Community Management of Acute Malnutrition (CMAM)

JOB AIDS

Compiled and Edited By

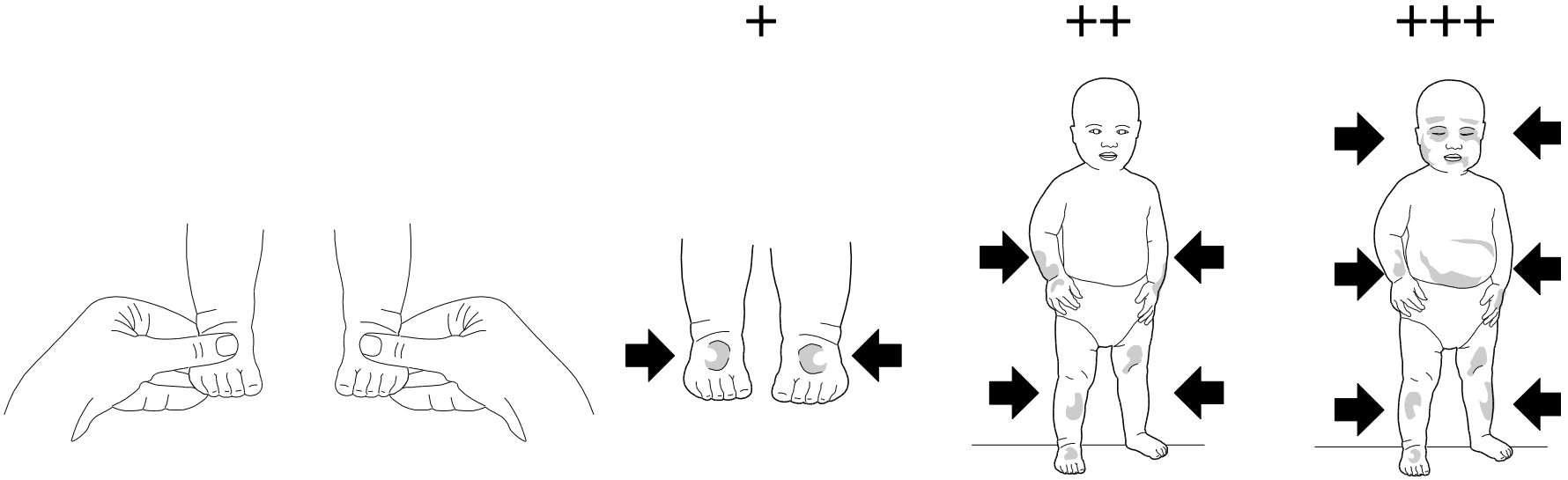
Dr. Abdul Rehman Pirzado

Bilateral Pitting Edema

[All ages]

* *Bilateral pitting oedema, or kwashiorkor, usually starts in the feet and ankles. Oedema in only one foot is not of nutritional origin.*

1. Hold the child's feet and press thumbs on top of both feet. Count to 3 and then lift your thumbs. If no pit shows or if a pit only shows in one foot, the child does not have bilateral pitting oedema. If a pit shows in both feet, go to Step 2.
2. Continue the same test on the lower legs, hands and lower arms. If no pitting appears in these areas, then the child is said to have Grade + or mild bilateral pitting oedema. Mild bilateral pitting oedema only shows in the feet. If pitting appears in these areas, go to Step 3.
3. Look for swelling in the face, especially around the eyes. If no swelling appears in the face, then the child is said to have Grade ++, or moderate, bilateral pitting oedema. If swelling appears in the face, the child is said to have Grade +++ or severe bilateral pitting oedema.
4. Have a second person repeat the test to confirm results.



Edited by Dr. Abdul Rehman Pirzado pirzado@gmail.com

MUAC (without aid) -[6-59 months]

1. Have the person bend his/her left arm to 90-degree angle. Determine both the top of the shoulder and the tip of the elbow bone and put the start point of the MUAC tape to top of shoulder and mark the distance to the tip of elbow placing the right thumb on the tape (endpoint).

2. Find the middle of the upper arm, by carefully folding the endpoint to the start point of the MUAC tape and place the left thumb on the mid-point of the folded ends of the tape

3. With the person's arm relaxed and falling alongside his/her body, wrap MUAC tape around the arm at the mid-point. There shouldn't be any space between the skin and tape, but don't wrap the tape too tight.

4. Read MUAC in millimeters (mm), centimeters (cm) or in color (red, yellow, green) from middle window exactly where arrows point inward. MUAC is recorded with a precision of 1 mm (0.1 cm).

