continue.

CONCLUSION

Many techniques for nutritional assessment exist but the recommendations of the King's Fund Report (Lennard-Jones, 1992) to introduce routine nutritional screening have perhaps been hindered by the lack of a simple, validated nutritional-assessment tool suitable for use

Table 4. *Post-screening nutritional assessment carried out by medical staff at Birmingham Heartlands Hospital**

(Nutritional status and/or problems mentioned in medical notes; overall: yes 40%, no 60%)

	Low-risk patients			Moderate-risk patients			High-risk patients		
	Yes	No	Total	Yes	No	Total	Yes	No	Total
<i>n</i>	18	51	69	15	12	27	27	27	54
<i>%</i>	26	74		56	44		50	50	

* For details of patient sample, see Table 1.

by nursing staff to highlight patients who are undernourished or at risk of nutritional depletion. The NRS is suitable for this purpose and provides a structured scoring system to facilitate interpretation of the findings. The NRS incorporates the basic nutritional-assessment techniques that have subsequently been recommended by the BAPEN survey (Lennard-Jones *et al.* 1995).

In our hospital the NRS has been introduced as a standard part of the admission procedure. Developing, piloting and implementing nutritional screening in our hospital has raised the awareness of the staff of nutritional status and its implications. It has established also a simple framework within which to promote a multidisciplinary approach to nutritional support, and has provided a mechanism to facilitate regular and standardized assessment of nutritional status. Awareness of the factors associated with risk of undernutrition has improved, and fewer patients with nutritional problems now slip through the net. We hope that this improved prevention and treatment of undernutrition will maximize the benefits of health care provided.

Routine screening for nutritional problems should be keenly promoted by all health professionals concerned for the improvement of nutritional care of hospitalized patients. Simple questions about weight changes and food intake and observation for signs of nutritional depletion should form part of a holistic approach to patient assessment both on admission and during a hospital stay. Scoring systems incorporating the simple techniques may be useful to facilitate standardized assessment. Either nursing or medical staff are in a position to carry out routine nutritional screening and efforts to encourage this should continue. The need for nutritional assessment is not confined to the hospital setting, it is also useful in the community and in residential accommodation to identify 'at-risk' patients in need of nutritional intervention. The simple techniques described are suitable for routine use in any setting.

The means to provide patients with nutritional support are available and can help improve nutrient intake in patients at risk of undernutrition. Identification of patients with poor nutritional status or inadequate food intake likely to result in nutritional depletion enables nutritional support to be targeted at those who need it. Patients with unresolved obesity can also be given reliable, practical advice on weight loss. Lack of interest or failure to make time to include simple questions and observations about nutrition in the assessment of a patient has considerable implications for the quality of health care provided. If nutritional problems are to be identified and acted upon, nutritional assessment must become a compulsory part of routine patient assessment, not an optional extra.

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