A consistent and reliable tool for malnutrition screening

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Malnutrition is both preventable and treatable and yet it continues to undermine the health of a significant proportion of the UK population. The Malnutrition Advisory Group (MAG) has launched a screening tool for use by all health professionals to screen patients with any disease or condition. The malnutrition universal screening tool (MUST) is endorsed by the British Dietetic Association, the RCN and the Registered Nursing Homes Association. These groups are now actively working with MAG to develop appropriate professional training opportunities.

About three million people in the UK (roughly five per cent of the population) are underweight (Office of Population Censuses and Surveys, 1994), a state that can have a detrimental effect on health and quality of life. Although malnutrition can affect anyone, the most vulnerable groups include patients with chronic diseases, older people, those recently discharged from hospital and those who are poor or socially isolated. The condition affects about one in three residents of care homes, one in four attendants of outpatient and GP clinics and two in five medical, surgical, elderly and orthopaedic ward patients (Elia, 2003; 2000; King et al; 2003; Stratton et al, 2003; Wood et al, 2003; Stratton et al, 2002).

Malnutrition predisposes people to disease and delays recovery from existing illnesses. Extensive evidence indicates that malnourished individuals are admitted to hospital more often, and have longer hospital stays, more GP visits and more prescriptions. This is largely due to the adverse effects of malnutrition (Box 1).

Over 10 years ago the King’s Fund estimated that NHS hospitals could save up to £266m if the problem of malnutrition was addressed (Lennard-Jones, 1992). However, the challenge of detection and the diffusion of responsibility among health care professionals means it remains a serious public health problem.

**Government focus on nutrition**

Nutrition slipped off the UK health agenda in the mid-1990s, with health care providers concentrating on the complexities of NHS reforms and demands for funding of new drugs and technologies. However, there is increasing official recognition of the fundamental importance of good nutrition in health and recovery. Nutritional care is increasingly seen as an integral part of treatment:

- Explicit food and nutrition benchmarks were launched in England in 2001 as part of the government’s Essence of Care initiative (www.doh.gov.uk/essenceofcare) – a set of standards establishing best practice in fundamental aspects of hospital care;
- In Scotland groundbreaking standards for food, fluid and nutritional care in hospitals were launched in September this year, making it mandatory to assess patients’ nutritional status and dietary needs at the time of admission and to ensure these needs are met as part of their care plan. All NHS boards have a responsibility to deliver on these standards and their performance will be monitored by NHS Quality Improvement Scotland (QIS). In Wales nutritional screening for hospital patients becomes mandatory from December 2003;
- The National Service Framework for Older People (Department of Health, 2001) highlights nutritional care as a key element of health care provision;
- Nutritional issues have recently been added to the National Institute for Clinical Excellence (NICE) agenda.

**The need for screening**

Malnutrition is frequently undetected and overlooked in community, hospital and nursing home settings. Patients can be stuck on the ‘malnutrition carousel’, revolving between hospital and the community with their underlying problem intact. Contributing to this situation are:

- Diffuse responsibility;
- Lack of an integrated infrastructure for dealing with nutritional problems within and between different health care settings;
- Inadequate education;
- A lack of consistent criteria used to identify and treat malnutrition.

Although there are well over 50 published (and many more unpublished) nutrition screening tools in clinical use, these differ widely in criteria used, weighting factors applied to the criteria, the intended users (who are
sometimes not specified) and practicality in routine clinical practice. Many tools have not been tested for reliability or validity and many lack a robust evidence base. Added to this, they take anything from two minutes to over 30 minutes to complete. In some cases, several tools may be in use concurrently within the same hospital, leading to inconsistency and confusion.

**Malnutrition Universal Screening Tool**

The Malnutrition Universal Screening Tool (MUST) was developed to help nurses and other health professionals identify adult patients at risk of malnutrition (Table 1). It is the first universal screening tool, appropriate across the whole health care spectrum, for use by different health care professionals and different patient groups (including pregnant/breastfeeding women and people with eating disorders, mental health problems, critical illnesses or fluid disturbances). Evidence-based, validated and extensively piloted, the MUST is designed to enable nurses, dietitians, care managers and physicians to recognise patients with malnutrition, identify those at risk and plan appropriate nutritional care. It also provides guidance on alternative and subjective ways of establishing nutritional risk even when traditional height and weight measurements cannot be taken.

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<th>TABLE 1. KEY STEPS IN THE MUST</th>
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<td>• Step 1: Gather measurements: height, weight and body mass index (BMI). If height and weight cannot be directly measured, the patient’s self-reported height and weight may be substituted (if considered reliable and realistic). In addition, surrogate measures may be used (such as length of forearm/knee height).</td>
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<td>• Step 2: Identify unplanned weight loss over the previous three to six months (from questioning the patient and/or medical records).</td>
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<td>• Step 3: Note if the patient’s nutritional intake has been (or is likely to be) adversely affected by an acute physiological or psychological condition. Such patients include those who are critically ill, have swallowing difficulties (after stroke, for example) or are undergoing gastrointestinal surgery.</td>
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<td>• Step 4: After each of steps 1, 2 and 3, the MUST will indicate a score of 0–2. These should now be added together to give a total score, representing the patient’s overall risk of malnutrition (low, medium or high).</td>
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<td>• Step 5: For patients with a medium or high risk, agree and document a care plan for nutritional rehabilitation based on the MUST recommendations and/or local policy. Some patients may simply need advice on eating; others may need to be referred for more expert assessment and treatment.</td>
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Particular care should be taken when screening special patient groups such as those with fluid disturbances, plaster casts, amputations, critical illness and women who are pregnant or lactating. Refer to the MUST explanatory booklet for more information and the MUST report for supporting evidence.

**THE MUST PACK**

- A five-step flow chart
- BMI chart
- Weight-loss tables and alternative measurement instructions
- Explanatory booklet – a guide to using the MUST flowchart
- The MUST report

From the end of November, log on to the British Association for Parenteral and Enteral Nutrition website at www.bapen.org.uk to download copies of the MUST, the explanatory booklet and an executive summary of the MUST report. Printed copies are available to purchase from the BAPEN office. Details of prices can be found on the website or requested from the office.

Readers who have received a starter pack of materials from the MAG will receive copies of the full MUST pack by the end of the year.

For further information or enquiries, contact BAPEN, Secure Hold Business Centre, Studley Road, Redditch, Worcs B98 7LG. Tel: 01527 457850; e-mail: must@gciuk.com

**CONCLUSION**

Nurses in both primary and secondary care are ideally placed to undertake front-line malnutrition screening and play a pivotal role in initiating appropriate care pathways for at-risk patients. With the availability of the MUST, they can be supported by a dependable, adaptable, pragmatic resource with proven clinical value.

**REFERENCES**

Department of Health (2001) **National Service Framework for Older People.** London: DoH.


**FURTHER INFORMATION**

The Malnutrition Advisory Group is a standing committee of the British Association for Parenteral and Enteral Nutrition, a multidisciplinary organisation dedicated to improving nutritional care through research, standard setting and clinical governance.

This article has been double-blind peer-reviewed.

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