Pressure Ulcers to Zero

Malnutrition Universal Screening Tool
Nutrition & SSKIN bundle

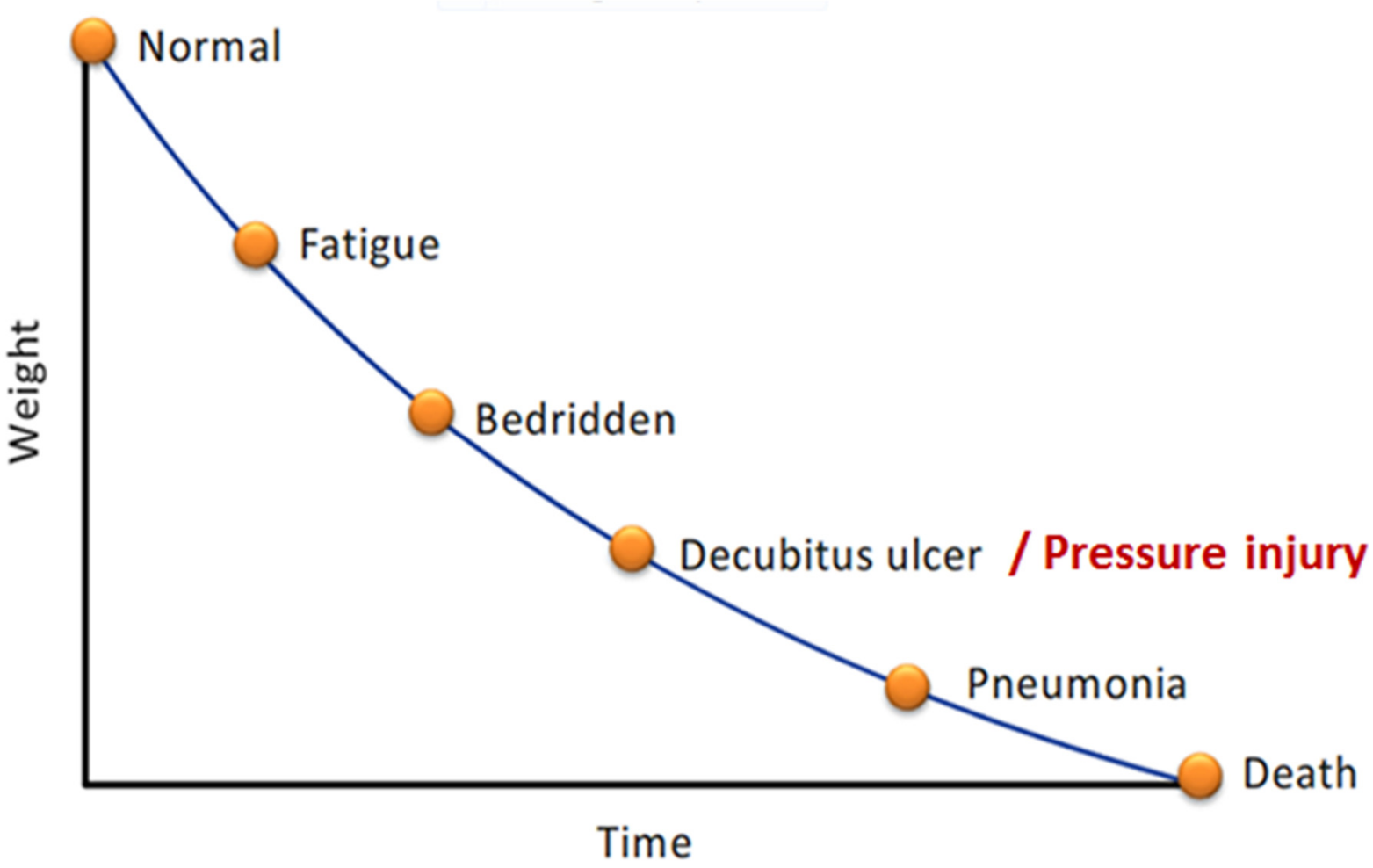
20th June 2017

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?

