

## > Answers: Using Health Information

### Module 8: Part 1 – Supplementary Feeding Programme (SFP)

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#### Q1

(a) Using the NCHS/WHO Reference Chart provided, calculate the weight-for-height (WFH) %median for the following children:

- i. Boy 1 (weight 8.3 kg; height 73.4 cm)  
*Mild Malnutrition = >80% to <90% median*
- ii. Boy 2 (weight 10.2 kg; height 79.8 cm)  
*Normal = >90% median*
- iii. Girl 1 (weight 4.5 kg; height 61.3 cm)  
*Moderate Malnutrition = >70% to < 80% median*
- iv. Girl 2 (weight 9.5 kg, height 91.7 cm)  
*Severe Malnutrition = < 70% median*
- v. Boy 3 (weight 9.9 kg; height 85.5\* cm)  
*Moderate Malnutrition = >70% to <80% median*  
*(\*NOTE: Should always round up values of .5)*

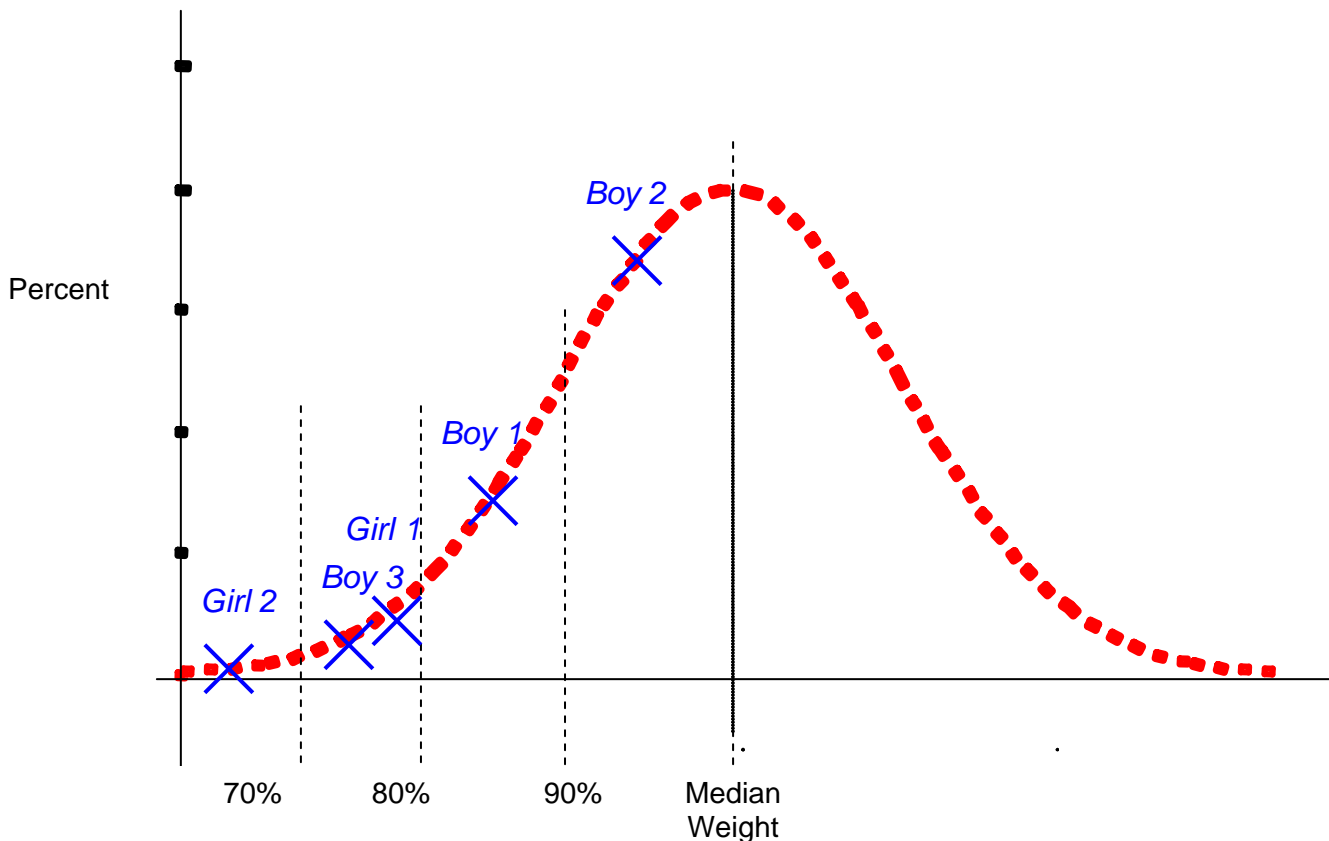
(b) How would you interpret and use these results?

