Malnutrition Universal Screening Tool
Nutrition & SSKIN bundle

Pressure Ulcer Prevention
Food First

20th June 2017
Vicky Baker Nurse Tutor CUH
Overview

1. Impact of malnutrition on risk of pressure injury development.
2. Importance of nutrition & hydration in wound healing.
3. NPUAP/EPUAP 2014 guidelines & HIQA requirements to screen all patients in hospital for risk of malnutrition.
4. Calculate MUST score (add steps 1+2+3 to get step 4 overall risk of malnutrition: low, medium or high risk).
5. Understand step 5 appropriate nutritional interventions for prevention of pressure injury.
6. Be aware of need to follow local policy, nutritional action plan & document care.
7. Consider your own role in SSKIN bundle.
Clinical effects of malnutrition

Malnutrition defined as insufficient calories, proteins or other nutrients needed for tissue maintenance and repair.
Who is at greatest risk of Pressure Ulcers?

Anyone with poor mobility and a compromised nutritional status.

• Disease states, such as cancer, diabetes, renal disease, and heart disease, may predispose patients to pressure injury secondary to the decrease in oxygen supplied to at-risk areas.

• Assessment of serum albumin is key in this high-risk population, since hypoalbuminemia, if not corrected, has been associated with the development & progression of pressure ulcers.

I care
Observe clothing, appearance, rings, energy level
Wound healing process

- Bleeding
  - Blood clot
- Inflammatory
  - Scab
  - Fibroblast
  - Macrophage
  - Blood vessel
  - Fibroblasts proliferating
  - Subcutaneous fat
- Proliferative
- Remodeling
  - Freshly healed epidermis
  - Freshly healed dermis

Protein
Calories
Vitamins
Minerals
Hydration
Nutritional intervention

• Must include adequate protein and adequate calories to spare protein from wound healing.
• The amount of protein and number of calories need to increase as the stage of the ulcer increases.
• Supplementation with vitamin C
• Supplementation with zinc
• Hydration
• Information, advice & encouragement
• Multidisciplinary team assessment
• Assistance at mealtimes
• Monitoring & documenting intake.
Pressure injuries may never heal if the patient is failing to consume adequate food and fluids to maintain body functions and assist tissue growth.

- Cellular growth is dependent on adequate intake of protein, vitamin C, zinc and iron.

**FOOD AS MEDICINE**
Food & Fluids First

We all have a role in pressure ulcer prevention
Nutrition in Pressure Ulcer Prevention & Treatment

- Nutrition Screening
- Nutrition Assessment
- Care Planning
- Energy Intake
- Protein Intake
- Hydration
- Vitamins & Minerals


- Need to screen ALL adult inpatients using a validated tool.
- Accurate weights must be recorded
- Protected mealtimes
Must do Malnutrition Universal Screening Tool

‘Malnutrition Universal Screening Tool’

‘MUST’

‘MUST’ is a five-step screening tool to identify adults, who are malnourished, at risk of malnutrition (undernutrition), or obese. It also includes management guidelines which can be used to develop a care plan.

It is for use in hospitals, community and other care settings and can be used by all care workers.

This guide contains:
- A flow chart around the 5 steps to use for screening and management
- BMI chart
- Weight loss tables
- Alternative measurements when BMI cannot be obtained by measuring weight and height.

The 5 ‘MUST’ Steps

Step 1
Measure height and weight to get a BMI score using chart provided. If unable to obtain height and weight use the alternative procedures shown in this guide.

Step 2
Note percentage unplanned weight loss and score using tables provided.

Step 3
Establish acute disease effect and score.

Step 4
Add scores from steps 1, 2 and 3 together to obtain overall risk of malnutrition.

Step 5
Use management guidelines and/or local policy to develop care plan.

Please refer to the ‘MUST’ Extraordinary Booklet for more information when weight and height cannot be measured, and when screening settings exist in which extra care in interpretation is needed e.g. those with fluid disturbances, plaster casts, immobility, illness and pregnant or lactating women. The booklet can be also be used for training. 

www.bapen.org.uk/pdfs/must/must_explan.pdf
Step 1 + Step 2 + Step 3

**BMI score**

<table>
<thead>
<tr>
<th>Score</th>
<th>BMI kg/m²</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>&gt;20 (Obese)</td>
</tr>
<tr>
<td>1</td>
<td>18.9-20</td>
</tr>
<tr>
<td>2</td>
<td>&lt;18.5</td>
</tr>
</tbody>
</table>

Unplanned weight loss in past 2-3 months

<table>
<thead>
<tr>
<th>%</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>2</td>
</tr>
</tbody>
</table>

Acute disease effect score

<table>
<thead>
<tr>
<th>%</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>2</td>
</tr>
</tbody>
</table>

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 4

**Management guidelines**

- Low Risk: Routine clinical care
  - Nutritional screening
  - Record weight as baseline
  - Record weight at every regular interval

- Medium Risk: Enhanced clinical care
  - Nutritional screening
  - Record weight at every regular interval
  - Record weight at 2-3 months

- High Risk: Specialized care
  - Nutritional screening
  - Record weight at 2-3 months
  - Follow basic care guidelines

Step 5

If unable to obtain height and weight, use resource for alternative assessments and use of subjective criteria.