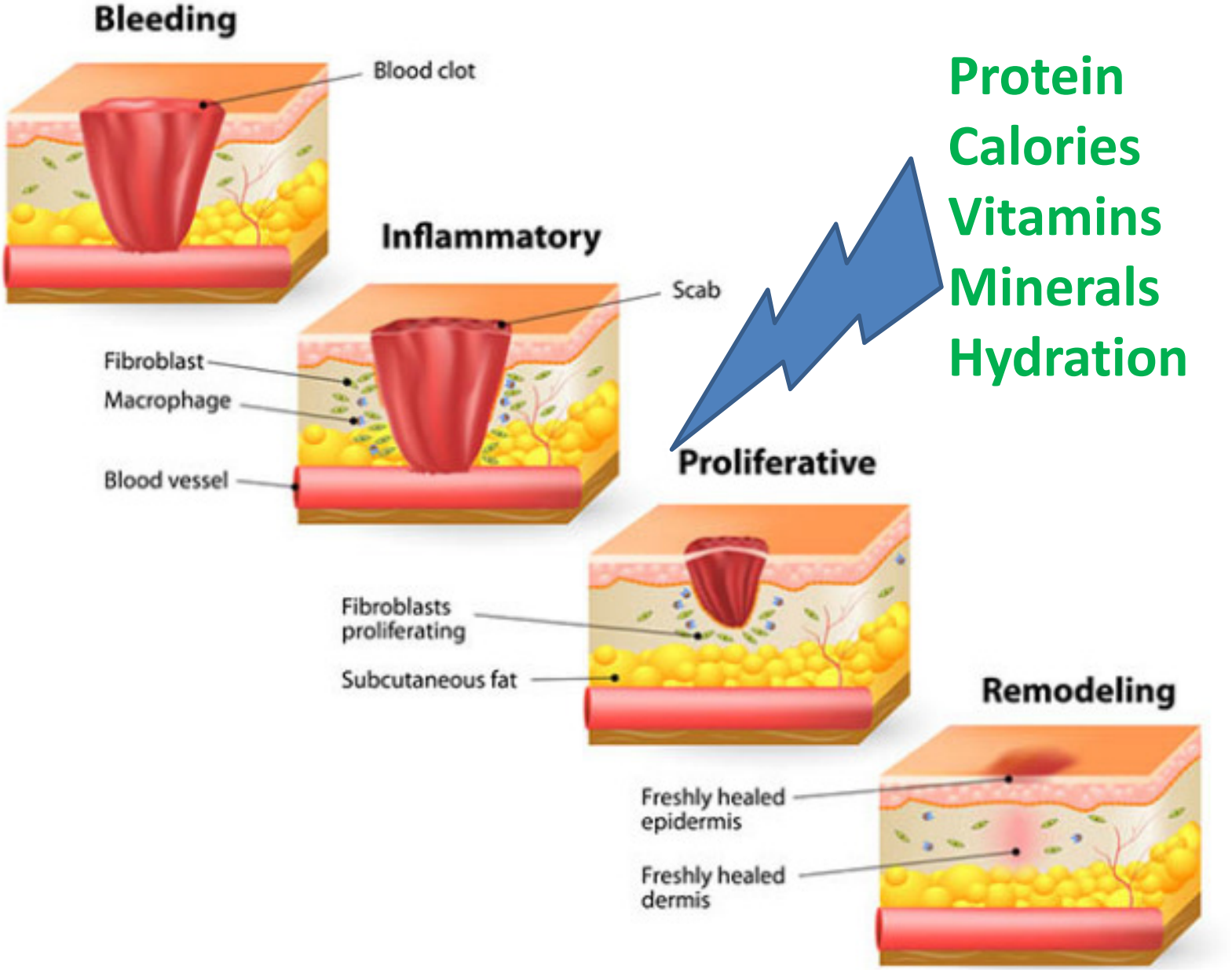
Anyone with poor mobility and a compromised nutritional status.

