Managing Adult Malnutrition in the Community

Including a pathway for the appropriate use of oral nutritional supplements (ONS)

Produced by a multi-professional consensus panel
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Introduction

This document is a practical guide to support General Practitioners and other healthcare professionals in the community to identify and manage individuals at risk of disease related malnutrition, including the appropriate use of oral nutritional supplements (ONS).

This document has been written and agreed by a multi-professional consensus panel with expertise and an interest in malnutrition, representing their respective professional associations. This document is based on clinical evidence, clinical experience and accepted best practice. Local guidance may be available; contact your dietetic department for information.

Topics covered:
• Disease related malnutrition
• How to identify malnutrition and nutritional screening
• Management according to the degree of malnutrition risk
• Evidence-based management pathway for using oral nutritional supplements appropriately

Topics not covered:
• Parenteral nutrition
• Enteral tube feeding
• Acute hospital setting
• Paediatrics
• Eating disorders
• Prevention of malnutrition, public health awareness

MAY 2012 (Document to be reviewed May 2017)
Malnutrition Overview

The term malnutrition can refer to both over and under nutrition. In this document, malnutrition refers to under nutrition; a deficiency of energy, protein and other nutrients that causes adverse effects on the body (shape, size and composition), the way it functions and clinical outcomes. Most malnutrition is disease related, although some social and mechanical (e.g. dentition) factors can also have an impact.

Clinical consequences of malnutrition:
- Impaired immune response
- Reduced muscle strength
- Impaired wound healing
- Impaired psycho-social function
- Impaired recovery from illness and surgery
- Poorer clinical outcomes

Cost implications of malnutrition
The healthcare cost of managing individuals with malnutrition is more than twice that of managing non-malnourished individuals, due to higher use of healthcare resources.

Malnourished people have:
- Disease related malnutrition costs in excess of £13 billion per annum, based on malnutrition prevalence figures and the associated costs of both health and social care.
- The National Institute for Health and Clinical Excellence (NICE CG32) has shown substantial cost savings can result from identifying and treating malnutrition, CG32 is ranked 3rd in the top clinical guidelines shown to produce savings.
- The cost of managing malnutrition using prescribable nutrition support is low <2.5% of the total expenditure on malnutrition.

Size of the problem
- At any point in time more than 3 million people in the UK are at risk of malnutrition, most (~93%) live in the community.

Malnutrition affects:
- More than ¼ people recently admitted to care homes
- ¼ adults on admission to hospital
- Around ¼ clients on admission to mental health units
- Up to ¼ patients attending hospital outpatients
- ¼ people at GP practices

Groups at risk of malnutrition include those with:

<table>
<thead>
<tr>
<th>Chronic disease</th>
<th>chronic obstructive pulmonary disease (COPD), cancer, inflammatory bowel disease, gastrointestinal disease, renal or liver disease</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chronic progressive disease</td>
<td>Dementia, neurological conditions (Parkinson's disease, motor neurone disease (MND))</td>
</tr>
<tr>
<td>Acute illness</td>
<td>Where food is not being consumed for more than 5 days (this is often seen in the acute setting and is rare in the community)</td>
</tr>
<tr>
<td>Debility</td>
<td>Frailty, immobility, old age, depression, recent discharge from hospital</td>
</tr>
<tr>
<td>Social issues</td>
<td>Poor support, housebound, inability to cook and shop, poverty</td>
</tr>
</tbody>
</table>
Identification of Malnutrition

Malnutrition can be identified using a validated screening tool such as the ‘Malnutrition Universal Screening Tool’ (‘MUST’). For ‘MUST’ (www.bapen.org.uk) see Appendix 1 or http://www.eguidelines.co.uk/eguidelinesmain/guidelines/summaries/nutrition/bapen_malnutrition.php

‘MUST’ is a 5 step screening tool that can be used across care settings to identify adults who are malnourished or at risk of malnutrition. ‘MUST’ includes management guidelines and alternative measures when BMI cannot be obtained by measuring weight and height.

