

Care Home Quick Reference Guidelines

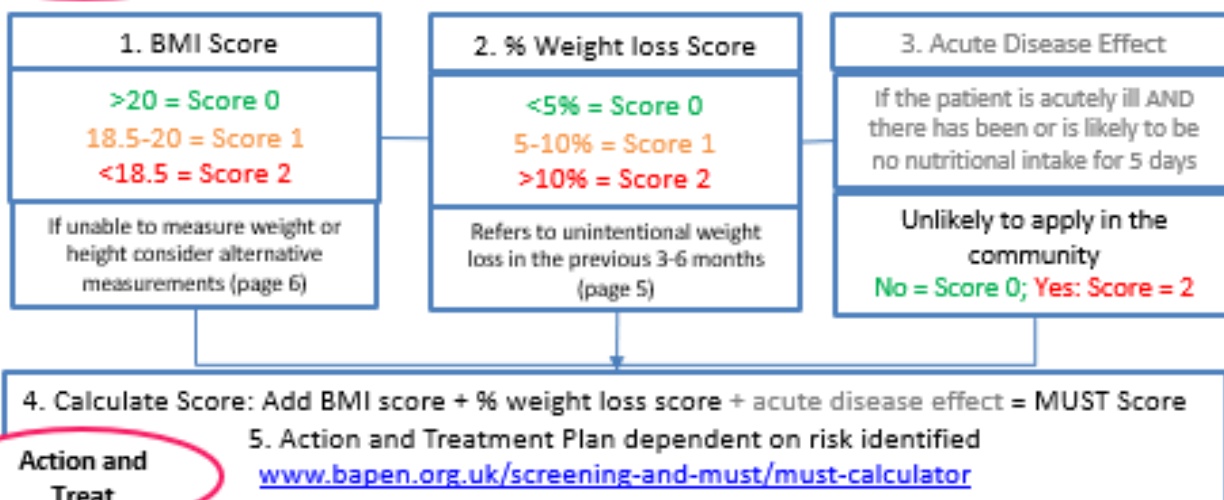
Malnutrition Management Pathway

South West London Alliance

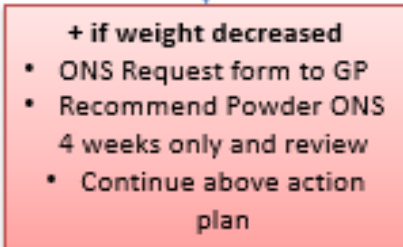
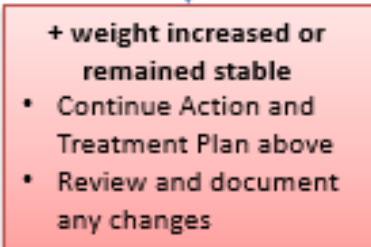
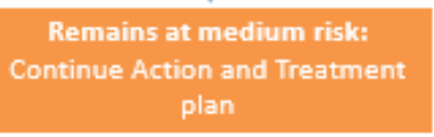
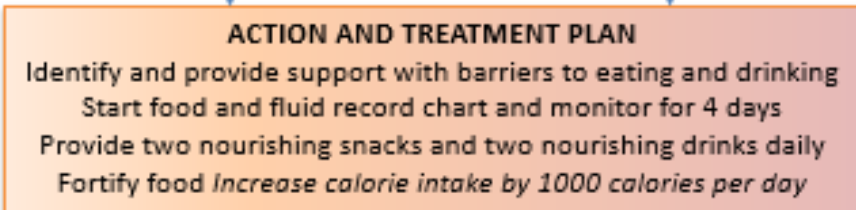
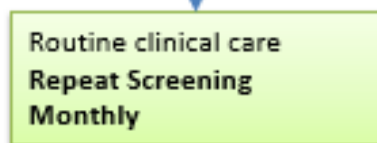
These guidelines should be used in conjunction with the South West London Guidelines on the Identification, Treatment and Management of Malnutrition in Adults, Including the Appropriate prescription of Oral Nutritional Supplements available here
<http://www.swlmcg.nhs.uk/Clinical/Pages/Oral-Nutritional-Supplements.aspx>