- 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



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

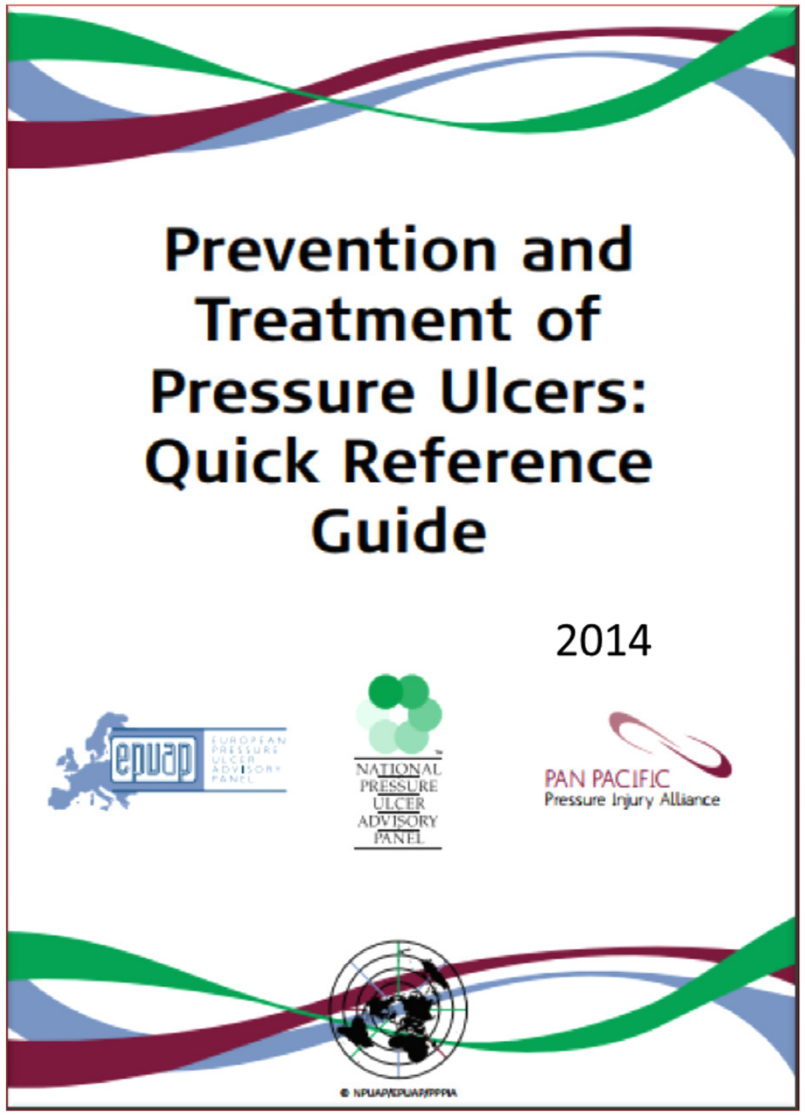
if the patient is failing to consume adequate food and fluids to maintain body functions and assist tissue growth.

- 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

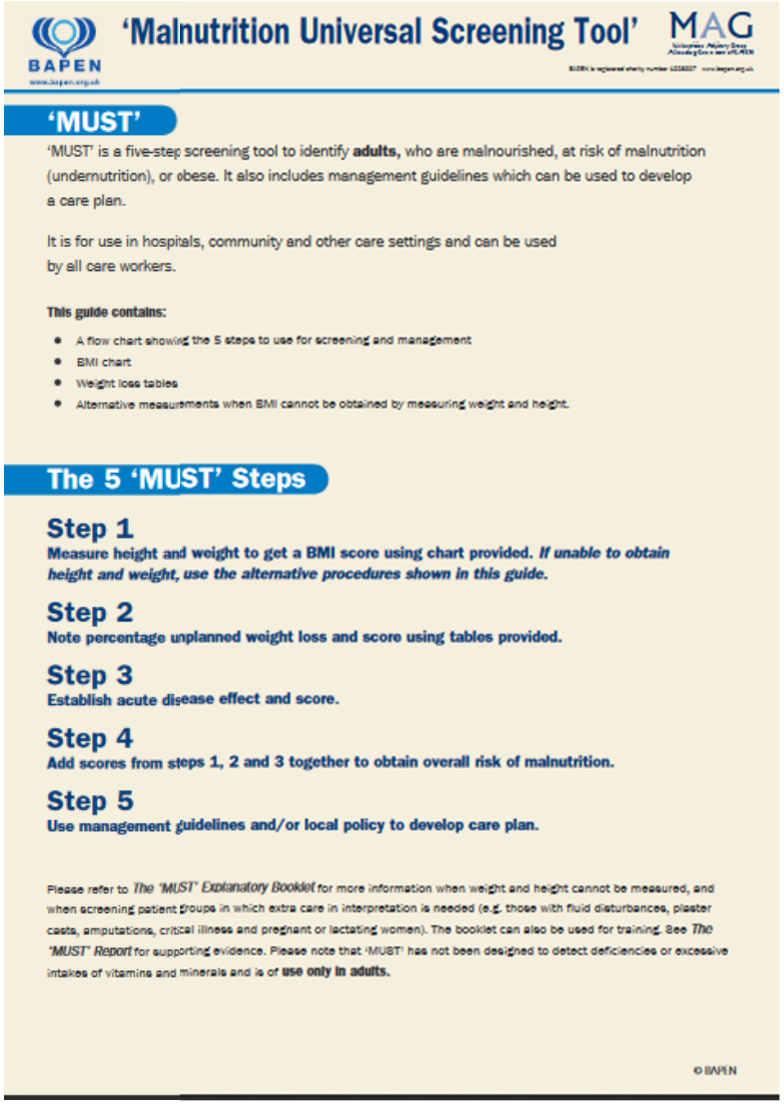
- Nutrition Screening
- Nutrition Assessment
- Care Planning
- Energy Intake
- Protein Intake
- Hydration
- Vitamins & Minerals