Recommended screening frequency:
- First contact within care setting e.g. upon registration with GP, first home visit, on admission to care home or hospital. Other opportunities for screening include: contact with Community Pharmacist or District Nurse
- Upon clinical concern (e.g. unintentional weight loss, appears thin, fragile skin, poor wound healing, pressure ulcers, apathy, wasted muscles, poor appetite, altered taste sensation, impaired swallowing, altered bowel habit, loose fitting clothes or prolonged intercurrent illness) and consider groups at risk of malnutrition (see page 4)
- Once an individual has been highlighted at risk of malnutrition, regular screening and monitoring is recommended to determine any improvement or deterioration and action required

Management of Malnutrition

In most cases malnutrition is a treatable condition that can be managed using first line dietary advice to optimise food intake and oral nutritional supplements (ONS) where necessary.

Management of malnutrition should be linked to the level of malnutrition risk (see page 6)
- For all individuals: record risk agree goals of intervention monitor
- If appropriate treat the underlying cause of malnutrition
- Members of the multidisciplinary team including Dietitians, Occupational Therapists, Speech and Language Therapists, Community Matrons and Community Pharmacists may need to be involved according to an individual’s clinical condition

Goal Setting

Agree goals of intervention with individual/carer
- Set goals to assess the effectiveness of intervention e.g. prevent further weight loss, maintain nutritional status, optimise nutrient intake during acute illness, healing of wounds or pressure ulcers, improved mobility
- Consider disease stage and treatment; adjust goals of intervention accordingly. For example nutritional interventions in some groups such as palliative care, patients undergoing cancer treatment, patients with progressive neurological conditions and those in advanced stages of illness may not result in improvements in nutritional status, but may provide a valuable support to slow decline in weight and function

Monitoring the Intervention

- Monitor progress against goals and modify intervention appropriately
- Consider weight, strength, physical appearance, appetite, ability to perform activities of daily living compared with goals set
- Frequency of monitoring depends on setting and treatment (see pages 6 and 7)
Managing Malnutrition According to Risk Category using ‘MUST’

<table>
<thead>
<tr>
<th>BMI score</th>
<th>Weight loss score</th>
<th>Acute disease effect score (unlikely to apply outside hospital)</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt;20kg/m²</td>
<td>Score 0</td>
<td>Unplanned weight loss score in past 3-6 months</td>
</tr>
<tr>
<td>18.5 – 20kg/m²</td>
<td>Score 1</td>
<td>&lt;5% Score 0</td>
</tr>
<tr>
<td>&lt;18.5kg/m²</td>
<td>Score 2</td>
<td>5 – 10% Score 1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>&gt;10% Score 2</td>
</tr>
</tbody>
</table>

**Total score 0-6**

- **Low risk - score 0**
  - Routine clinical care
  - Review/repeat screening
  - Monthly in care homes
  - Annually in community
  - If BMI>30kg/m² (obese) treat according to local policy/national guidelines.

- **Medium risk - score 1**
  - **Observe**
    - Dietary advice to maximise nutritional intake. Record intake for 3 days, encourage small frequent meals and snacks, with high energy and protein food and fluids.
    - Powdered nutritional supplements to be made up with water or milk are available.
    - Review progress/repeat screening after 1-3 months according to clinical condition or sooner if the condition requires.
    - If improving continue until ‘low risk’
    - If deteriorating, consider treating as ‘high risk’.

- **High risk - score 2 or more**
  - **Treat**
    - Dietary advice to maximise nutritional intake. Record intake for 3 days, encourage small frequent meals and snacks, with high energy and protein food and fluids.
    - Prescribe oral nutritional supplements (ONS) and monitor: See pathway, page 7, on appropriate use of ONS.
    - On improvement, consider managing as ‘medium risk’
    - If no improvement or more specialist support is required, refer to Dietitian.

**For all individuals:**
-Consider whether dietetic assessment is indicated due to underlying illness e.g. diabetes, COPD
-Consider underlying symptoms and cause of malnutrition (e.g. nausea, infections) and treat if appropriate
-Agree goals of intervention with individual/carer and record details of the malnutrition risk
-Reassess individuals identified at risk as they move through care settings

* Treat, unless detrimental or no benefit is expected from nutritional support.