Screen and Identify

**South West London MUST Management Guidelines
CARE HOMES**



Action and Treat



Monitor and Review

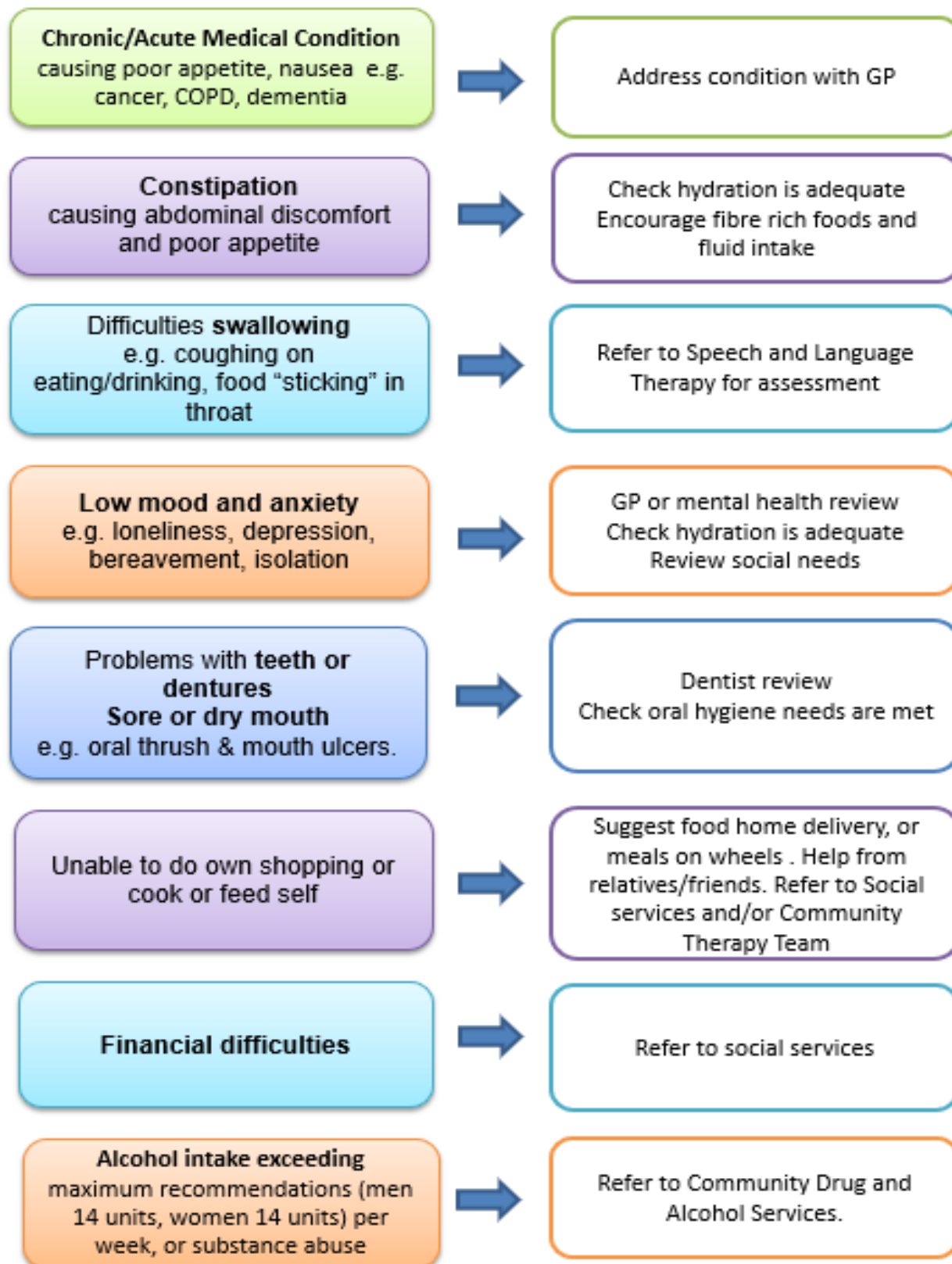
Resources to support Care Homes are available via the South West London Medicines Committee Group website
www.swlmcg.nhs.uk/Clinical/Pages/Oral-Nutritional-Supplements.aspx

**FOR ALL RESIDENTS COMPLETE THE ABOVE PATHWAY MONTHLY
SCREEN & IDENTIFY, ACTION & TREAT, MONITOR & REVIEW**

Assessing the underlying cause of malnutrition

Factor affecting Eating and Drinking

Possible education



Step 1 – BMI score (& BMI)

Height (feet and inches)

	4'9 ¹ / ₂	4'10 ¹ / ₂	4'11	5'0	5'0 ¹ / ₂	5'1 ¹ / ₂	5'2	5'3	5'4	5'4 ¹ / ₂	5'5 ¹ / ₂	5'6	5'7	5'7 ¹ / ₂	5'8 ¹ / ₂	5'9 ¹ / ₂	5'10	5'11	5'11 ¹ / ₂	6'0 ¹ / ₂	6'1	6'2	6'3	6'3 ¹ / ₂	6'4 ¹ / ₂	
100	47	46	44	43	42	41	40	39	38	37	36	35	35	34	33	32	32	31	30	30	29	28	28	27	27	15 10
99	46	45	44	43	42	41	40	39	38	37	36	35	34	33	32	31	31	30	29	29	28	27	27	26	26	15 8
98	46	45	44	42	41	40	39	38	37	36	36	35	34	33	32	31	30	30	29	28	28	27	27	26	26	15 6
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40	19	18	18	17	17	16	16	1																		