National standards for Safer Better Healthcare.

Report of the review of nutrition & hydration care in public acute hospitals. 2016

- **Need to screen ALL adult inpatients using a validated tool.**
- Accurate weights must be recorded
- Protected mealtimes

Must do Malnutrition Universal Screening Tool



BAPEN

'Malnutrition Universal Screening Tool'

MAG

'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 showing 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

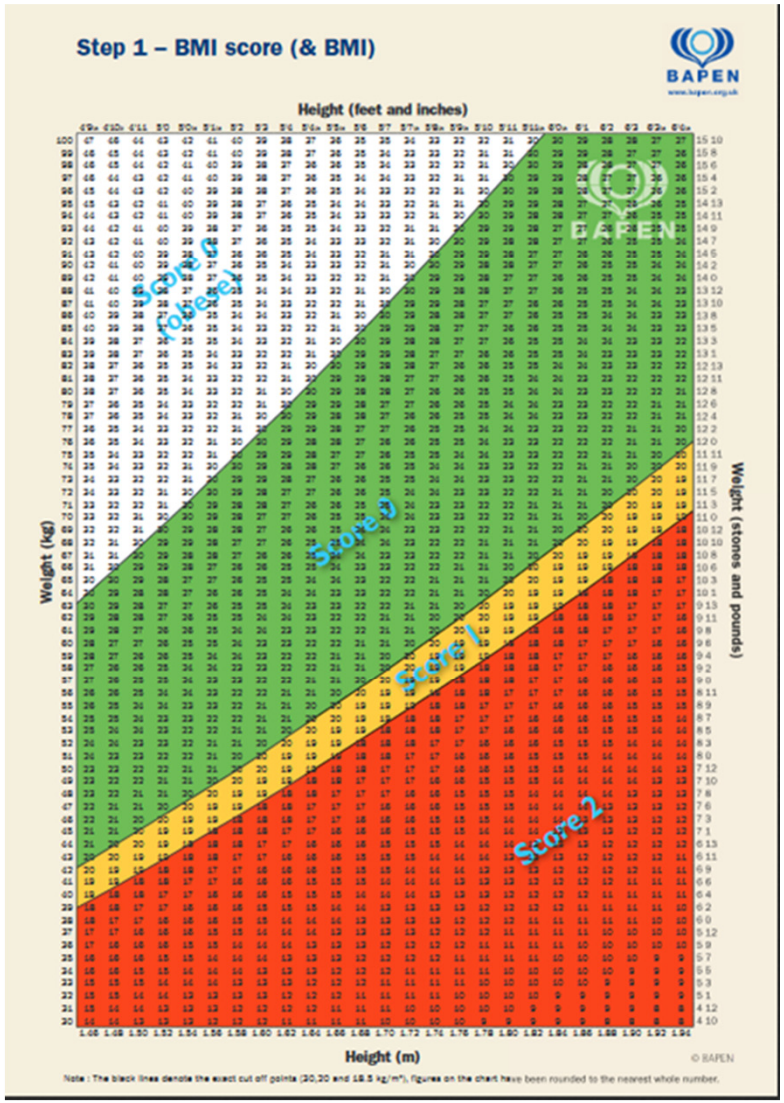
Add scores from steps 1, 2 and 3 together to obtain overall risk of malnutrition.

