



ENHANCED HEALTH
IN CARE HOMES
WORKING TOGETHER TO IMPROVE QUALITY

MUST

Malnutrition Universal Screening Tool

Nutrition Screening Tool

- Adapted from the 'MUST' tool (BAPEN, 2003)
'Malnutrition Universal Screening Tool'
- Designed to be used by all care workers – in hospital and in the community
- Practical and easy to use
- Validated and reliable

MALNUTRITION UNIVERSAL SCREENING TOOL (MUST)
Nutrition screening tool should be completed on admission and then weekly

Patient's Name: _____ DOB: _____ Care home: _____

Date of admission: _____ Normal Weight (kg): _____ Height (M): _____ estimate/actual

For each section below circle one score

| Date | | | | | |
|--------------------------------------------------------------------------------------------------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Weight (Kg) | Actual/Estimate | Actual/Estimate | Actual/Estimate | Actual/Estimate | Actual/Estimate |
| BODY MASS INDEX (BMI) kg/m² Calculate from chart over page | | | | | |
| • 20 or more | 0 | 0 | 0 | 0 | 0 |
| • 18.5 - 20 | 1 | 1 | 1 | 1 | 1 |
| • less than 18.5 | 2 | 2 | 2 | 2 | 2 |
| UNPLANNED WEIGHT LOSS IN THE LAST 3-6MONTHS – calculate from tables over page | | | | | |
| • <5% | 0 | 0 | 0 | 0 | 0 |
| • 5-10% | 1 | 1 | 1 | 1 | 1 |
| • >10% | 2 | 2 | 2 | 2 | 2 |
| MEDICAL CONDITION | | | | | |
| • If patient is acutely ill <u>AND</u> there has been or is likely to be no nutritional intake for >5 days score 2 | 2 | 2 | 2 | 2 | 2 |
| TOTALS | | | | | |

ACTION

| 0 LOW RISK Routine Clinical Care | 1 MEDIUM RISK Observe | 2 or more HIGH RISK *Treat |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> Ensure adequate fluid intake Offer advice on food and drink choices Offer help and advice with feeding if needed Use appropriate feeding aids if required Help with positioning, sit out/up for meals Weigh weekly, recalculate % weight loss over the last 3 – 6 months and monitor Document action taken | <p>Complete food and fluid chart for 3 days</p> <p>If improved or adequate intake:</p> <ul style="list-style-type: none"> Little clinical concern, discontinue food intake chart Weigh weekly and repeat screen <p>If inadequate intake or no improvement:</p> <ul style="list-style-type: none"> Offer high energy meals and extra suitable snacks - implement 'Food First' Consider modified consistency e.g. soft/puree Continue accurate food and fluid intake chart daily If patient's managing less than ½ meals, offer non-prescribable supplement drinks (Complan/Build up) at least twice daily Weigh weekly, recalculate % weight loss over the last 3 – 6 months and monitor Document action plan | <ul style="list-style-type: none"> Follow action plan for medium risk Refer to dietitian* Weigh weekly, recalculate % weight loss over the last 3 – 6 months and monitor Document action taken <p>*Unless detrimental or no benefit is expected from nutritional support e.g. end of life care pathway</p> |

This is a tool to assist your assessment. If in doubt use your professional judgement