MUAC (with pen & string)

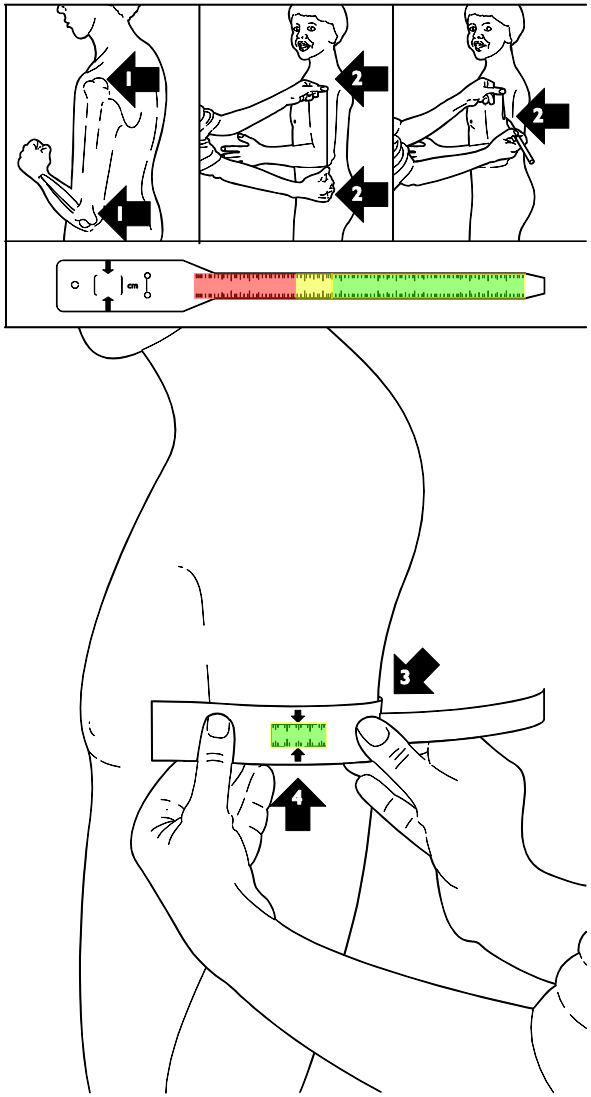
[6-59 months]

1 MUAC is always taken on the left arm. Measure the length of the person's left upper arm, between the bone at the top of the shoulder and the tip of the elbow bone (the arm should be bent).

2 Fold the end points of the string together on the shoulder top and mark the middle of the person's upper arm with a pen.

3 With the person's arm relaxed and falling alongside his/her body, wrap the MUAC tape around the arm at the mid-point. There shouldn't be any space between the skin and tape, but don't wrap the tape too tight. For numbered tapes, feed the end of the tape down through the first opening and up through the third opening. For the simple three-color tape (red, yellow, green), slide the end through the first opening and then through the second opening.

4 Read the measurement from the middle window where the two arrows meet. Depending on the tape used, the measurement will be in millimeters (mm), centimeters (cm) or in color (red, yellow, green). MUAC is recorded with a precision of 1 mm (0.1 cm).



Edited by Dr. Abdul Rehman Pirzado pirzado@gmail.com

Measure Using Length Board [Under 2 years ***OR*** height below 87 cm]

1 Place height board on the ground and remove child's shoes.

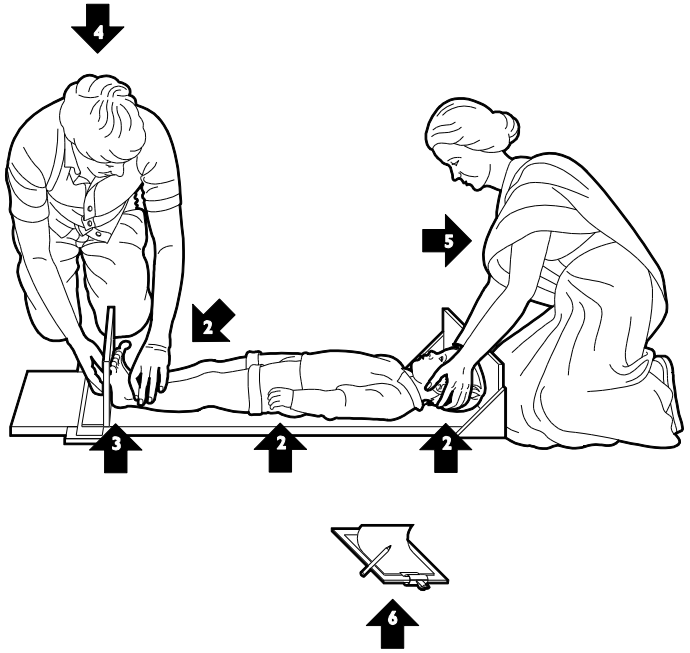
2 Place child on his/her back in middle of board, head facing straight up, arms at child's sides and feet at right angles to board.