Step 5

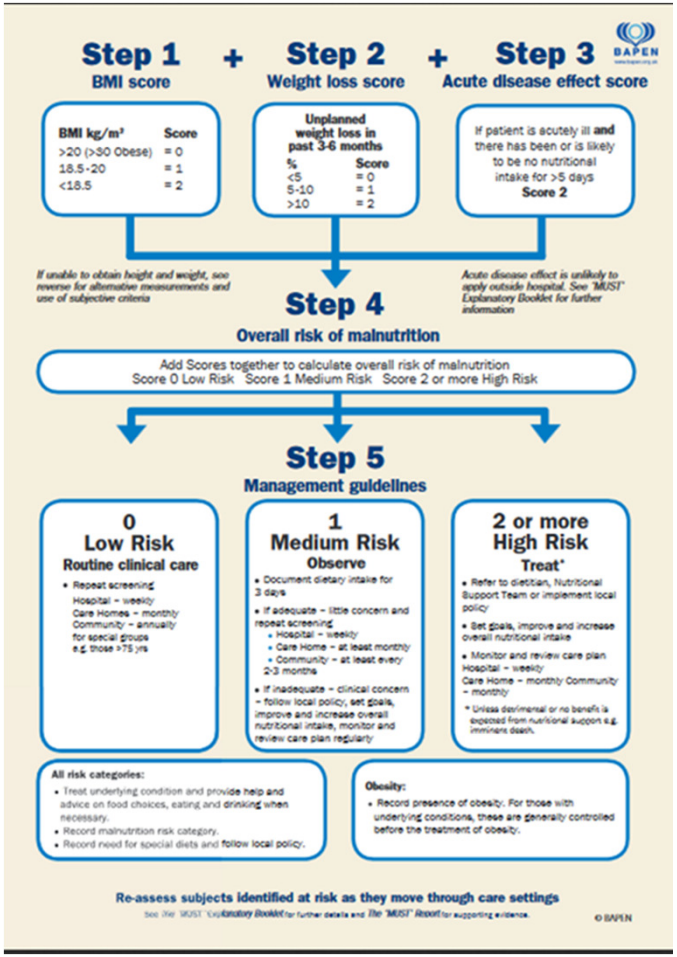
Use management guidelines and/or local policy to develop care plan.

Please refer to *The 'MUST' Explanatory Booklet* for more information when weight and height cannot be measured, and when screening patient groups in which extra care in interpretation is needed (e.g. those with fluid disturbances, plaster casts, amputations, critical illness and pregnant or lactating women). The booklet can also be used for training. See *The 'MUST' Report* for supporting evidence. Please note that 'MUST' has not been designed to detect deficiencies or excessive intakes of vitamins and minerals and is of **use only in adults.**

© BAPEN



www.**bapen**.org.uk/pdfs/**must**/**must** explan.pdf



Step 2 – Weight loss score

BAPEN
www.bapen.org.uk

Current weight

kg	Score 0 Wt loss < 5% — Weight loss in last 3 to 6 months: Less than (kg)	Score 1 Wt loss 5 - 10% — Between (kg)	Score 2 Wt loss > 10% — 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

kg	Score 0 Wt loss < 5% — Weight loss in last 3 to 6 months: Less than (kg)	Score 1 Wt loss 5 - 10% — Between (kg)	Score 2 Wt loss > 10% — 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

Alternative measurements and considerations

Step 1: BMI (body mass index)

If height cannot be measured

- Use recently documented or self-reported height (if reliable and realistic).
- If the subject does not know or is unable to report their height, use one of the alternative measurements to estimate height (ulna, knee height or demispan).

Step 2: Recent unplanned weight loss

If recent weight loss cannot be calculated, use self-reported weight loss (if reliable and realistic).

Subjective criteria

If height, weight or BMI cannot be obtained, the following criteria which relate to them can assist your professional judgement of the subject's nutritional risk category. Please note, these criteria should be used collectively not separately as alternatives to steps 1 and 2 of 'MUST' and are not designed to assign a score. Mid upper arm circumference (MUAC) may be used to estimate BMI category in order to support your overall impression of the subject's nutritional risk.