- *Moderate and Severely malnourished children to be enrolled in SFP/TFP and receive appropriate case management/nutritional rehabilitation according to national Nutrition Protocol.*
- *Mild cases of malnutrition to be monitored closely in Growth Monitoring to observe for weight faltering between monthly recordings. Mother to be educated on appropriate infant / child feeding methods.*

(c) Roughly plot where they would lie in the normal distribution curve below.

*See Normal Distribution Curve*

## Normal Distribution Curve



- *The relationship between the percentage of median value and the ZS varies with age and height, particularly in the first year of life, and beyond 5 years.*
- *Between 1 and 5 years median  $-1$  ZS and median  $-2$  ZS correspond to approximately 90% and 80% of median weight-for-height (WFH).*
- *Beyond 5 years of age or 110 cm (or 100 cm in stunted children) this equivalence is not maintained; median  $-2$  ZS is much below 80% of median. Hence the use of "percentage-of-median" is not recommended, particularly in children of school age.*
- *Somewhere beyond 10 years or 137 cm, the adolescent growth spurt begins and the time of its onset is variable. The correct interpretation of weight-for-height data beyond this point is therefore difficult.*
- *Therefore, despite NCHS/WHO reference standards being available for children up to 18 years old, they are most accurate when limited to use with children up to the age of 10 years.*

**IMPORTANT!** *WFH Z-scores (ZS) have not yet been approved for use in the management of selective feeding programs. It is recommended that existing WFH %median reference values continue to be used until the international guidance is officially changed.*

**Q2**

(a) Table 2 gives information on the number of exits during the month. Using the information provided, calculate the following indicators for children under 5:

- i. Recovery rate  $(28 / 37 * 100) = 76\%$  (acceptable, standard > 75%)
- ii. Death rate  $(3 / 37 * 100) = 8\%$  (unacceptable, standard < 3%)
- iii. Default rate  $(6 / 37 * 100) = 16\%$  (acceptable, standard < 15%)

(b) What is the definition of “Non-cured” in SFP? How should these children be managed in the SFP register?

Non-cured children (aka non-responders) are defined in SFP as children who have not reached discharge criteria within 12 weeks (3 months). They should be exited as “Non-cured” and admitted again in the next available row in the register as a new admission. Steps should also be taken to investigate reasons for poor response.

**Table 2**

Supplementary Feeding Program		Refugee				Total
		< 5		≥ 5		
Number of exits	Discharge	21	7	0	0	28
	Death	3	0	0	0	3
	Default	6	0	0	0	6
	Referral	0	0	0	0	0
	Non-cured	0	0	0	0	0
<b>Total exits</b>		30	7	0	0	37

**Q3**

The results of the most recent nutrition survey show a moderate acute malnutrition rate of 5%. The total population is 30, 319; under 5 population is 6, 064.

(a) Using the information given in Table 3, answer the following:

i. What is the SFP coverage among moderately malnourished children <5?  
 Target population for moderately malnourished = 6064 \* 0.05 (mod. mal. rate) = 303  
 Coverage = (28 + 33) / 303 = 20% (unacceptable, standard > 90%)

ii. What is the SFP coverage among Pregnant and Lactating mothers?  
 Target population for pregnant and lactating = 30,319 \* 0.04 (proportion Preg & Lact) = 1213. Coverage = (767 + 354) / 1213 = 92%

iii. What could be some of the explanations for these results?  
 Most common explanations for low coverage in part (i) include: (a) programmatic (access, insecurity, location of feeding centres, acceptability, service quality, community education / mobilisation) and (b) statistical (inaccurate estimation of target population)

**Table 3**

SFP	Refugee				Total	Refugee		Total
	< 5		≥ 5			Preg	Lact	
	M	F	M	F				
Total end of month	28	33	15	113	189	767	354	1121

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### Module 8: Part 2 – Therapeutic Feeding Programme (TFP)

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#### Q1

You are working in a Therapeutic Feeding Centre, monitoring the progress of an individual child who was recently admitted under your care. Look at the record for Child A in the sample TFP register provided.

- (a) Complete the information in the TFP register and at the top of the Patient Record Form

*See completed TFP Register and Patient Record Form*

- (b) What is the Target Weight?

*Target Weight = 7.5 kg*

- (c) Plot a graph of his weight gain whilst he was admitted (assume that his height remained at 72 cm, and temperature at 37.0°C throughout admission).

*See completed Patient Record Form*

- (d) Calculate length of stay and average weight gain.

*Length of stay = 15 days*

*Average weight gain = 13.2 g/kg/day*

*(NOTE: lowest recorded weight during admission was NOT the same as length of stay in this example)*

#### Q2

You now begin to prepare the Nutrition Report at the end of the month. Look at the records of the other children in the sample TFP register. This is the complete record of admissions and discharges for January 2008.