How to use the screening tool

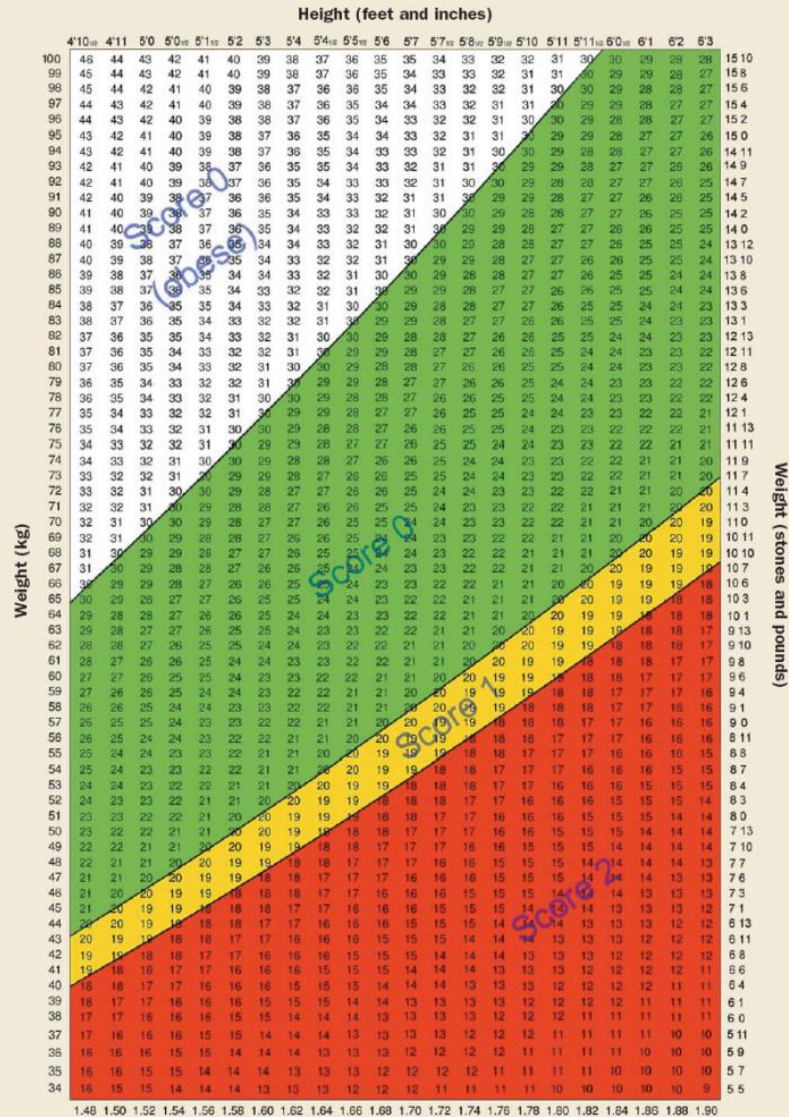
- Step 1 – Obtain height and weight and calculate BMI
- Step 2 – find out % unplanned weight loss
- Step 3 – Consider the medical condition
- Step 4 – Determine overall risk score
- Step 5 – ACTION

Step 1 : Obtain height & weight and calculate BMI

- Obtain height
- Weight
- Calculate Body Mass Index (BMI)
- $BMI = \frac{\text{weight (kg)}}{\text{height} \times \text{height (m)}}$

BMI Chart

Step 1 – BMI score (& BMI)



Score 0 – White Zone

- Indicates obesity. Follow local policy in treating obesity.
- Obese and acutely ill – need to address weight loss after person is clinically stable

Score 0 – Green Zone

- $BMI > 20 \text{ kg/m}^2$

Score 1 – Yellow Zone

- $BMI - 18.5 - 20 \text{ kg/m}^2$

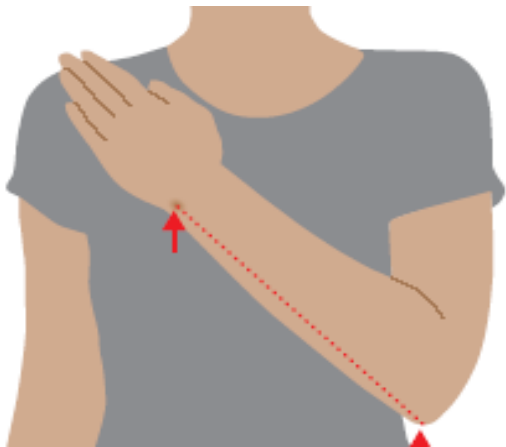
Score 2 – Red Zone

- $BMI \text{ less than } 18.5 \text{ kg/m}^2$

Note : The black lines denote the exact cut off points (30,20 and 18.5 kg/m^2), figures on the chart have been rounded to the nearest whole number.

Estimating Height

- Ask patient or estimate using ulna length
- Measure between the point of the elbow and mid-point of the prominent bone of the wrist
- How to calculate (look at sheet)
 - Measure ulna
 - Look at table and find the ulna length in the white rows
 - If a **man** – read blue row above white line
 - If a **woman** – read blue line below white line
 - Check the age of person



70 year old woman with an ulna length of 25cm, what is her estimated height?

Activity – Working out Step 1

Calculate the BMI's for the following people:

James Ht of 1.78m and Wt 65kg

John Ht of 1.6m and Wt 45kg

Mary Ht of 1.6m and Wt 60kg

Estimating body mass index (BMI)

BMI can be estimated using the mid upper arm circumference (MUAC)

If MUAC < 23.5 cm BMI < 20 kg/m²

If MUAC > 32.0 cm BMI > 30 kg/m²

To estimate weight change over a period of time, take **2 measurements** on each occasion and use the average of the 2 figures.