Score 0 Low Risk, Score 1 Medium Risk, Score 2 or more High Risk

Re-assess subjects identified at risk as they move through care settings.
Alternative measurements and considerations

Step 1: BMI (Body Mass Index)
If height cannot be measured
- Use recently documented or self-reported height or weight as additional information.
- If the subject does not know or is unable to report their height, use one of the alternative measurements to estimate height (e.g., shoe height or dress height).

Step 2: Reckon unreported weight loss
If recent weight loss cannot be calculated, use self-reported weight loss (e.g., relative to normal weight).

Subjective criteria
If height, weight, or BMI cannot be obtained, the following criteria which relate to them can assist your professional judgment of the subject's nutritional risk category. Please note, these criteria should be used cautiously not exclusively as alternatives to adopt a BMI or WESI and are not designed to assign a score. Mid-upper arm circumference (MUAC) may be used to estimate BMI category in order to support overall impression of the subject's nutritional risk.

1. BMI
- Clinical impression - thin, acceptable weight, overweight, converse testing (very thin, very overweight, etc.)

2. Unplanned weight loss
- Causes of increased fluid intake, reduced appetite, or unexplained problems over 3-6 months and unexplained causes of excess weight gain

3. Acute disease effects
- See if there is no nutritional intake or nutrition in less than 1 week for more than 2 weeks.

Further details on taking alternative measurements, special circumstances, and subjective criteria can be found in the "WESF Exploratory Toolkit." A copy can be downloaded at www.bpt.org.uk or purchased from the DFID office. The full documentation for WESF is contained in the "WESF Toolkit" and is available for purchase from the DFID office.

MUAC (Mid-Upper Arm Circumference)

Measuring the point of the elbow, appearance posterior, and the midpoint of the arm. Some of the guidelines provide not side for evaluation.

a. Measuring height from side length
b. Measuring BMI from side length

Estimating BMI from side length

Estimating BMI from side length

Estimating BMI from side length

Estimating BMI from side length

The subject's left arm should be bent at the elbow at a 90-degree angle, and the upper arm should be held parallel to the side of the body. Measure the distance between the elbow and the shoulder, posterior, and the point of the elbow. Mark the midpoint.

If MUAC is 23.5 cm, BMI is likely to be >20 kg/m².
If MUAC is >25.0 cm, BMI is likely to be <20 kg/m².

This use of chart provides a general estimation of BMI and is not designed to diagnose or determine actual body mass index (BMI) for use with MUAC. For further information on use of MUAC please refer to the "WESF Exploratory Toolkit."
MUST Workshop 1

Mrs Annie Body is 74 years old and has been admitted from a nursing home for a procedure.

Her weight is 43 kgs & you find she was 48 kgs four months ago in previous admission records.

She says her height is 5ft 2 inches. She has a poor appetite but is eating.

Please calculate & document her MUST score & action plan

Step 1. BMI kg/m² score =

Step 2. Unplanned weight loss in last 3-6 months score =

Step 3. Acute disease effect score =
Add 1+2+3 to get
Step 4. Overall risk of malnutrition

Step 5. Management guidelines and action plan.

(Note on tool if therapeutic diet in place)
MUST Workshop 1

Mrs Annie Body is 74 years old and has been admitted from a nursing home for a procedure. Her weight is 43kgs & you find she was 48kgs four months ago in previous admission records. She says her height is 5ft 2inches. She has a poor appetite but is eating.

Please calculate & document her MUST score & action plan

Step 1. BMI kg/m^2 = 17 kg/m^2 score = 2

Step 2. Unplanned weight loss in last 3-6months score = 2
48-43=5kgs lost. Using weight loss chart = 2   >10% weight loss

Step 3 Acute disease effect score = 0

She is eating & not fasting at present

Add 1+2+3 to get Step 4. Overall risk of malnutrition

2+2+0 = 4

Step 5 Management guidelines and action plan.

Score 2 or more = High risk.

Follow local policies, referral to dietician, follow guidelines, improve & increase nutritional intake, monitor & review care plan, assist with mealtimes

Inclusive of action as per medium risk.