- (a) Calculate length of stay and average weight gain for each child.

*See completed TFP Register*

- (b) Calculate sum length of stay and sum average weight gain for discharged children under 5.

*Sum length of stay = (15 + 16 + 14 + 20 + 26) = 91 days*

*Sum average weight gain = (13.2 + 8.4 + 9.5 + 10.0 + 5.2) = 46.3 g/kg/day*

- (c) Calculate the indicator for average weight gain for January 2008 in this centre. How would you interpret this result?

*Average weight gain = 46.3 / 5 = 9.3 g/kg/day*

*This figure is above the recommended standard of 8 g/kg/day and is therefore within acceptable limits of weight gain*

*(NOTE: average length of stay is 18 days in this example)*

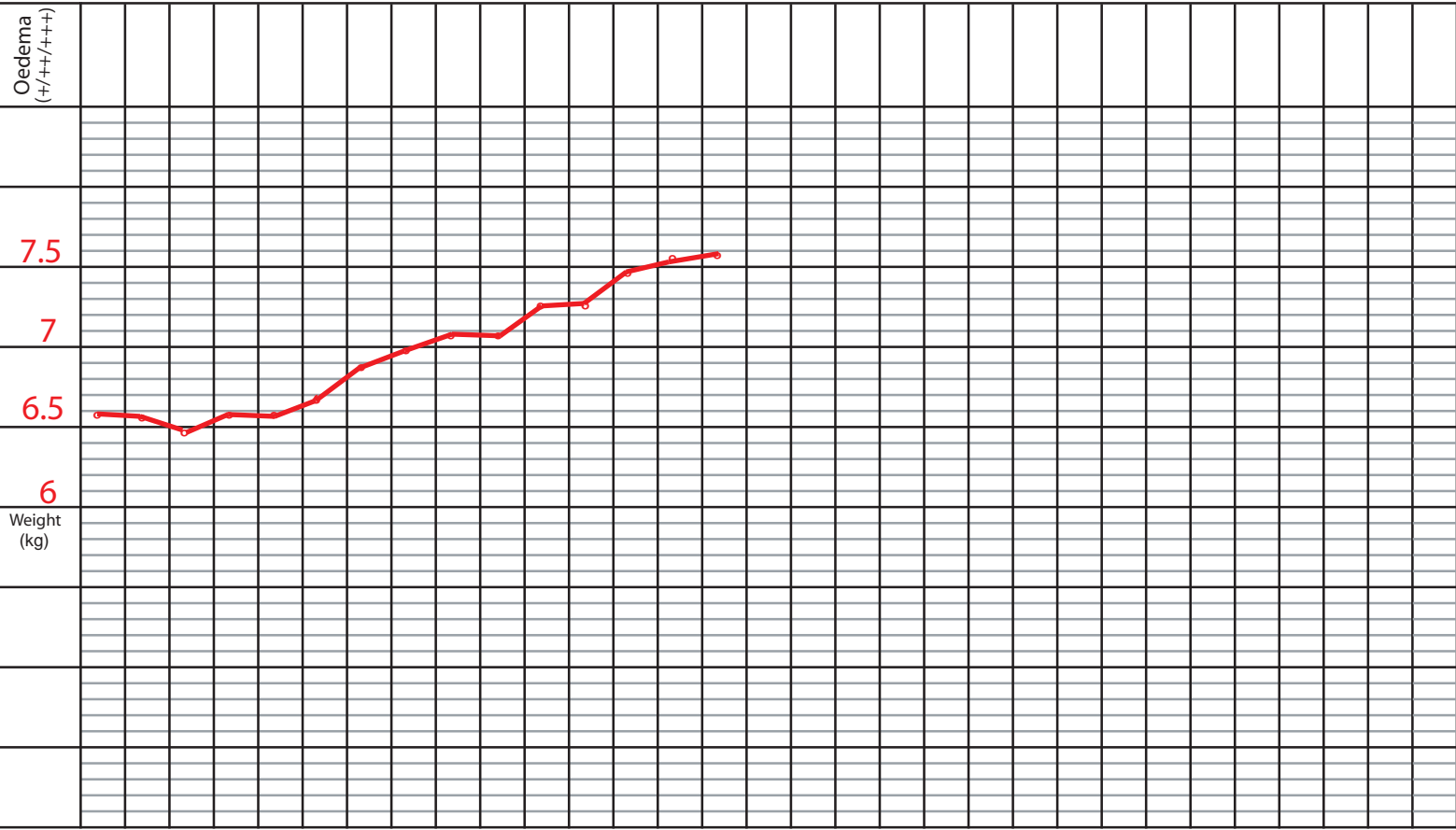
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## Module 8: Part 2 - Therapeutic Feeding Program (TFP)

