



Management of Malnutrition in Primary Care (*individuals in Care Homes*)

This document is designed for use by GPs, Nursing or other Allied Healthcare Professionals in Primary Care to highlight the Best Practice Pathway for those who are at risk of Malnutrition. The most nutritionally vulnerable include those with chronic disease, the elderly, those recently discharged from hospital, poor and socially isolated. A recent survey suggests that 55% of residents in Care Homes are at risk of Malnutrition¹. Malnutrition is associated with higher risks of falls, poor wound healing, more likely to be admitted to hospital and have longer hospital stays.²

Malnutrition is defined as:

- BMI: under 18.5kg/m²
- BMI under 20kg/m² with weight loss 5-10% in the last 3-6 months
- 10% weight loss in the last 3-6 months

The Malnutrition Universal Screen Tool (MUST) is a validated tool designed to identify adults who are underweight and at risk of malnutrition, as well as those who are obese³.

1. CALCULATE MUST

Calculating a MUST score is the most accurate way to identify risk and should be completed monthly in a Care Setting. The Care Setting can provide a MUST score.

MUST Calculator: www.bapen.org.uk/must-and-self-screening/must-calculator (requires current weight, weight from 3-6 months ago and height)

Alternative measurements: see appendix 1

MUST 0 – Low risk	MUST 1 – Medium risk	MUST 2 or more - High risk
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2. ADDRESS BARRIERS TO ORAL INTAKE

nausea/vomiting, pain, infection, constipation/diarrhoea, ability to chew/swallow, medical prognosis /impact of medication. This list is not exhaustive

3. FOOD FIRST CARE PLAN

Care Settings should be aware of the principle of Food First and implement this already. If there is nutritional concern, residents of any MUST score should be on a Care Home led, Food First Care Plan that may include:

Low Risk	Medium Risk	High Risk
1. No concerns 2. Continue routine screening 3. Patient leaflet patientleaflet_lowrisk.pdf (malnutritionpathway.co.uk) patientleaflet_lowrisk_welsh.pdf (malnutritionpathway.co.uk)	1. Offer Little and Often 2. Fortified menu - add butter, cheese, cream to meals 3. Extra snacks twice daily 4. Nourishing drinks twice daily (see appendix 2 for recipe suggestions)	



<p><i>If patient/practitioner has concerns about weight or weight loss</i> Use Medium/High risk Care Plan.</p>	<p>Patient leaflet patientleaflet_medium/high_risk (malnutritionpathway.co.uk) patientleaflet_medium/highrisk_welsh.pdf (malnutritionpathway.co.uk)</p>
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<p>4. ACTION FOR PRACTITIONER If resident is End of Life, see guidance</p>		
<p>MUST 0</p>	<p>MUST 1</p>	<p>MUST 2</p>
<p>1. No action needed. 2. Care Home staff to continue monthly MUST screening and existing Food First Care Plan, if needed.</p>	<p>1. Staff to continue Food First Care Plan 2. Staff to continue monthly MUST screening.</p>	<p>1. see Step 5</p>

<p>5. REFER</p>
<p>1. Care home self-refer to Nutrition and Dietetics</p> <p>Dietetics will assess a wide variety of other conditions too. This pathway focuses on undernutrition. See Appendix 4.</p> <p>Please email powys.dietetics@wales.nhs.uk if you would like advice regarding the suitability of a referral, or call 01686 617273 (office hours only). Please send referrals via:</p> <p>E-referral to the Therapies Hub: 01686 617238 Email referral to Therapies.Hub.POW@wales.nhs.uk The Welsh Clinical Communications Gateway / Welsh Admin Portal (WAP)</p> <p>2. Start with twice daily, starter pack of a powder-based oral nutritional supplement:</p> <p>(Milkshake style) Aymes Shake 1x 57g sachet to mix with 200ml full fat milk, in flavour Strawberry, Chocolate, Banana or Vanilla</p> <p>OR</p> <p>(Juice style) Actasolve Smoothie 1x 66g sachet mixed with 150ml water in flavour Peach, Mango, Pineapple, Strawberry and Cranberry</p> <ul style="list-style-type: none"> • Check compliance with ACBS criteria • Do not prescribe ONS if patient has dysphagia. See Dysphagia guidance • Do not prescribe powder-based oral nutritional supplement if patient has CKD 4/5 in the absence of Dietetic advice.



3. Continue High Risk Food first Care Plan (Step 3)

Pathway-specific Guidance for the appropriate prescribing of Oral Nutritional Supplements (ONS)

ONS in patients receiving end of Life Care

Patients in the final weeks of life are unlikely to benefit from an ONS prescription. It is important to recognise that a normal part of the dying process is a reduction in appetite, thirst and the ability to tolerate food and fluid in the last few weeks of life. Reassurance should be given to families to focus on food/fluids for comfort and enjoyment.