Step 2 – Weight loss score

| Score 0 | Score 1 | Score 2 |
|-----------------|--------------------|------------------|
| Wt loss < 5% | Wt loss 5 - 10% | Wt loss > 10% |

Weight loss in last
3 to 6 months

| Current weight | kg | Less than (kg) | Between (kg) | More than (kg) |
|----------------|----|-------------------|-----------------|-------------------|
| | | | | |
| | 30 | 1.6 | 1.6 - 3.3 | 3.3 |
| | 31 | 1.6 | 1.6 - 3.4 | 3.4 |
| | 32 | 1.7 | 1.7 - 3.6 | 3.6 |
| | 33 | 1.7 | 1.7 - 3.7 | 3.7 |
| | 34 | 1.8 | 1.8 - 3.8 | 3.8 |
| | 35 | 1.8 | 1.8 - 3.9 | 3.9 |
| | 36 | 1.9 | 1.9 - 4.0 | 4.0 |
| | 37 | 1.9 | 1.9 - 4.1 | 4.1 |
| | 38 | 2.0 | 2.0 - 4.2 | 4.2 |
| | 39 | 2.1 | 2.1 - 4.3 | 4.3 |
| | 40 | 2.1 | 2.1 - 4.4 | 4.4 |
| | 41 | 2.2 | 2.2 - 4.6 | 4.6 |
| | 42 | 2.2 | 2.2 - 4.7 | 4.7 |
| | 43 | 2.3 | 2.3 - 4.8 | 4.8 |
| | 44 | 2.3 | 2.3 - 4.9 | 4.9 |
| | 45 | 2.4 | 2.4 - 5.0 | 5.0 |
| | 46 | 2.4 | 2.4 - 5.1 | 5.1 |
| | 47 | 2.5 | 2.5 - 5.2 | 5.2 |
| | 48 | 2.5 | 2.5 - 5.3 | 5.3 |
| | 49 | 2.6 | 2.6 - 5.4 | 5.4 |
| | 50 | 2.6 | 2.6 - 5.6 | 5.6 |
| | 51 | 2.7 | 2.7 - 5.7 | 5.7 |
| | 52 | 2.7 | 2.7 - 5.8 | 5.8 |
| | 53 | 2.8 | 2.8 - 5.9 | 5.9 |
| | 54 | 2.8 | 2.8 - 6.0 | 6.0 |
| | 55 | 2.9 | 2.9 - 6.1 | 6.1 |
| | 56 | 2.9 | 2.9 - 6.2 | 6.2 |
| | 57 | 3.0 | 3.0 - 6.3 | 6.3 |
| | 58 | 3.1 | 3.1 - 6.4 | 6.4 |
| | 59 | 3.1 | 3.1 - 6.6 | 6.6 |
| | 60 | 3.2 | 3.2 - 6.7 | 6.7 |
| | 61 | 3.2 | 3.2 - 6.8 | 6.8 |
| | 62 | 3.3 | 3.3 - 6.9 | 6.9 |
| | 63 | 3.3 | 3.3 - 7.0 | 7.0 |
| | 64 | 3.4 | 3.4 - 7.1 | 7.1 |

| Score 0 | Score 1 | Score 2 |
|-----------------|--------------------|------------------|
| Wt loss < 5% | Wt loss 5 - 10% | Wt loss > 10% |