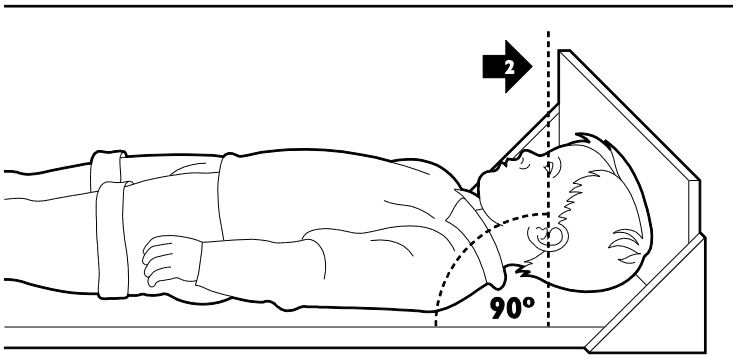
3 While holding child's ankles or knees, move sliding board up against bottom of child's feet.

4 Take measurement to nearest 0.1 cm and read out loud.

5 Assistant, holding head in place, repeats the measurement for verification.

6 If child is 2 years or older or 87 cm or above standing up, subtract 0.7 cm from measurement.

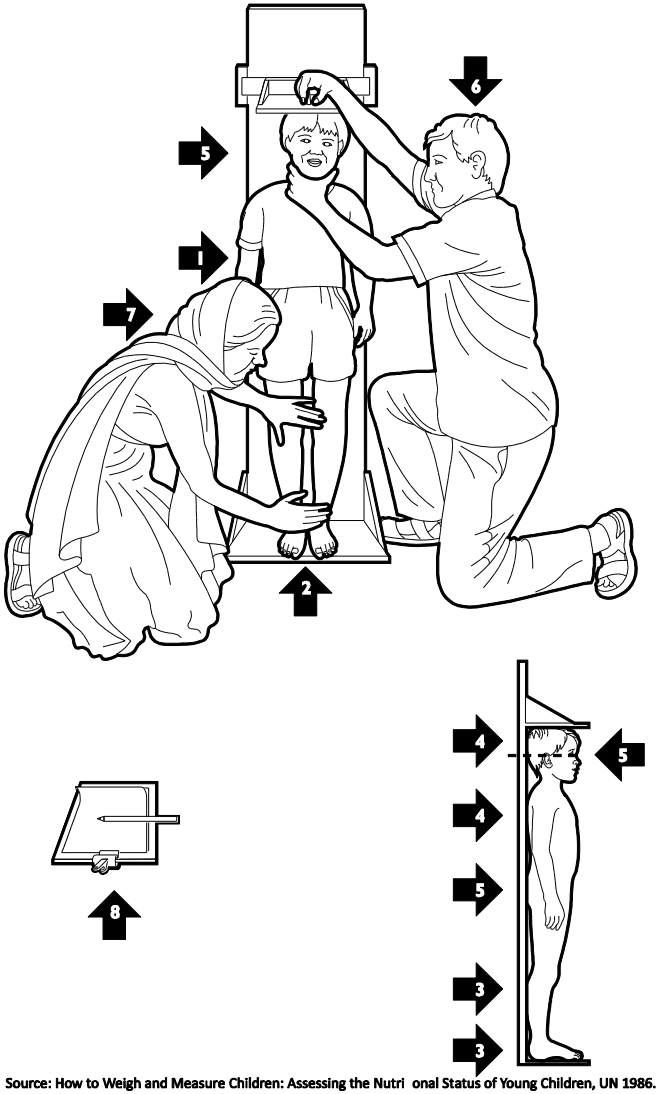




Source: How to Weigh and Measure Children: Assessing the Nutritional Status of Young Children, UN 1986.

Measure Using Height Board [2 years or older ***OR*** height 87 cm or greater]

1. Place child on height board, standing upright in middle of board with arms at his/her sides.
2. Child's feet, with shoes removed, should be close together with heels flat on floor.
3. Child's ankles and knees should be firmly pressed against board.
4. Child's heels, back of legs, buttocks, shoulders and head should be touching back of board.
5. Measurer holds child's head straight. A line between child's eyes should be parallel to the floor.
6. Measurer reads measurement out loud to nearest 0.1 cm.
7. Assistant, holding child's legs and feet, repeats the measurement for verification.
8. Measurer records height to nearest 0.1 cm.



Source: How to Weigh and Measure Children: Assessing the Nutri onal Status of Young Children, UN 1986.

Weigh Using Electronic Scale (Solar) [All ages]

* "Tared weighing" means that the scale can be re-set to zero ("tared") with the person just weighed still on it. Stress that the mother must stay on the scale until her child has been weighed in her arms. **If the child is 2 years or older, you will weigh the child alone if the child will stand still**.

1 Be sure that the scale is placed on a flat, hard, even surface. Since the scale is solar powered, there must be enough light to operate the scale.