1. BMI

- Clinical impression – thin, acceptable weight, overweight. Obvious wasting (very thin) and obesity (very overweight) can also be noted.

2. Unplanned weight loss

- Clothes and/or jewellery have become loose fitting (weight loss).
- History of decreased food intake, reduced appetite or swallowing problems over 3-6 months and underlying disease or psycho-social/physical disabilities likely to cause weight loss.

3. Acute disease effect

- Acutely ill and no nutritional intake or likelihood of no intake for more than 5 days.

Further details on taking alternative measurements, special circumstances and subjective criteria can be found in *The 'MUST' Explanatory Booklet*. A copy can be downloaded at www.bapen.org.uk or purchased from the BAPEN office. The full evidence-base for 'MUST' is contained in *The 'MUST' Report* and is also available for purchase from the BAPEN office.

BAPEN Office, Secure Hold Business Centre, Studley Road, Redditch, Worcs, B98 7LG. Tel: 01527 457 850. Fax: 01527 458 718. bapen@sovereignconference.co.uk BAPEN is registered charity number 1023927. www.bapen.org.uk

© BAPEN 2003 ISBN 1 899467 90 4 Price £2.00

© BAPEN. First published May 2003 by MAG the Malnutrition Advisory Group, a Standing Committee of BAPEN.
Reviewed and reprinted with minor changes March 2006, September 2010 and August 2011.
'MUST' is supported by the British Dietetic Association, the Royal College of Nursing and the Registered Nursing Home Association.

Alternative measurements: Instructions and tables

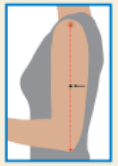
If height cannot be obtained, use length of forearm (ulna) to calculate height using tables below.
(See The 'MUST' Explanatory Booklet for details of other alternative measurements (knee height and demispan) that can also be used to estimate height).

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).

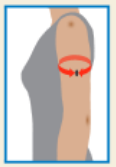
Height (m)	men (<65 years)	1.94	1.93	1.91	1.89	1.87	1.85	1.84	1.82	1.80	1.78	1.76	1.75	1.73	1.71
	men (≥65 years)	1.87	1.86	1.84	1.82	1.81	1.79	1.78	1.76	1.75	1.73	1.71	1.70	1.68	1.67
	Ulna length (cm)	32.0	31.5	31.0	30.5	30.0	29.5	29.0	28.5	28.0	27.5	27.0	26.5	26.0	25.5
Height (m)	Women (<65 years)	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	1.58	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.*

MUST Workshop 1

Mrs Annie Body is 74years old and has been admitted from a nursing 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 score =

Step 2. Unplanned weight loss in last 3-6months 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 74years 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**

SSKIN BUNDLE

Pressure Ulcers to Zero

Frequency of care delivery (circle as appropriate) 1 hrly 2hrly 3hrly 4hrly													
Date													
Time (24 Hour Clock)													
SURFACE	Indicate each day if Foam Matress or Pressure Relieving Mattress												
Mattress appropriate & functioning correctly													
Appropriate seating													
Heel protectors													
SKIN INSPECTION	Inspect skin at boney prominence every 2-4 hours. Existing Pressure Ulceration **Y/N CIRCLE** Stage* & site of existing ulceration recorded in wound assesment 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**													
BED **L side**													
BED **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