Weight loss in last
3 to 6 months

| kg | Less than (kg) | Between (kg) | More than (kg) |
|----|-------------------|-----------------|-------------------|
| 65 | 3.4 | 3.4 - 7.2 | 7.2 |
| 66 | 3.5 | 3.5 - 7.3 | 7.3 |
| 67 | 3.5 | 3.5 - 7.4 | 7.4 |
| 68 | 3.6 | 3.6 - 7.6 | 7.6 |
| 69 | 3.6 | 3.6 - 7.7 | 7.7 |
| 70 | 3.7 | 3.7 - 7.8 | 7.8 |
| 71 | 3.7 | 3.7 - 7.9 | 7.9 |
| 72 | 3.8 | 3.8 - 8.0 | 8.0 |
| 73 | 3.8 | 3.8 - 8.1 | 8.1 |
| 74 | 3.9 | 3.9 - 8.2 | 8.2 |
| 75 | 3.9 | 3.9 - 8.3 | 8.3 |
| 76 | 4.0 | 4.0 - 8.4 | 8.4 |
| 77 | 4.1 | 4.1 - 8.6 | 8.6 |
| 78 | 4.1 | 4.1 - 8.6 | 8.7 |
| 79 | 4.2 | 4.2 - 8.7 | 8.8 |
| 80 | 4.2 | 4.2 - 8.9 | 8.9 |
| 81 | 4.3 | 4.3 - 9.0 | 9.0 |
| 82 | 4.3 | 4.3 - 9.1 | 9.1 |
| 83 | 4.4 | 4.4 - 9.2 | 9.2 |
| 84 | 4.4 | 4.4 - 9.3 | 9.3 |
| 85 | 4.5 | 4.5 - 9.4 | 9.4 |
| 86 | 4.5 | 4.5 - 9.6 | 9.6 |
| 87 | 4.6 | 4.6 - 9.7 | 9.7 |
| 88 | 4.6 | 4.6 - 9.8 | 9.8 |
| 89 | 4.7 | 4.7 - 9.9 | 9.9 |
| 90 | 4.7 | 4.7 - 10.0 | 10.0 |
| 91 | 4.8 | 4.8 - 10.1 | 10.1 |
| 92 | 4.8 | 4.8 - 10.2 | 10.2 |
| 93 | 4.9 | 4.9 - 10.3 | 10.3 |
| 94 | 4.9 | 4.9 - 10.4 | 10.4 |
| 95 | 5.0 | 5.0 - 10.6 | 10.6 |
| 96 | 5.1 | 5.1 - 10.7 | 10.7 |
| 97 | 5.1 | 5.1 - 10.8 | 10.8 |
| 98 | 5.2 | 5.2 - 10.9 | 10.9 |
| 99 | 5.2 | 5.2 - 11.0 | 11.0 |

Step 2

Determine % unplanned weight loss

Activity – Working out Step 2

Calculate the % weight loss for the following people:

| | |
|------|--------------------------------------|
| John | Usual Wt of 62kg, current Wt of 52kg |
| Mary | Usual Wt of 65kg, current Wt of 58kg |
| Ann | Usual Wt of 70kg, current Wt of 64kg |

Factors that affect weight

- Fluid disturbances (oedema)
- Amputations
- Plaster casts
- See Nutrition folder and Nutrition and Hydration training session

Working out Step 3

Establish acute disease effect

Acute patho-physiological/psychological condition

- No nutritional intake or likelihood of no intake for > 5 days

Swallowing difficulties (e.g. after stroke)

Head injuries

Pre/post gastrointestinal surgery

Score 0 or 2

- most patients scoring 2 would be in hospital

Working out Step 4

Determine overall risk score

Add the 3 steps to get an overall risk of malnutrition score:

- Score = 0 → Low risk 'routine care'
- Score = 1 → Medium risk 'observe'
- Score = 2 → High risk 'treat'

Case Study 1 - Lillian

Lillian is a 68 year old lady and has been having problems with her stomach for the last 18 months.

She is only managing small amounts, but some days she is unable to tolerate anything solid.

- Current weight 63kg
- Height 1.58 metres

Step 1

Calculate BMI score

Usual weight 77kg

Step 2

Calculate weight loss score

Step 3

Calculate Acute Disease Effect Score

Case Study 2: Hugh

Hugh is a 73 year old gentleman he suffers from COPD and struggles with shortness of breath, which has been getting progressively worse.

- Current weight: 52 Kg
- Height 1.78 metres

Step 1 Calculate BMI Score

Hugh's weight 6 months ago was 62Kg

Step 2 Calculate his weight loss score

Hugh says he is eating most of his meals

Step 3 Calculate his acute disease effect score

Case Study 3: Dot

Dot is 79 years old and suffers with dysphagia after a recent stroke

- Current weight 68kg
- Height 1.62m
- Usual weight 70kg
- She is managing to eat about 3/4 of a soft diet

Step 5: Setting an appropriate care plan

Management Guidelines

- Record the person's overall risk score
- agree and document a care plan and any advice given
- A high or medium risk individual requires some form of intervention

Score 0 - Low Risk

Routine Nutritional Care

- Ensure adequate fluid intake
- Offer advice on food and drink choices
- Offer help and advice with feeding if needed
- Use appropriate feeding aids if required
- Help with positioning, sit out/up for meals

Repeat Screening

Care homes – repeat screening monthly

- recalculate % weight loss over the last 3-6 months and monitor
- Document action taken
- Monitor and review

Score 1 - Medium Risk

Observe

Provide help and advice on food choices, eating and drinking to improve nutritional intake

Complete food and fluid chart for 3 days

- If improved or adequate intake then discontinue food intake chart, weigh weekly and repeat screen
- If inadequate intake or no improvement

Implement 'Food First'