2 To turn on the scale, cover the solar panel for a second. When the number 0.0 appears, the scale is ready.

3 Check to see that the mother has removed her shoes. You or someone else should hold the naked baby wrapped in a blanket.

4 Ask the mother to stand in the middle of the scale, feet slightly apart (on the footprints, if marked), and remain still. The mother's clothing must not cover the display or solar panel.

5 Remind her to stay on the scale even after her weight appears, until the baby has been weighed in her arms.

6 With the mother still on the scale and her weight displayed, tare the scale by covering the solar panel for a second. The scale is tared when it displays a figure of a mother and baby and the number 0.0.

7 Gently hand the naked baby to the mother and ask her to remain still.

8 The baby's weight will appear on the display. Record the weight. Be careful to read the numbers in the correct order (as though you were viewing while standing on the scale rather than upside-down).

Adapted from "How to use the UNISCALE" UNICEF, 2000 and "Weighing a Child Using a Taring Scale" WHO, 2006.

Weigh Using Hanging Scale (Pants) [Under 5]

* The scale should be checked daily against a known weight. To do this, set the scale to zero and weigh objects of known weight (e.g., 5.0 kg, 10.0 kg, 15.0 kg). If the measure does not match the weight to within 10 grams the springs must be changed or the scale should be replaced.

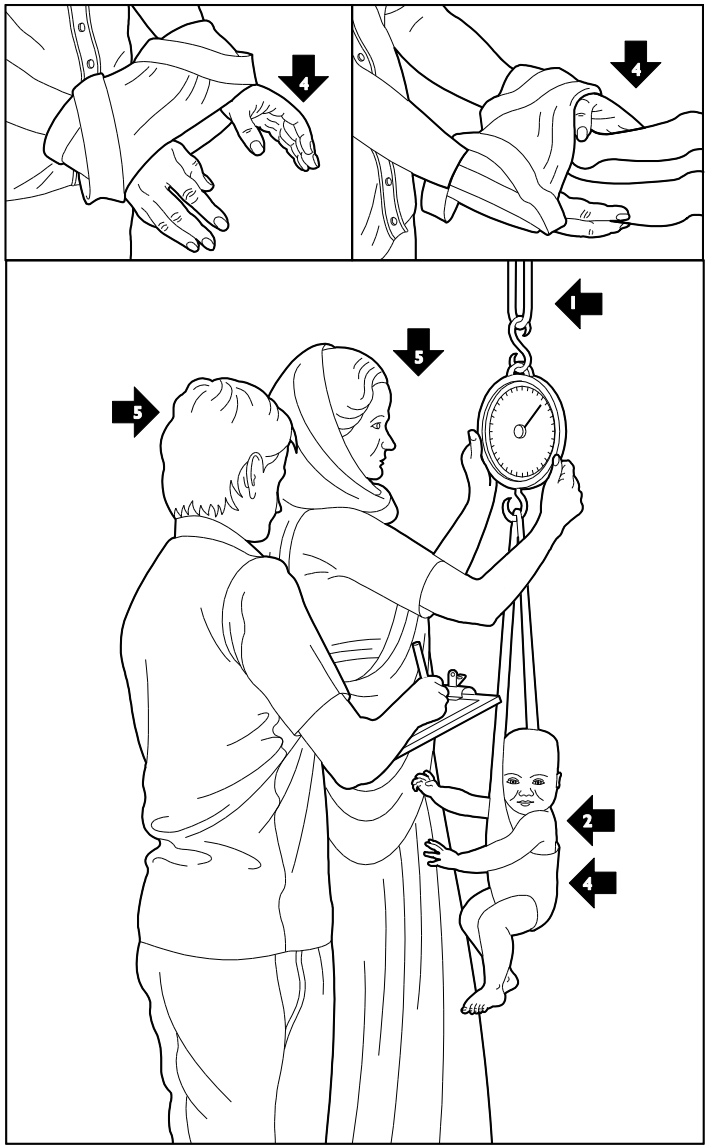
1 The scale can be hooked to a rope on the ceiling or stand in a clinic, at eye level of the measurer.

2 Before weighing the child, take all his/her clothes off.

3 Make sure the weighing scale arrow is at 0 (zero the scale) with the weighing pants hooked on the scale.

4 Place child in weighing pants and let child hang freely, touching nothing. Make sure the child is safely in the weighing pants with one arm in front and one arm behind the straps to help maintain balance.

5 When arrow is steady, measurer reads child's weight in kg at eye level and to the nearest 100 g (for example: 6.4 kg). The assistant repeats it for verification and records it. The child is then dressed.



Source: How to Weigh and Measure Children: Assessing the Nutritional Status of Young Children, UN 1986.

Edited by Dr. Abdul Rehman Pirzado pirzado@gmail.com

Weigh Using Hanging Scale (Bucket)

[What age?]

