

Healthcare professional/care guide – How to complete MUST

1 Current weight (record weight in kilograms) - Weigh patient at least once per month and record on MUST chart

- Record if the patient has oedema (fluid swelling seen often in the feet and legs) as presence of oedema means that weight will not be accurate. In this case measure MUAC as well as weight (see 3)

* Patient can't be weighed? Record reason why patient can't be weighed. Measure and record mid upper arm circumference (MUAC) (see 3 & MUST alternative measurements - MUAC) NB MUAC will not generate a MUST score

- If different scales are needed (e.g. chair or hoist scales) raise this with team lead NB care homes have a duty of care to their residents to weigh them regularly, even if this requires purchase of different scales

2 Current height (record height in metres) – Complete on admission only and record on MUST chart

- Measuring standing height is most accurate but is often impossible to do accurately in a care home setting or in the patient's own home
- The next most accurate way of finding height is by recall (remembered/recorded) - this can be recalled by the patient, a relative or from the patients GP records
- The least accurate way of finding height is by measuring ulna length – ulna length measurement should only be used when it is not possible to measure height or obtain height by recall, or when a recalled height does not seem to match the patients appearance (see MUST alternative measurements – Ulna length)

3 BMI score – Complete once per month

Follow a. b. c. below and USE THIS TABLE

a. Find the patients height on the left hand side of the table

b. Follow the arrow to the right of the patients height (being sure not to cross any black line) and find which of the 3 colours contains the patients current weight

- Red = Score 2 (BMI <18.5)
- Yellow = Score 1 (BMI 18.5 – 20)
- Green = Score 0 (BMI >20)

c. Record this score on MUST chart

For example If a patient is 1.65m (5'5") tall and weighs 49kg (Red <50.4kg) then their BMI Score will be 2

* Patient has oedema (see 1)? Remember that their BMI score will not be accurate

* Patient has had an amputation? Multiply current weight (in kg) by:

- 1.18 if whole leg amputated
- 1.1 if leg amputated above knee
- 1.063 if leg amputated below knee
- 1.05 if whole arm amputated
- 1.022 if arm amputated below elbow

And use this figure (weight) and patients height to find BMI score

* Patient cannot be weighed? Use mid upper arm circumference (MUAC) to estimate whether BMI is likely to be >20 or < 20 (See MUST alternative measurements – MUAC)

* Need to measure MUAC? (See MUST alternative measurements – MUAC) MUAC of less than 23.5cm indicates BMI is less than 20 (underweight); MUAC of more than 23.5cm indicates BMI is more than 20 (normal weight) NB MUAC will not generate a BMI score

Height		BMI score		
(ft)	(m)	Weight range (kg)		
		(< = less than)		(> = more than)
6'3	1.90	<66.8 kg	66.8 – 72.2kg	>72.2kg
6'2½	1.89	<66.1 kg	66.1 – 71.4kg	>71.4kg
6'2	1.88	<65.4 kg	65.4 – 70.7kg	>70.7kg
6'1½	1.86	<64.0 kg	64.0 – 69.2kg	>69.2kg
6'1	1.85	<63.3 kg	63.3 – 68.5kg	>68.5kg
6'0½	1.84	<62.6 kg	62.6 – 67.7kg	>67.7kg
6'0	1.82	<61.3 kg	61.3 – 66.2kg	>66.2kg
5'11½	1.81	<60.6 kg	60.6 – 65.5kg	>65.5kg
5'11	1.80	<59.9 kg	59.9 – 64.8kg	>64.8kg
5'10½	1.79	<59.3 kg	59.3 – 64.1kg	>64.1kg
5'10	1.77	<58.0 kg	58.0 – 63.4kg	>63.4kg
5'9½	1.76	<57.3 kg	57.3 – 62.0kg	>63.0kg
5'9	1.75	<56.7 kg	56.7 – 61.3kg	>61.3kg
5'8½	1.74	<56.0 kg	56.0 – 60.6kg	>60.6kg
5'8	1.72	<54.7 kg	54.7 – 59.2kg	>59.2kg
5'7½	1.71	<54.1 kg	54.1 – 58.5kg	>58.5kg
5'7	1.70	<53.5 kg	53.5 – 57.8kg	>57.8kg
5'6½	1.68	<52.2 kg	52.2 – 57.1kg	>57.1kg
5'6	1.67	<51.6 kg	51.6 – 56.4kg	>56.4kg
5'5½	1.66	<51.0 kg	51.0 – 55.1kg	>55.1kg
5'5	1.65	<50.4 kg	50.4 – 54.5kg	>54.5kg
5'4½	1.63	<49.2 kg	49.2 – 53.1kg	>53.1kg
5'4	1.62	<48.6 kg	48.6 – 52.5kg	>52.5kg
5'3½	1.61	<48.0 kg	48.0 – 51.8kg	>52.8kg
5'3	1.60	<47.4 kg	47.4 – 51.2kg	>51.2kg
5'2½	1.58	<46.8 kg	46.8 – 50.6kg	>50.6kg
5'2	1.57	<46.2 kg	46.2 – 50.0kg	>50.0kg
5'1½	1.56	<45.0 kg	45.0 – 49.1kg	>49.1kg
5'1	1.54	<43.2 kg	43.2 – 47.4kg	>47.4kg
5'0½	1.53	<43.3 kg	43.3 – 46.8kg	>46.8kg
5'0	1.52	<42.7 kg	42.7 – 46.2kg	>46.2kg
4'11½	1.51	<42.2 kg	42.2 – 45.6kg	>45.6kg
4'11	1.49	<41.1 kg	41.1 – 44.4kg	>44.4kg
4'10	1.47	<40.0 kg	40.0 – 43.2kg	>43.2kg
4'9½	1.46	<39.4 kg	39.4 – 42.6kg	>42.6kg