Step 2 – Weight loss score

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

Weight 3 to 6 months ago

kg	Weight 3 to 6 months ago		
	Less than (kg)	Between (kg)	More than (kg)
30	31.6	31.6 - 33.3	33.3
31	32.6	32.6 - 34.4	34.4
32	33.7	33.7 - 35.6	35.6
33	34.7	34.7 - 36.7	36.7
34	35.8	35.8 - 37.7	37.8
35	36.8	36.8 - 38.9	38.9
36	37.9	37.9 - 40.0	40.0
37	38.9	38.8 - 41.1	41.1
38	40.0	40.0 - 42.2	42.2
39	41.1	41.1 - 43.3	43.3
40	42.1	42.1 - 44.4	44.4
41	43.2	43.2 - 45.6	45.6
42	44.2	44.2 - 46.7	46.7
43	45.3	45.3 - 47.8	47.8
44	46.3	46.3 - 48.9	48.9
45	47.4	47.4 - 50.0	50.0
46	48.4	48.4 - 51.1	51.1
47	49.5	49.5 - 52.2	52.2
48	50.5	50.5 - 53.3	53.3
49	51.6	51.6 - 54.4	54.4
50	52.6	52.6 - 55.6	55.6
51	53.7	53.7 - 56.7	56.7
52	54.7	54.7 - 57.8	57.8
53	55.8	55.8 - 58.9	58.9
54	56.8	56.8 - 60.0	60.0
55	57.9	57.9 - 61.1	61.1
56	58.9	58.9 - 62.2	62.2
57	60.0	60.0 - 63.3	63.3
58	61.1	61.1 - 64.4	64.4
59	62.1	62.1 - 65.6	65.6
60	63.2	63.2 - 66.7	66.7
61	64.2	64.2 - 67.8	67.8
62	65.3	65.3 - 68.9	68.9
63	66.3	66.3 - 70.0	70.0
64	67.4	67.4 - 71.1	71.1

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

Weight 3 to 6 months ago

kg	Weight 3 to 6 months ago		
	Less than (kg)	Between (kg)	More than (kg)
65	68.4	68.4 - 72.2	72.2
66	69.5	69.5 - 73.3	73.3
67	70.5	70.5 - 74.4	74.4
68	71.6	71.6 - 75.6	75.6
69	72.6	72.6 - 76.7	76.7
70	73.7	73.7 - 77.8	77.8
71	74.7	74.7 - 78.9	78.9
72	75.8	75.8 - 80.0	80.0
73	76.8	76.8 - 81.1	81.1
74	77.9	77.9 - 82.2	82.2
75	78.9	78.9 - 83.3	83.3
76	80.0	80.0 - 84.4	84.4
77	81.1	81.1 - 85.6	85.6
78	82.1	82.1 - 86.7	86.7
79	83.2	83.2 - 87.8	87.8
80	84.2	84.2 - 88.9	88.9
81	85.3	85.3 - 90.0	90.0
82	86.3	86.3 - 91.1	91.1
83	87.4	87.4 - 92.2	92.2
84	88.4	88.4 - 93.3	93.3
85	89.5	89.5 - 94.4	94.4
86	90.5	90.5 - 95.6	95.6
87	91.6	91.6 - 96.7	96.7
88	92.6	92.6 - 97.8	97.8
89	93.7	93.7 - 98.9	98.9
90	94.7	94.7 - 100.0	100.0
91	95.8	95.8 - 101.1	101.1
92	96.8	96.8 - 102.2	102.2
93	97.9	97.9 - 103.3	103.3
94	98.9	98.9 - 104.4	104.4
95	100.0	100.0 - 105.6	105.6
96	101.1	101.1 - 106.7	106.7
97	102.1	102.1 - 107.8	107.8
98	103.2	103.2 - 108.9	108.9
99	104.2	104.2 - 110.0	110.0