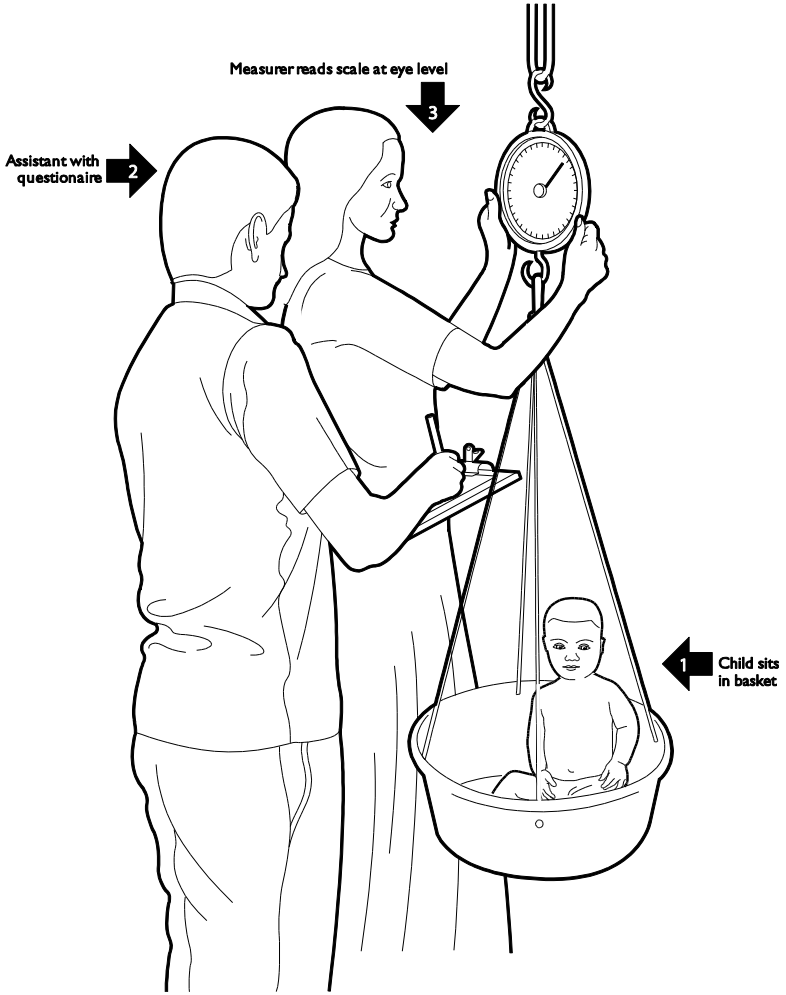
1. The scale can be hooked to a rope on the ceiling or stand in a clinic, at eye level of the measurer.

2. Before weighing the child take all his/her clothes off.

3. Make sure the weighing scale arrow is at 0 with the bucket hooked on the scale

4. Place child in weighing bucket.

5. When arrow is steady, measurer reads child's weight in kg at **eye level** and assistant records it to nearest 100 g (for example: 5.2kg)



Weigh Using Hanging Scale (Hammock or Cloth) [Infants]

* The scale should be checked daily against a known weight. To do this, set the scale to zero and weigh objects of known weight (e.g., 5.0 kg, 10.0 kg, 15.0 kg). If the measure does not match the weight to within 10 grams the springs must be changed or the scale should be replaced.

1. The scale can be hooked to a rope on the ceiling or stand in a clinic, at eye level of the measurer.

2. Before weighing the child, take all his/her clothes off.

3. Make sure the weighing scale arrow is at 0 (zero the scale) each time with the hammock or cloth that will be used hooked on the scale.

4. Place child in hammock or cloth, hook it on the scale, and let child hang freely, touching nothing. Make sure the child is safely in the hammock or cloth.

5. When arrow is steady, measurer reads child's weight in kg at eye level and to the nearest 100 g (for example: 6.4 kg). The assistant repeats it for verification and records it. The child is then dressed.

When arrow is steady, measurer reads child's weight in kg at **eye level** and assistant records it to nearest 100 g (for example: 5.2kg)

Admission and Discharge Criteria for CMAM in Children under Five

ADMISSION CRITERIA

Inpatient Care

CHILDREN 6-59 MONTHS

☐ Bilateral pitting oedema +++

OR ☐ Any grade of bilateral pitting oedema with severe wasting

OR ☐ SAM with any of the following medical complications:

- Anorexia, poor appetite
- Intractable vomiting
- Convulsions
- Lethargy, not alert
- Unconsciousness
- Hypoglycaemia
- High fever
- Hypothermia
- Severe dehydration
- Persistent diarrhoea
- Lower respiratory tract infection
- Severe anaemia
- Eye signs of vitamin A deficiency
- Skin lesion