Dysphagia

Patients with swallowing problems should be referred to Speech and Language services for assessment before ONS can be safely prescribed and before dietetic input. If a patient is known to Speech and Language or has already been given guidance regarding appropriate texture recommendations, contact the Dietitians for advice on appropriate oral nutritional supplements.

Appendix 1 – Alternative measurements

Alternative measurements: instructions and tables



If height cannot be obtained, use length of forearm (ulna) to calculate height using tables below.
(See *The 'MUST' Explanatory Booklet* for details of other alternative measurements (knee height and demispan) that can also be used to estimate height).

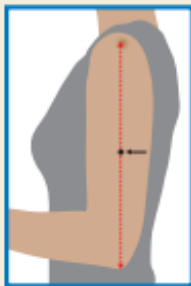
Estimating height from ulna length



Measure between the point of the elbow (olecranon process) and the midpoint of the prominent bone of the wrist (styloid process) (left side if possible).

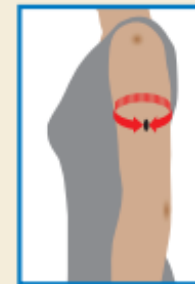
Height (m)	men (<65 years)	1.94	1.93	1.91	1.89	1.87	1.85	1.84	1.82	1.80	1.78	1.76	1.75	1.73	1.71
	men (≥65 years)	1.87	1.86	1.84	1.82	1.81	1.79	1.78	1.76	1.75	1.73	1.71	1.70	1.68	1.67
	Ulna length (cm)	32.0	31.5	31.0	30.5	30.0	29.5	29.0	28.5	28.0	27.5	27.0	26.5	26.0	25.5
Height (m)	Women (<65 years)	1.84	1.83	1.81	1.80	1.79	1.77	1.76	1.75	1.73	1.72	1.70	1.69	1.68	1.66
	Women (≥65 years)	1.84	1.83	1.81	1.79	1.78	1.76	1.75	1.73	1.71	1.70	1.68	1.66	1.65	1.63
Height (m)	men (<65 years)	1.69	1.67	1.66	1.64	1.62	1.60	1.58	1.57	1.55	1.53	1.51	1.49	1.48	1.46
	men (≥65 years)	1.65	1.63	1.62	1.60	1.59	1.57	1.56	1.54	1.52	1.51	1.49	1.48	1.46	1.45
	Ulna length (cm)	25.0	24.5	24.0	23.5	23.0	22.5	22.0	21.5	21.0	20.5	20.0	19.5	19.0	18.5
Height (m)	Women (<65 years)	1.65	1.63	1.62	1.61	1.59	1.58	1.56	1.55	1.54	1.52	1.51	1.50	1.48	1.47
	Women (≥65 years)	1.61	1.60	1.58	1.56	1.55	1.53	1.52	1.50	1.48	1.47	1.45	1.44	1.42	1.40

Estimating BMI category from mid upper arm circumference (MUAC)



The subject's left arm should be bent at the elbow at a 90 degree angle, with the upper arm held parallel to the side of the body. Measure the distance between the bony protrusion on the shoulder (acromion) and the point of the elbow (olecranon process). Mark the mid-point.

Ask the subject to let arm hang loose and measure around the upper arm at the mid-point, making sure that the tape measure is snug but not tight.



If MUAC is <23.5 cm, BMI is likely to be <20 kg/m².
If MUAC is >32.0 cm, BMI is likely to be >30 kg/m².

The use of MUAC provides a general indication of BMI and is not designed to generate an actual score for use with 'MUST'. For further information on use of MUAC please refer to *The 'MUST' Explanatory Booklet*.



Appendix 2 – Homemade Nourishing drinks

Fortified Milkshake

Makes 1 portion
1 portion = 220ml
Serve 2 x 220ml portions per day
(or 4 x 110ml per day depending on the resident's preference)
300kcal and 17g protein per 220ml portion

Ingredients

1/3 pint/180ml whole milk
2 heaped tablespoons/30grams skimmed milk powder**
4 heaped teaspoons/20grams vitamin fortified milkshake powder (Aldi Cowbelle, Asda Milkshake Mix, Lidl Goody Cao, Nesquik®)
OR 5 heaped teaspoons (25grams) 'Ovaltine™ Original Add Milk' powder
OR 5 heaped teaspoons (25grams) 'Horlicks™ Original' Malted Drink powder

Directions

Mix milk powder and milkshake/ Ovaltine™/Horlicks™ powder together in a glass.

Gradually mix in milk and stir well.