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

Weight 3 to 6 months ago

kg	Weight 3 to 6 months ago		
	Less than (kg)	Between (kg)	More than (kg)
100	105.3	105.3 - 111.1	111.1
101	106.3	106.3 - 112.2	112.2
102	107.4	107.4 - 113.3	113.3
103	108.4	108.4 - 114.4	114.4
104	109.5	109.5 - 115.6	115.6
105	110.5	110.5 - 116.7	116.7
106	111.6	111.6 - 117.8	117.8
107	112.6	112.6 - 118.9	118.9
108	113.7	113.7 - 120.0	120.0
109	114.7	114.7 - 121.1	121.1
110	115.8	115.8 - 122.2	122.2
111	116.8	116.8 - 123.3	123.3
112	117.9	117.9 - 124.4	124.4
113	118.9	118.9 - 125.6	125.6
114	120.0	120.0 - 126.7	126.7
115	121.1	121.1 - 127.8	127.8
116	122.1	122.1 - 128.9	128.9
117	123.2	123.2 - 130.0	130.0
118	124.2	124.2 - 131.1	131.1
119	125.3	125.3 - 132.2	132.2
120	126.3	126.3 - 133.3	133.3
121	127.4	127.4 - 134.4	134.4
122	128.4	128.4 - 135.6	135.6
123	129.5	129.5 - 136.7	136.7
124	130.5	130.5 - 137.8	137.8
125	131.6	131.6 - 138.9	138.9
126	132.6	132.6 - 140.0	140.0
127	133.7	133.7 - 141.1	141.1
128	134.7	134.7 - 142.2	142.2
129	135.8	135.8 - 143.3	143.3
130	136.8	136.8 - 144.4	144.4
131	137.9	137.9 - 145.6	145.6
132	138.9	138.9 - 146.7	146.7
133	140.0	140.0 - 147.8	147.8
134	141.1	141.1 - 148.9	148.9

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

Weight 3 to 6 months ago

kg	Weight 3 to 6 months ago		
	Less than (kg)	Between (kg)	More than (kg)
135	142.1	142.1 - 150.0	150.0
136	143.2	143.2 - 151.0	151.1
137	144.2	144.2 - 152.2	152.2
138	145.3	145.3 - 153.3	153.3
139	146.3	146.3 - 154.4	154.4
140	147.4	147.4 - 155.6	155.6
141	148.4	148.4 - 156.7	156.7
142	149.5	149.5 - 157.8	157.8
143	150.5	150.5 - 158.9	158.9
144	151.6	151.6 - 160.0	160.0
145	152.6	152.6 - 161.1	161.1
146	153.7	153.7 - 162.2	162.2
147	154.7	154.7 - 163.3	163.3
148	155.8	155.8 - 164.4	164.4
149	156.8	156.8 - 165.6	165.6
150	157.9	157.9 - 166.7	166.7
151	158.9	158.9 - 167.8	167.8
152	160.0	160.0 - 168.7	168.9
153	161.1	161.1 - 170.0	170.0
154	162.1	162.1 - 171.1	171.1
155	163.2	163.2 - 172.2	172.2
156	164.2	164.2 - 173.3	173.3
157	165.3	165.3 - 174.4	174.4
158	166.3	166.3 - 175.6	175.6
159	167.4	167.4 - 176.7	176.7
160	168.4	168.4 - 177.8	177.8
161	169.5	169.5 - 178.9	178.9
162	170.5	170.5 - 180.0	180.0
163	171.6	171.6 - 181.1	181.1
164	172.6	172.6 - 182.2	182.2
165	173.7	173.7 - 183.3	183.3
166	174.7	174.7 - 184.4	184.4
167	175.8	175.8 - 185.6	185.6
168	176.8	176.8 - 186.7	186.7
169	177.9	177.9 - 187.8	187.8

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).

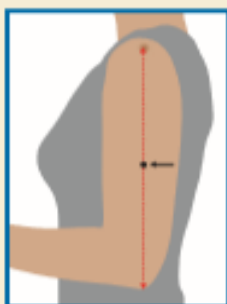
Estimating height from ulna length



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).

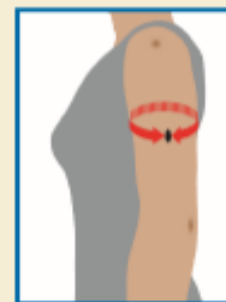
Height (m)	men (<65 years)	1.94	1.93	1.91	1.89	1.87	1.85	1.84	1.82	1.80	1.78	1.76	1.75	1.73	1.71
	men (≥65 years)	1.87	1.86	1.84	1.82	1.81	1.79	1.78	1.76	1.75	1.73	1.71	1.70	1.68	1.67
	Ulna length (cm)	32.0	31.5	31.0	30.5	30.0	29.5	29.0	28.5	28.0	27.5	27.0	26.5	26.0	25.5
Height (m)	Women (<65 years)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

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 midpoint.

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*.

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.