OR ☐ Referred from outpatient care according to action protocol

INFANTS < 6 MONTHS

☐ Bilateral pitting oedema

OR ☐ Visible wasting

- Includes infants with SAM ≥ 6 months and < 4 kg

Outpatient Care

CHILDREN 6-59 MONTHS

☐ Bilateral pitting oedema + and ++

OR ☐ Severe wasting (MUAC < 115 mm or WFH < -3 z-score)

AND

- Appetite test passed
- No medical complication
- Child clinically well and alert

REFERRAL/DISCHARGE CRITERIA

CHILDREN 6-59 MONTHS

☐ Referred to outpatient care:

- Appetite returned (passed appetite test)
- Medical complication resolving
- Severe bilateral pitting oedema decreasing
- Child clinically well and alert

(If admitted due to bilateral pitting oedema and severe wasting: criterion for referral is bilateral pitting oedema resolved)

☐ Discharged cured (special cases):

- 15 percent weight gain maintained for two consecutive days
- Oedema free for two consecutive weeks
- Child clinically well and alert

INFANTS < 6 MONTHS

☐ Discharged cured:

If successful re-lactation and appropriate weight gain maintained (minimum 20 g per day on breastfeeding alone for five days) and infant clinically well and alert
(if infant has no access to breastfeeding, see other guidance for non-breastfed children on replacement feeding)

CHILDREN 6-59 MONTHS

☐ Discharged cured:

- 15 percent weight gain maintained for two consecutive visits (of admission weight or weight free of oedema)
- Oedema free for two consecutive visits
- Child clinically well and alert

Children are referred to receive supplementary feeding if available

Edited by Dr. Abdul Rehman Pirzado pirzado@gmail.com

Weight-for-Length Look-Up Table for Children 6-23 Months

✱[WHO 2006 Child Growth Standards] Length is measured for children under 2 years or less than 87 cm height. For children 2 years or older or 87 cm height or greater, height is measured. Recumbent length is, on average, 0.7 cm greater than standing height; although the difference is of no importance to individual children, a correction may be made by subtracting 0.7 cm from all lengths above 86.9 cm if standing height cannot be measured.

Boys' weight (kg)				Length	Girls' weight (kg)			
-3 SD	-2 SD	-1 SD	Median	(cm)	Median	-1 SD	-2 SD	-3 SD
1.9	2.0	2.2	2.4	45	2.5	2.3	2.1	1.9
2.0	2.2	2.4	2.6	46	2.6	2.4	2.2	2.0
2.1	2.3	2.5	2.8	47	2.8	2.6	2.4	2.2
2.3	2.5	2.7	2.9	48	3.0	2.7	2.5	2.3
2.4	2.6	2.9	3.1	49	3.2	2.9	2.6	2.4
2.6	2.8	3.0	3.3	50	3.4	3.1	2.8	2.6
2.7	3.0	3.2	3.5	51	3.6	3.3	3.0	2.8
2.9	3.2	3.5	3.8	52	3.8	3.5	3.2	2.9
3.1	3.4	3.7	4.0	53	4.0	3.7	3.4	3.1
3.3	3.6	3.9	4.3	54	4.3	3.9	3.6	3.3
3.6	3.8	4.2	4.5	55	4.5	4.2	3.8	3.5
3.8	4.1	4.4	4.8	56	4.8	4.4	4.0	3.7
4.0	4.3	4.7	5.1	57	5.1	4.6	4.3	3.9
4.3	4.6	5.0	5.4	58	5.4	4.9	4.5	4.1
4.5	4.8	5.3	5.7	59	5.6	5.1	4.7	4.3
4.7	5.1	5.5	6.0	60	5.9	5.4	4.9	4.5
4.9	5.3	5.8	6.3	61	6.1	5.6	5.1	4.7
5.1	5.6	6.0	6.5	62	6.4	5.8	5.3	4.9
5.3	5.8	6.2	6.8	63	6.6	6.0	5.5	5.1
5.5	6.0	6.5	7.0	64	6.9	6.3	5.7	5.3
5.7	6.2	6.7	7.3	65	7.1	6.5	5.9	5.5
5.9	6.4	6.9	7.5	66	7.3	6.7	6.1	5.6
6.1	6.6	7.1	7.7	67	7.5	6.9	6.3	5.8
6.3	6.8	7.3	8.0	68	7.7	7.1	6.5	6.0
6.5	7.0	7.6	8.2	69	8.0	7.3	6.7	6.1
6.6	7.2	7.8	8.4	70	8.2	7.5	6.9	6.3
6.8	7.4	8.0	8.6	71	8.4	7.7	7.0	6.5
7.0	7.6	8.2	8.9	72	8.6	7.8	7.2	6.6
7.2	7.7	8.4	9.1	73	8.8	8.0	7.4	6.8
7.3	7.9	8.6	9.3	74	9.0	8.2	7.5	6.9
7.5	8.1	8.8	9.5	75	9.1	8.4	7.7	7.1
7.6	8.3	8.9	9.7	76	9.3	8.5	7.8	7.2
7.8	8.4	9.1	9.9	77	9.5	8.7	8.0	7.4
7.9	8.6	9.3	10.1	78	9.7	8.9	8.2	7.5
8.1	8.7	9.5	10.3	79	9.9	9.1	8.3	7.7
8.2	8.9	9.6	10.4	80	10.1	9.2	8.5	7.8
8.4	9.1	9.8	10.6	81	10.3	9.4	8.7	8.0
8.5	9.2	10.0	10.8	82	10.5	9.6	8.8	8.1
8.7	9.4	10.2	11.0	83	10.7	9.8	9.0	8.3
8.9	9.6	10.4	11.3	84	11.0	10.1	9.2	8.5
9.1	9.8	10.6	11.5	85	11.2	10.3	9.4	8.7
9.3	10.0	10.8	11.7	86	11.5	10.5	9.7	8.9
9.5	10.2	11.1	12.0	87	11.7	10.7	9.9	9.1
9.7	10.5	11.3	12.2	88	12.0	11.0	10.1	9.3
9.9	10.7	11.5	12.5	89	12.2	11.2	10.3	9.5
10.1	10.9	11.8	12.7	90	12.5	11.4	10.5	9.7
10.3	11.1	12.0	13.0	91	12.7	11.7	10.7	9.9
10.5	11.3	12.2	13.2	92	13.0	11.9	10.9	10.1
10.7	11.5	12.4	13.4	93	13.2	12.1	11.1	10.2
10.8	11.7	12.6	13.7	94	13.5	12.3	11.3	10.4
11.0	11.9	12.8	13.9	95	13.7	12.6	11.5	10.6
11.2	12.1	13.1	14.1	96	14.0	12.8	11.7	10.8
11.4	12.3	13.3	14.4	97	14.2	13.0	12.0	11.0
11.6	12.5	13.5	14.6	98	14.5	13.3	12.2	11.2
11.8	12.7	13.7	14.9	99	14.8	13.5	12.4	11.4
12.0	12.9	14.0	15.2	100	15.0	13.7	12.6	11.6