In the absence of height and weight (measured or recalled), the following subjective indicators** can be used collectively to identify individuals at risk of malnutrition1

- Physical appearance e.g. thin or very thin
- History of recent unplanned weight loss
- Loose fitting clothing/jewellery, need for assistance with feeding, changes in appetite and problems with dentition
- Risk of undernutrition due to current illness
- Increased nutritional needs as a result of disease
- Presence of swallowing difficulties which could impact on ability to eat and drink
- The individual’s ability to eat and drink; how does current intake compare with ‘normal’ intake?

**For more guidance on the use of subjective criteria, see the ‘MUST’ explanatory booklet: http://www.bapen.org.uk/must_notes.html

If only using clinical judgement, the following may act as a guide:

<table>
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<tr>
<th>Unlikely to be at risk of malnutrition (low)</th>
<th>Physical appearance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not thin, weight stable or gaining weight (no unplanned weight loss), no change to appetite</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Possible risk of malnutrition (medium)</th>
<th>Thin as a result of disease/condition or history of unplanned weight loss in previous 3-6 months, reduced appetite/ability to eat</th>
</tr>
</thead>
</table>

| Likely malnourished (high) | Thin/very thin and/or substantial unplanned weight loss in previous 3-6 months, No oral intake for 5 days in the presence of acute disease (unlikely to be seen in the community) |
Pathway for using Oral Nutritional Supplements (ONS) in the Management of Malnutrition

**Individual identified as high risk (page 6)**

- Record details of malnutrition risk (screening result/risk category, or clinical judgement)
- Agree goals of intervention with individual/carer
- Consider underlying symptoms and cause of malnutrition e.g. nausea, infections and treat if appropriate
- Consider social requirements e.g. ability to collect prescription
- Reinforce advice to optimise food intake*, confirm individual is able to eat and drink and address any physical issues e.g. dysphagia, dentures

**Acute illness/Recent hospital discharge:**

- Confirm need for ONS - is individual able to manage adequate nutritional intake from food alone?
- Where intake remains inadequate, ONS prescription for 4-6 weeks (1-3 ONS per day)** in addition to oral intake
- If a continuation from hospital prescription, confirm need using screening tool (page 4 and Appendix 1), verify compliance
- Consider ACBS (Advisory Committee for Borderline Substances) indications (see page 9)

**Chronic conditions e.g. COPD, cancer, frail elderly:**

- Longer term nutritional support when food approaches alone are insufficient
- 2 ONS per day (range 1-3) in addition to oral intake. 12 week duration according to clinical condition/ nutritional needs
- Prescribe 1 ‘starter pack’, then 60 preferred ONS per month
- Consider ACBS (Advisory Committee for Borderline Substances) indications (see page 9)

**Monitor progress after 4 - 6 weeks**

- Review goals set before intervention
- Consider weight change, strength, physical appearance, appetite, ability to perform activities of daily living
- Monitor monthly or sooner if clinical concern

**Monitor progress after 12 weeks**

- Review goals set before intervention
- Consider weight change, strength, physical appearance, appetite, ability to perform activities of daily living
- Monitor every 3 months or sooner if clinical concern

**Goals met/Good progress:**

- Encourage oral intake and dietary advice
- Consider reducing to 1 ONS per day for 2 weeks before stopping
- Maximise nutritional intake, consider powdered nutritional supplements to be made up with water or milk
- Monitor progress, consider treating as ‘medium risk’ (see page 6)

**Goals not met/Limited progress**

- Check ONS compliance; amend prescription as necessary, increase volume of ONS
- Reassess clinical condition, consider more intensive nutrition support or seek advice from a Dietitian
- Consider goals of intervention, ONS may be provided as support for individuals with deteriorating conditions
- If no improvement, seek advice from a Dietitian
- Review individuals on ONS every 3-6 months or upon change in clinical condition

**When to stop ONS prescription**

- Goals of intervention have been met and individual is no longer at risk of malnutrition
- Individual is clinically stable/acute episode has abated
- Individual is back to their normal eating and drinking pattern
- If no further clinical input would be appropriate

ONS – oral nutritional supplements/sip feeds/nutrition drinks (BNF section 9.4.2) (see pages 8-9)