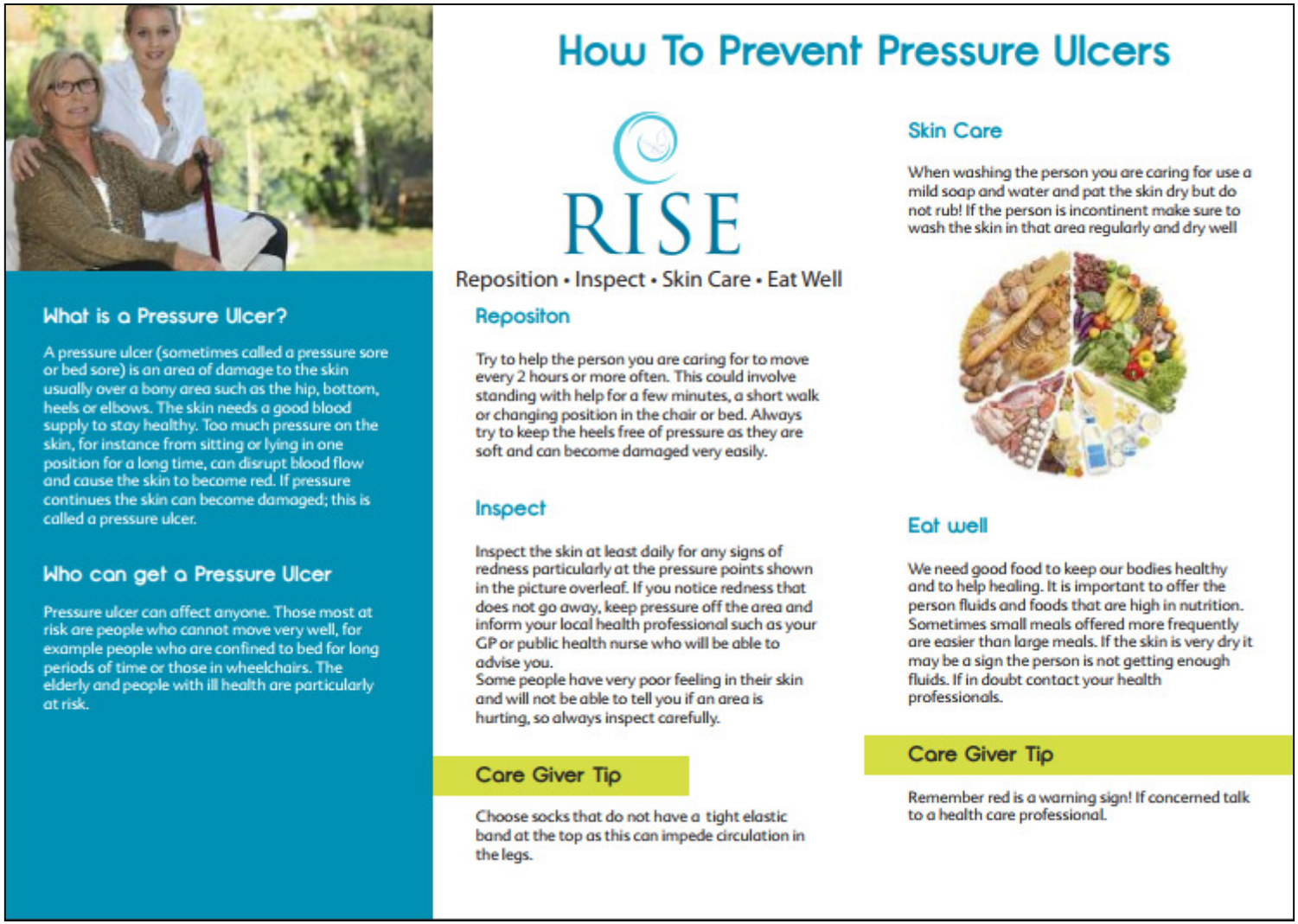
Patient Pressure Ulcer Prevention Information booklet given ☐

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

Reposition-Inspect-Skin Care-Eat Well



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 ulcer 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.

RISE

Reposition • Inspect • Skin Care • Eat Well

Repositon

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 overleaf. 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.

http://www.epuap.org/wp-content/uploads/2014/11/RISE-LEaflet-07.05.14-FInal-Version.pdf

Summary

- Hospitalised patients at risk of undernutrition
  - Fasting, missed meals, food choice
  - Disease process
- **Must do M**alnutrition **U**niversal **S**creening **T**ool
- 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/
- http://www.epuap.org/wp-content/uploads/2016/10/quick-reference-guide-digital-npuap-epuap-pppia-jan2016.pdf
- https://www.hiqa.ie/hiqa-news-updates/nutrition-and-hydration-publication
- http://www.bapen.org.uk/screening-and-must/must-calculator
- www.**bapen**.org.uk/pdfs/**must**/**must** explan.pdf
- http://www.epuap.org/wp-content/uploads/2014/11/RISE-LEaflet-07.05.14-FInal-Version.pdf

- Bapen, Irspen & Hseland e-learning on MUST