Rescreen (hospitals weekly, homes monthly) or more frequently if condition changes
Food first, food & hydration as medicine

Supervise & Monitor Mealtimes

• Protected mealtimes as per local policy & national guidelines
• Follow therapeutic diets
• Be alert for food allergens, sensitivities, intolerances
• Plan & Prepare for Mealtimes
• Red tray system
• Assist with Meal
• Observe
• Document dietary & fluid intake

➢ Consider shadowing a mealtime to learn more
**SKIN BUNDLE**

**Frequency of care delivery (circle as appropriate)**

<table>
<thead>
<tr>
<th>1 hrly</th>
<th>2 hrly</th>
<th>3 hrly</th>
<th>4 hrly</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Date**

**Time (24 Hour Clock)**

**SURFACE**

Indicate each day if Foam Mattress or Pressure Relieving Mattress

**Mattress appropriate & functioning correctly**

**Appropriate seating**

**Heel protectors**

**SKIN INSPECTION**

Inspect skin at bony prominence every 2-4 hours. Existing Pressure Ulceration Y/N CIRCLE Stage* & site of existing ulceration recorded in wound assessment chart Y/N CIRCLE

**Pressure areas checked**

**New Redness State Site:**

**KEEP MOVING**

Frequency of repositioning is determined by skin inspection if red at least 2 hourly

**BED**

R side

L side

Back

**CHAIR**

Standing/Mobilising

**INCONTINENCE**

Incontinence Related Skin Care regime Implemented Y/N

Dry and Clean

Peri-anal skin healthy

**NUTRITION**

Fluid Balance Chart/Food Chart in progress Y/N (Circle and continue) Otherwise record below.

Meal/Snack taken

Drink taken

Supplements taken

**Signature**

Grade: SN = Staff Nurse

HCA = Health care Attendant

OT = Occupational Therapist

D= Dietician

P= Physiotherapist

S= Student

SALT

KEY: Care Delivered:  V = YES  X = NO (if NO Document & Explain in Nursing notes)

RED SKIN - RELIEVE PRESSURE - REVERSE DAMAGE

Patient Pressure Ulcer Prevention Information booklet given

**Category/Stage:** Please refer to the interantion NPUAP/EPUAP Pressure Ulcer Classification system
Please encourage patients to maintain their nutrition:

- Swallow assessment
- Meat, fish, or alternatives.
- Fruit and vegetables.
- Bread, potatoes and cereals.
- Cheese, milk and dairy products.
- Plenty of fluids stop the skin becoming dehydrated and can reduce the risk of ulceration.
- Regular meals & snacks
- Oral hygiene & dental care
- Oral nutritional supplements, choice, temperature,
- Dexterity assessed, adapted cutlery, straws, non slip mats
- Assistance & advice
- Information leaflets
How To Prevent Pressure Ulcers

What is a Pressure Ulcer?
A pressure ulcer (sometimes called a pressure sore or bed sore) is an area of damage to the skin usually over a bony area such as the hip, bottom, heels or elbows. The skin needs a good blood supply to stay healthy. Too much pressure on the skin, for instance from sitting or lying in one position for a long time, can disrupt blood flow and cause the skin to become red. If pressure continues the skin can become damaged; this is called a pressure ulcer.

Who can get a Pressure Ulcer
Pressure ulcers can affect anyone. Those most at risk are people who cannot move very well, for example people who are confined to bed for long periods of time or those in wheelchairs. The elderly and people with ill health are particularly at risk.

How To Prevent Pressure Ulcers

Reposition
Try to help the person you are caring for to move every 2 hours or more often. This could involve standing with help for a few minutes, a short walk or changing position in the chair or bed. Always try to keep the heels free of pressure as they are soft and can become damaged very easily.

Inspect
Inspect the skin at least daily for any signs of redness particularly at the pressure points shown in the picture opposite. If you notice redness that does not go away, keep pressure off the area and inform your local health professional such as your GP or public health nurse who will be able to advise you. Some people have very poor feeling in their skin and will not be able to tell you if an area is hurting, so always inspect carefully.

Care Giver Tip
Choose socks that do not have a tight elastic band at the top as this can impede circulation in the legs.

Skin Care
When washing the person you are caring for use a mild soap and water and pat the skin dry but do not rub! If the person is incontinent make sure to wash the skin in that area regularly and dry well.

Eat well
We need good food to keep our bodies healthy and to help healing. It is important to offer the person fluids and foods that are high in nutrition. Sometimes small meals offered more frequently are easier than large meals. If the skin is very dry it may be a sign the person is not getting enough fluids. If in doubt contact your health professionals.

Care Giver Tip
Remember red is a warning sign! If concerned talk to a health care professional.

Summary

• Hospitalised patients at risk of undernutrition
  – Fasting, missed meals, food choice
  – Disease process
• **Must do Malnutrition Universal Screening Tool**
• Unplanned weight change / insidious weight loss
  Reliant on accurate height & weight recorded
• Healthy meal patterns & adequate fluids
• Patient & carer information leaflets
• Food & hydration first
• Oral nutritional supplements
• We all have a role in preventing pressure injury by enhancing nutritional care
Further Information

- http://www.wounds-uk.com/
- https://www.hiqa.ie/hiqa-news-updates/nutrition-and-hydration-publication
- www.bapen.org.uk/pdfs/must/must_explan.pdf

- Bapen, Irspen & Hseland e-learning on MUST