Advice on ONS prescription according to consensus clinical opinion. ONS prescription-units to prescribe per day e.g. 2 ONS = 2 bottles/units of ONS per day

* For more detailed support or complex conditions seek advice from a Dietitian

**Some individuals may require more than 3 ONS per day – seek dietetic advice

NOTE: ONS requirement will vary depending on nutritional requirements, patient condition and ability to consume adequate nutrients, ONS dose and duration should be considered
Managing Adult Malnutrition in the Community

Optimising Oral Intake

Dietary advice to optimise oral intake (also known as ‘food first’)

- Everyday foods (e.g. cheese, full fat milk) added to the diet to increase energy and protein content without increasing volume of food consumed. Check with local Dietitians or Primary Care Commissioning Group for local policy and guidance. For more information refer to Manual of Dietetic Practice.
- Small frequent meals and snacks, with food and fluids high in energy and protein
- Powdered nutritional supplements are available
- Overcome potential barriers to oral intake: physical (e.g. dentition, illness related loss of appetite), mechanical (e.g. need for modified texture diet/thickened fluids) and environmental (e.g. unable to prepare food). Consider referral to other healthcare professionals such as Dietitian, Occupational Therapist, Speech and Language Therapist
- There is some evidence for managing malnutrition with dietary advice (food first) alone. However, data on clinical outcomes or cost is limited.
- Care should be taken when using food fortification to ensure that requirements for all nutrients including protein and micronutrients are met. Consider a multivitamin and mineral supplement
- Acute and chronic disease may adversely affect appetite and the ability to source and prepare meals and drinks. Dietary advice can only be effective if acceptable and feasible to the individual

Oral nutritional supplements (ONS) to optimise oral intake

- ONS are typically used in addition to the normal diet, when diet alone is insufficient to meet daily nutritional requirements
- ONS not only increase total energy and protein intake, but also the intake of micronutrients. ONS do not reduce intake of normal food
- Evidence from systematic reviews including NICE demonstrate that ONS are a clinically and cost effective way to manage malnutrition particularly amongst those with a low BMI (BMI<20kg/m²). Clinical benefits of ONS include reductions in complications (e.g. pressure ulcers, poor wound healing, infections), mortality (in acutely ill older people), hospital admissions and readmissions, and clinical benefits of ONS are often seen with: 300-900kcal/day (e.g. 1-3 ONS servings per day) with benefits seen in the community typically with 2 - 3 month’s supplementation, however supplementation periods may be shorter, or longer (up to 1 year) according to clinical need

Oral nutritional supplements (ONS) – range and selection of products

There are a wide range of ONS styles (milk, juice, yoghurt, savoury), formats (liquid, powder, pudding, pre-thickened), types (high protein, fibre containing, low volume) energy densities (1-2.4kcal/ml) and flavours available to suit a wide range of needs.

Most ONS provide ~300kcal, 12g of protein and a full range of vitamins and minerals per serving.

The majority of people requiring ONS can be managed using standard ONS (1.5-2.4kcal/ml); these are often used for people who are frail, elderly or with diagnoses of dementia, COPD or cancer.

There are a number of different ONS which may be of benefit in specific groups:

- **High protein ONS** are suitable for individuals with wounds, post-operative patients, some types of cancer, and the elderly
- **Fibre-containing ONS** are useful for those with constipation (not suitable for those requiring a fibre-free diet)
- **Pre-thickened ONS** and puddings are available for individuals with neurological conditions that affect their swallow
- **Small volume high energy dense ONS** may aid compliance, and may be better tolerated by patients who cannot consume larger volumes
Commencing oral nutritional supplements (ONS)

- Aim to establish preferred flavours, likes and dislikes e.g. milk or juice, sweet or savoury
- Test preferences and compliance with a prescribable ‘starter pack’ (offers a range of products/flavours)
- Prescribe preferred product or range of products/flavours; 2 ONS per day (1-3 per day), initially for up to 3 months (see pathway, page 7, for guidance) 7,17,18,20,21
- For those that require ONS as a sole source of nutrition and those with complex nutritional needs referral to a Dietitian is recommended
- Modular ONS that provide only one or two nutrients should be used under dietetic supervision