Consider modified consistency e.g. soft/puree

Weigh weekly

Always document action in care plan

Monitor and review care plan

Score 2 or more - High Risk

Treat

Similar to medium risk; improve and increase overall nutritional intake

- Refer to Dietitian*
- Weigh weekly
- Document action taken
- Monitor and review care plan

**Unless detrimental or no benefit is expected from nutritional support e.g. end of life care pathway*

How to refer to a Dietitian

This is
ESSENTIAL for
all referrals.
Please make
sure the height,
weight and BMI
is included

Please include
as many other
details as
possible here
e.g. if the
patient is able
to attend clinic

| NUTRITION AND DIETETIC SERVICE: Adult Community Referral Form | | | |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|---------------------------------------------------------------------------------------------------------------------------|--|
| NHS no. 000 000 0000 | Address 1 SMITH STREET | | |
| Title Mr / Mrs / Miss / Other _____ MR__ | SMITH VILLAGE | | |
| Name JOHN SMITH | | | |
| D.O.B. ____/____/____ 01 / ____ 01 / ____ 1901 ____ | Postcode ____ SM1 1TH | | |
| Hospital no. ____ RXR 55555 | Tel. no. ____ 02890 555555 | | |
| GP details: Name ____ DR SMITH _____ Address ____ SMITH SURGERY | | | |
| THE FOLLOWING INFORMATION IS ESSENTIAL ON ALL REFERRAL FORMS | | | |
| Weight: ____ 57 ____ Kg Height: ____ 1.82 ____ m BMI: ____ 17.2 ____ kg/m² | | | |
| Please note: If referring for nutrition support, %weight loss and MUST score is also ESSENTIAL. Incomplete referral forms will be returned. | | | |
| REASON FOR REFERRAL: (please tick) <input checked="" type="checkbox"/> Nutrition support (refer to Malnutrition Universal Screening Tool 'MUST') ____ 12 ____ % weight loss ; ' MUST ' score ____ 4 ____ <input type="checkbox"/> Overweight/obese <input type="checkbox"/> Newly diagnosed diabetes (type 1 / type 2 *) / IGT (please delete as appropriate) <input type="checkbox"/> Existing diabetes needing dietetic review / recently commenced on insulin <input type="checkbox"/> Hepatic / renal disease <input type="checkbox"/> Hyperlipidaemia. <i>CHD risk score</i> ____ % <input type="checkbox"/> Coeliac disease <i>Date of diagnosis</i> ____ / ____ / ____ <i>Diagnosis by:</i> <input type="checkbox"/> biopsy; <input type="checkbox"/> blood test <input type="checkbox"/> IBS (<i>screening for coeliac disease done</i> <input type="checkbox"/>) <input type="checkbox"/> Inflammatory bowel disease i.e. Crohn's disease and ulcerative colitis <input type="checkbox"/> Allergy (confirmed/suspected*) new/review* of diet <input type="checkbox"/> Other (please specify) _____ | | | |
| RELEVANT DETAILS e.g. medical history, investigations, drug therapy, social circumstances, relevant blood results COPD. DEMENTIA. GRADE 2 PRESSURE SORE. JOHN IS ON HOME OXYGEN | | | |
| Urgency of referral | Non-urgent <input type="checkbox"/> | Urgent <input checked="" type="checkbox"/> <i>If urgent please specify reason:</i> LARGE WEIGHT LOSS AND POOR APPETITE | |
| Can the patient attend clinic? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> <i>If No please specify reason:</i> HOUSEBOUND | |
| Are there any safety/security issues involved in seeing this patient? | No <input checked="" type="checkbox"/> | Yes <input type="checkbox"/> <i>If yes please give details</i> | |
| Other services involved (e.g. District Nurses/Consultants/other hospital services) PHYSIO AND RESPIRATORY NURSE | | | |
| Any special requirements (e.g. any communication & language needs) | | | |
| REFERRER DETAILS: Name ____ A.JONES _____ Position ____ RGN _____ | | | |
| Address ____ ST PETERS CENTRE _____ | | Contact number ____ 01000 000000 _____ | |
| Signature of referrer _____ <i>Shall</i> | | Date of referral ____ 01 ____ / ____ 01 ____ / ____ 2001 ____ | |
| This referral has been agreed with the patient Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Implied <input type="checkbox"/> | | | |
| Safe Personal Effective | | | |
| Burnley office - Tel: 01282 602452 Fax: 01282 691770 Blackburn office - Tel: 01254 734059 Fax: 01254 736162 | | | |

Patient details –
to be completed
as best as
possible

MUST score and
percentage
weight loss is
also ESSENTIAL
for us to be able
to accept the
referral.

QUESTIONS ?