**Use skimmed milk powder that does not contain added vegetable fat

Fortified Fruit Juice

Makes 1 portion
1 portion = 220ml
Serve 2 x 220ml portions per day
(or 4 x 110ml per day depending on the resident's preference)
180 – 250kcal and 8 – 9g protein per 220ml portion

Ingredients

180ml pure fruit juice (If possible, use fruit juice with added vitamins such as Kubus™ 100% Multivitamin Juice (Tesco), Naturis™ Multivitamin Juice (Lidl) or Tropicana™ Multivitamin Boost).
40ml undiluted premium cordial (not sugar free/diet/no added sugar) e.g., Belvoir™, Bottle green™, Ribena™, Rocks Organic™.
10grams (2 x 5gram sachets) egg white powder or 80gram liquid egg white (e.g., Margarets™ liquid egg white) (these can be found in the home-baking section of most supermarkets or larger, better value packs can be purchased online).

Directions

Put egg white powder or liquid egg white in a glass.

Gradually stir in undiluted cordial or squash (do not whisk).

When mixed, gradually mix in fruit juice.

Appendix 3

MUST 0 with nutritional concern/MUST 1 Care Plan

1. Offer Little and Often
2. Speak to the Kitchens to start a fortified menu - adding double cream/cheese/or extra butter to meals/snacks as appropriate, such as soup, porridge, mash potato/jacket potato/sandwiches.
3. Extra snacks – 2 extra snacks per day
4. Nourishing drinks – twice daily, see appendix 2 for a recipe suggestion.
5. Trial finger foods - small slices of pizza/quiche, sausage rolls/small pasties, fingers of toast, cocktail sausages, cubes of cheese, potato wedges/chips, cake bars
6. Environmental changes - Consider offering extra assistance, allow sufficient time – don't rush, ensure the mealtime environment is relaxed and distractions are minimised, such as the TV switched off, serve foods on plates of a contrasting colour to the meal to ensure the food is easy to see, and avoid plates with patterns e.g., choose a plain blue or red plate.
7. Continue monthly weights – as per medium/high risk care pathway, if weight loss is ongoing after 1 month on this diet, Self-refer to Dietetics.

Appendix 4 – Care Home Self-referral form to Nutrition and Dietetics

<p>A Food First Care Plan should be in place, prior to referring to the Dietitians, see appendix 3. Please confirm that your resident has a Food First Care Plan in place.</p> <p style="text-align: center;">Yes No</p>	
Patient Information	
NHS Number	Date of Birth
Title: Mr / Mrs / Ms / Miss / Other <i>please state</i>	Gender
Contact phone number	Ethnicity
Preferred language	Interpreter required Yes No
Patient Address	GP Address
Postcode	Postcode
<i>Principle Carer name & relationship</i>	
<p>CONSENT - This referral has been made in the patient's best interest or they have consented to the referral: Yes No</p>	
Is the patient bedbound? Yes No	

Reason for Referral <i>tick all that apply</i>			
Cancer		Weight loss (Nutrition Support)	
Diabetes		Weight management (Obesity)	
Dementia		Wound Healing	
Palliative		Other <i>please specify</i>	

Clinical Information	
Medical History:	
Medications:	



Other relevant information:				
Is there family involvement?				
Does the patient require support at mealtimes?				
Weight history				
Date	Weight (kg) <i>(last 3-6 months)</i>	Height (m)	BMI (kg/m ²)	MUST Score
Swallowing Problems				
Have they been referred to Speech and Language therapy? Yes No				
What IDDSI recommendations is the patient on? <i>Please tick</i>				
Food:		Fluids:		
Level 3 - Liquidised		Level 0 – Thin/Normal		
Level 4 - Puree		Level 1 - Slightly thick		
Level 5 – Mince & moist		Level 2 – mildly thick		
Level 6 – Soft & bite sized		Level 3 – moderately thick fluids		
Level 7 – Regular/Easy chew		Level 4 – Extremely thick		
Referrers Name (Print):			Signature:	
Date of referral:			Job Role:	
Email to Therapies.Hub.POW@wales.nhs.uk				

Guidance for Care Settings

All Wales Guidance: Food and Nutrition Guidance for older people in Care Homes

This guidance aims to support the care home sector to improve the nutritional quality of the food they serve and to meet the range of needs of the older people in their care.

References

1. Stratton R, Cawood A, Anderson A, Burden S Malnutrition and Nutritional Care Survey in Adults; UK Malnutrition Awareness week. BAPEN, 2022
2. Elia M, Screening for malnutrition: a multidisciplinary responsibility. Development and use of the 'Malnutrition Universal Screening Tool' ('MUST') for adults. MAG, a Standing Committee of BAPEN (ISBN 1 899467 70 X) 2003
3. Elia M, Russell CA. Combating malnutrition: Recommendations for action: A report from the Advisory Group on Malnutrition led by BAPEN,2009.