Prescribable indications - ACBS (Advisory Committee for Borderline Substances) indications for prescribing standard oral nutritional supplements (ONS) 16

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<thead>
<tr>
<th>Disease related malnutrition</th>
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<tbody>
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<td>Short bowel syndrome</td>
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<tr>
<td>Intractable malabsorption</td>
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<tr>
<td>Pre-operative preparation of undernourished patients</td>
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<tr>
<td>Inflammatory bowel disease</td>
</tr>
<tr>
<td>Total gastrectomy</td>
</tr>
<tr>
<td>Dysphagia</td>
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<tr>
<td>Bowel fistulae</td>
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Discontinuing oral nutritional supplements (ONS)

Discontinue ONS when adequate oral intake is established, targets are achieved, the individual is stable7 and no longer at risk of malnutrition. Continue to monitor to check individual remains stable (consider relapsing remitting conditions e.g. COPD, IBD).

Links/websites

BAPEN  British Association for Parenteral and Enteral Nutrition [www.bapen.org.uk](http://www.bapen.org.uk)
- Key documents and reports
- ‘MUST’ toolkit, including ‘MUST’, explanatory booklet, e-learning and ‘MUST’ calculator

NICE  National Institute for Health and Clinical Excellence [www.nice.org.uk](http://www.nice.org.uk)
- NICE CG32: Nutrition Support in Adults

E-Guidelines  Clinical guidelines summaries for primary care [www.eguidelines.co.uk](http://www.eguidelines.co.uk)

BDA  British Dietetic Association [www.bda.uk.com](http://www.bda.uk.com)
- Information on food first approach, dietetic profession

- Prescribing of adult oral nutritional supplements (ONS). Guiding principles on improving the systems and processes for ONS use

For more information on an electronic pathway see [www.malnutritionpathway.co.uk](http://www.malnutritionpathway.co.uk)
Appendix 1: 'Malnutrition Universal Screening Tool' ('MUST') Flowchart

Step 1
BMI score

- Score
  - BMI kg/m²
    - >20 (>30 Obese) = 0
    - 18.5-20 = 1
    - <18.5 = 2

Step 2
Weight loss score

- Unplanned weight loss in past 3-6 months
  - %
    - <5 = 0
    - 5-10 = 1
    - >10 = 2

Step 3
Acute disease effect score

- If patient is acutely ill and there has been or is likely to be no nutritional intake for >5 days
  - Score 2

Step 4
Overall risk of malnutrition

- Add scores together to calculate overall risk of malnutrition
  - Score 0 Low Risk
  - Score 1 Medium Risk
  - Score 2 or more High Risk

Step 5
Management guidelines

0 Low Risk
Routine clinical care
- Repeat screening
  - Hospital – weekly
  - Care Homes – monthly
  - Community – annually
  - for special groups
    - e.g. those >75 yrs

1 Medium Risk
Observe
- Document dietary intake for 3 days
- If adequate – little concern and repeat screening
  - Hospital – weekly
  - Care Home – at least monthly
  - Community – at least every 2-3 months
- If inadequate – clinical concern
  - follow local policy, set goals, improve and increase overall nutritional intake, monitor and review care plan regularly

2 or more High Risk
Treat*
- Refer to diettian, Nutritional Support Team or implement local policy
- Set goals, improve and increase overall nutritional intake
- Monitor and review care plan
  - Hospital – weekly
  - Care Home – monthly
  - Community – monthly
* Unless detrimental or no benefit is expected from nutritional support e.g. imminent death.

All risk categories:
- Treat underlying condition and provide help and advice on food choices, eating and drinking when necessary
- Record malnutrition risk category
- Record need for special diets and follow local policy

Obesity:
- Record presence of obesity. For those with underlying conditions, these are generally controlled before the treatment of obesity.

Re-assess subjects identified at risk as they move through care settings
See the ‘MUST’ Explanatory Booklet for further details and The ‘MUST’ Report for supporting evidence.

*The ‘Malnutrition Universal Screening Tool’ (‘MUST’) is reproduced here with the kind permission of BAPEN (British Association for Parenteral and Enteral Nutrition). For more information and supporting materials see: http://www.bapen.org.uk/musttoolkit.html*
References


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