Weight-for-Height Look-Up Table, Children 24-59 Months

* [WHO 2006 Child Growth Standards] Length is measured for children under 2 years or less than 87 cm height. For children 2 years or older or 87 cm height or more, height is measured. Recumbent length is, on average, 0.7 cm greater than standing height; although the difference is of no importance to individual children, a correction may be made by subtracting 0.7 cm from all lengths greater than 86.9 cm if standing height cannot be measured.

Boys' weight (kg)				Length	Girls' weight (kg)			
-3 SD	-2 SD	-1 SD	Median	(cm)	Median	-1 SD	-2 SD	-3 SD
5.9	6.3	6.9	7.4	65	7.2	6.6	6.1	5.6
6.1	6.5	7.1	7.7	66	7.5	6.8	6.3	5.8
6.2	6.7	7.3	7.9	67	7.7	7.0	6.4	5.9
6.4	6.9	7.5	8.1	68	7.9	7.2	6.6	6.1
6.6	7.1	7.7	8.4	69	8.1	7.4	6.8	6.3
6.8	7.3	7.9	8.6	70	8.3	7.6	7.0	6.4
6.9	7.5	8.1	8.8	71	8.5	7.8	7.1	6.6
7.1	7.7	8.3	9.0	72	8.7	8.0	7.3	6.7
7.3	7.9	8.5	9.2	73	8.9	8.1	7.5	6.9
7.4	8.0	8.7	9.4	74	9.1	8.3	7.6	7.0
7.6	8.2	8.9	9.6	75	9.3	8.5	7.8	7.2
7.7	8.4	9.1	9.8	76	9.5	8.7	8.0	7.3
7.9	8.5	9.2	10.0	77	9.6	8.8	8.1	7.5
8.0	8.7	9.4	10.2	78	9.8	9.0	8.3	7.6
8.2	8.8	9.6	10.4	79	10.0	9.2	8.4	7.8
8.3	9.0	9.7	10.6	80	10.2	9.4	8.6	7.9
8.5	9.2	9.9	10.8	81	10.4	9.6	8.8	8.1
8.7	9.3	10.1	11.0	82	10.7	9.8	9.0	8.3
8.8	9.5	10.3	11.2	83	10.9	10.0	9.2	8.5
9.0	9.7	10.5	11.4	84	11.1	10.2	9.4	8.6
9.2	10.0	10.8	11.7	85	11.4	10.4	9.6	8.8
9.4	10.2	11.0	11.9	86	11.6	10.7	9.8	9.0
9.6	10.4	11.2	12.2	87	11.9	10.9	10.0	9.2
9.8	10.6	11.5	12.4	88	12.1	11.1	10.2	9.4
10.0	10.8	11.7	12.6	89	12.4	11.4	10.4	9.6
10.2	11.0	11.9	12.9	90	12.6	11.6	10.6	9.8
10.4	11.2	12.1	13.1	91	12.9	11.8	10.9	10.0
10.6	11.4	12.3	13.4	92	13.1	12.0	11.1	10.2
10.8	11.6	12.6	13.6	93	13.4	12.3	11.3	10.4
11.0	11.8	12.8	13.8	94	13.6	12.5	11.5	10.6
11.1	12.0	13.0	14.1	95	13.9	12.7	11.7	10.8
11.3	12.2	13.2	14.3	96	14.1	12.9	11.9	10.9
11.5	12.4	13.4	14.6	97	14.4	13.2	12.1	11.1
11.7	12.6	13.7	14.8	98	14.7	13.4	12.3	11.3
11.9	12.9	13.9	15.1	99	14.9	13.7	12.5	11.5
12.1	13.1	14.2	15.4	100	15.2	13.9	12.8	11.7