Name: <u>Child A</u>	Serial No.: <u>001</u>	Name of mother: <u>Mother</u>
Age: <u>1</u>	Reg. No.: <u>357</u>	Address: <u>A12.34</u>
Sex (M / F): <u>M</u>	Date of admission: <u>3 / 1 / 2008</u>	Status (Ref / TZ): <u>Ref</u>

Day	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Date	3/1	4/1	5/1	6/1	7/1	8/1	9/1	10/1	11/1	12/1	13/1	14/1	15/1	16/1	17/1																	
Weight (kg)	6.5	6.5	6.4	6.5	6.5	6.6	6.8	6.9	7.0	7.0	7.2	7.2	7.4	7.5	7.5																	
Height (cm)	72	72	72	72	72	72	72	72	72	72	72	72	72	72	72																	
Temp. (°C)	38.2	38.2	38.0	37.5	37.0	37.0	37.0	37.0	37.0	37.0	37.0	37.0	37.0	37.0	37.0																	

Target Weight (kg): 7.5  
 (use NCHS / WHO reference)



Date of exit: <u>17 / 1 / 2008</u>	Length of stay (days): <u>15</u>
Reason for exit *: <u>Discharge</u>	Average weight gain (g / kg / day) §: <u>13.2</u>

\* Reason for exit: 1. Discharge cured to SFP 2. Death 3. Default 4. Referral § See over page

## Clinical Notes

### Note:

To calculate average weight gain (g / kg / day):

1. Calculate the maximum weight gain during admission [ in grams (g) ]  
(= weight on exit - lowest weight recorded during recovery)
2. Divide by lowest weight recorded during recovery [ in kilograms (kg) ]
3. Divide by total number of days between exit and lowest weight recorded during recovery  
(this is NOT always the same as length of stay).
4. Enter figure on reverse and in Severe Malnutrition Register. At end of the week, calculate the sum average weight gain for all refugee discharges under 5 and enter into weekly report.

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## Module 8: Part 2 - Therapeutic Feeding Programme (TFP)

Serial No.	TFP No.	Name	Age	Sex (M / F)	Status (Ref / Nat)	Address	Date of admission	Re-adm. (Y / N)	Day 1				Target Weight (kg)	Weight (kg)						
									Height (cm)	Weight (kg)	Oedema (Y / N)	WFH		Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	
001	357	Child A	1	M	Ref	A12.34	3.1.2008	N	72.0	6.5	N	<70%	7.5	6.5	6.4	6.5	6.5	6.6	6.8	
002	243	Child B	2	F	Ref	A15.56	3.1.2008	N	76.2	7.2	N	<70%	8.9	7.6	8.1	8.5	8.7	8.8	8.8	
003	056	Child C	3.5	M	Ref	F11.03	4.1.2008	N	86.4	8.9	N	<70%	10.1	8.9	8.9	9.0	9.1	9.1	9.2	
004	103	Child D	4	M	Ref	C01.79	7.1.2008	N	99.0	11.3	N	<70%	12.8	11.3	11.4	11.5	11.7	11.8	11.9	
005	482	Child E	4	F	Ref	A34.09	10.1.2008	N	61.9	4.0	N	<70%	4.8	4.1	4.1	4.3	4.3	4.3	4.3	
006	360	Child F	4.5	M	Ref	B98.43	11.1.2008	N	105.1	12.5	N	<70%	14.2	12.5	12.6	12.7	12.7	12.8	12.9	

# Sample Severe Malnutrition Register

Weight (kg)																					Date of exit	Length of stay (days)	Average weight gain (g / kg / day)	Reason for exit *	Notes				
Day 8	Day 9	Day 10	Day 11	Day 12	Day 13	Day 14	Day 15	Day 16	Day 17	Day 18	Day 19	Day 20	Day 21	Day 22	Day 23	Day 24	Day 25	Day 26	Day 27	Day 28						Day 29	Day 30	Day 31	
6.9	7.0	7.0	7.2	7.2	7.4	7.5	7.5																		17/1/2008	15	13.2	Discharge	
																									9/1/2008	Not eligible for inclusion	Not eligible for inclusion	Death	
	9.3																								19/1/2008	16	8.4	Discharge	
	12.0	9.3																							20/1/2008	14	9.5	Discharge	
4.4	4.4	4.4	4.4	4.5	4.6	4.6	4.5	4.6	4.6	4.7	4.8	4.8													29/1/2008	20	10.0	Discharge	
12.9	13.0	13.1	13.1	13.2	13.2	13.3	13.5	13.6	13.7	13.7	13.8	13.8	13.9	13.9	14.0	14.1	14.2	14.2							6/2/2008	26	5.2	Discharge	

\* Reason for exit: 1. Discharge cured to SFP 2. Death 3. Default 4. Referral