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Date ratified	21 Aug 2014 (Medicines Management JET)
Review date	21 Aug 2017

4 Weight loss score – Complete once per month

- Look at patients weight record and find the patients **highest weight in last 6 months** then:

Follow a. b. c. below and USE THIS TABLE →

- a. On the left hand side of the table find the weight closest to the patients **highest weight in last 6 months**

* **Less than 6 months weights available?** Check that previous weight chart has not been archived. Find the patients highest weight within the weights available

* **Only have weight history from more than 6 months ago?** Use most recent weight available and current weight

* **No previous weights known?** Use subjective data as detailed below to estimate whether patient has recently lost a significant amount of weight **NB this will not generate a Weight loss score**

- b. Follow the arrow to the right of the **highest weight in last 6 months** (being sure not to cross any black line) and find which of the 3 colours contains the patients **current weight**

- Red** = Score 2 (>10% weight loss)
- Yellow** = Score 1 (5-10% weight loss)
- Green** = Score 0 (<5% weight loss)

- c. Record this score on MUST chart

For example If a patients highest weight in the last 6 months was 54.5kg (54kg) and they now weigh 49kg (**Yellow** 48.6 – 51.3kg) then their Weight Loss Score will be 1

* **Can only measure MUAC?** MUAC will not generate a Weight loss score but can show if weight is increasing or decreasing (See **MUST alternative measurements – MUAC**)

* **Patient currently has or recently had oedema (see 1)?**

Remember that their weight loss score may not be accurate

* **No previous weights?** Use subjective data (see below) to estimate whether patient has lost a significant amount of weight recently **NB this will not generate a Weight loss score**

Subjective data can include:

- Patient or carer reports weight loss within the last 6 months
- Loose clothes, dentures or rings (that fitted 3 - 6 months ago)
- Ongoing poor food intake

		Weight loss score		
Highest weight in last 6 months (kg)		Current weight (kg)		
		(< = less than)		(> = more than)
30	→	<27.0	27.0 – 28.5	>28.5
32	→	<28.8	28.8 – 30.4	>30.4
34	→	<30.6	30.6 – 32.3	>32.3
36	→	<32.4	32.4 – 34.2	>34.2
38	→	<34.2	34.2 – 36.1	>36.1
40	→	<36.0	36.0 – 38.0	>38.0
42	→	<37.8	37.8 – 39.9	>39.9
44	→	<39.6	39.6 – 41.8	>41.8
46	→	<41.4	41.4 – 43.7	>43.7
48	→	<43.2	43.2 – 45.6	>45.6
50	→	<45.0	45.0 – 47.5	>47.5
52	→	<46.8	46.8 – 49.4	>49.4
54	→	<48.6	48.6 – 51.3	>51.3
56	→	<50.4	50.4 – 53.2	>53.2
58	→	<52.2	52.2 – 55.1	>55.1
60	→	<54.0	54.0 – 57.0	>57.0
62	→	<55.8	55.8 – 58.9	>58.9
64	→	<57.6	57.6 – 60.8	>60.8
66	→	<59.4	59.4 – 62.7	>62.7
68	→	<61.2	61.2 – 64.6	>64.6
70	→	<63.0	63.0 – 66.5	>66.5
72	→	<64.8	64.8 – 68.4	>68.4
74	→	<66.6	66.6 – 70.3	>70.3
76	→	<68.4	68.4 – 72.2	>72.2
78	→	<70.2	70.2 – 74.1	>74.1
80	→	<72.0	72.0 – 76.0	>76.0
82	→	<73.8	73.8 – 77.9	>77.9
84	→	<75.6	75.6 – 79.8	>79.8
86	→	<77.4	77.4 – 81.7	>81.7
88	→	<79.2	79.2 – 83.6	>83.6
90	→	<81.0	81.0 – 85.5	>85.5
92	→	<82.8	82.8 – 87.4	>87.4
94	→	<84.6	84.6 – 89.3	>89.3
96	→	<86.4	86.4 – 91.2	>91.2
98	→	<88.2	88.2 – 93.1	>93.1
100	→	<90.0	90.0 – 95.0	>95.0

5 Acute disease effect score – complete once per month

- Score = 0 for almost all patients in the community
- Score = 2 **only** if patient is **acutely ill and** has had or is likely to have **no nutritional intake** for more than 5 days

6 MUST score - add together BMI score, weight loss score & acute disease effect score – Complete once per month

- In the community it is very unlikely that this number will be greater than 4. If it is greater than 4, one of the above steps may not have been completed correctly

- MUST score 0 = **Low** risk of malnutrition
- MUST score 1 = **Medium** risk of malnutrition
- MUST score 2 or more = **High** risk of malnutrition

- If patient cannot be weighed, use MUAC (See **MUST alternative measurements – MUAC**) and subjective data (See 4) to decide whether to treat patient as **Low**, **Medium** or **High** risk

NOW FOLLOW MUST MANAGEMENT GUIDELINES