12.3	13.3	14.4	15.6	101	15.5	14.2	13.0	12.0
12.5	13.6	14.7	15.9	102	15.8	14.5	13.3	12.2
12.8	13.8	14.9	16.2	103	16.1	14.7	13.5	12.4
13.0	14.0	15.2	16.5	104	16.4	15.0	13.8	12.6
13.2	14.3	15.5	16.8	105	16.8	15.3	14.0	12.9
13.4	14.5	15.8	17.2	106	17.1	15.6	14.3	13.1
13.7	14.8	16.1	17.5	107	17.5	15.9	14.6	13.4
13.9	15.1	16.4	17.8	108	17.8	16.3	14.9	13.7
14.1	15.3	16.7	18.2	109	18.2	16.6	15.2	13.9
14.4	15.6	17.0	18.5	110	18.6	17.0	15.5	14.2
14.6	15.9	17.3	18.9	111	19.0	17.3	15.8	14.5
14.9	16.2	17.6	19.2	112	19.4	17.7	16.2	14.8
15.2	16.5	18.0	19.6	113	19.8	18.0	16.5	15.1
15.4	16.8	18.3	20.0	114	20.2	18.4	16.8	15.4
15.7	17.1	18.6	20.4	115	20.7	18.8	17.2	15.7
16.0	17.4	19.0	20.8	116	21.1	19.2	17.5	16.0
16.2	17.7	19.3	21.2	117	21.5	19.6	17.8	16.3
16.5	18.0	19.7	21.6	118	22.0	19.9	18.2	16.6
16.8	18.3	20.0	22.0	119	22.4	20.3	18.5	16.9
17.1	18.6	20.4	22.4	120	22.8	20.7	18.9	17.3

Edited by Dr. Abdul Rehman Pirzado pirzado@gmail.com

Guidance Table to Identify Target Weight for Discharge for Children 6-59 Months

Source: *WHO child growth standards and the identification of severe acute malnutrition in infants and children 2009*

* Weight on admission or weight free of oedema. If weight on admission is pair, round the weight up with 0.1 kg. Example: weight on admission is 9.2 kg, use 9.3 kg as weight on admission.

Weight on admission*	Target weight: 15% weight gain
4.1	4.7
4.3	4.9
4.5	5.2
4.7	5.4
4.9	5.6
5.1	5.9
5.3	6.1
5.5	6.3
5.7	6.6
5.9	6.8
6.1	7.0
6.3	7.2
6.5	7.5
6.7	7.7
6.9	7.9
7.1	8.2
7.3	8.4
7.5	8.6
7.7	8.9
7.9	9.1
8.1	9.3
8.3	9.5
8.5	9.8
8.7	10.0
8.9	10.2
9.1	10.5
9.3	10.7
9.5	10.9
9.7	11.2
9.9	11.4
10.1	11.6
10.3	11.8
10.5	12.1
10.7	12.3
10.9	12.5

Weight on admission*	Target weight: 15% weight gain
11.1	12.8
11.3	13.0
11.5	13.2
11.7	13.5
11.9	13.7
12.1	13.9
12.3	14.1
12.5	14.4
12.7	14.6
12.9	14.8
13.1	15.1
13.3	15.3
13.5	15.5
13.7	15.8
13.9	16.0
14.1	16.2
14.3	16.4
14.5	16.7
14.7	16.9
14.9	17.1
15.1	17.4
15.3	17.6
15.5	17.8
15.7	18.1
15.9	18.3
16.1	18.5
16.3	18.7
16.5	19.0
16.7	19.2
16.9	19.4
17.1	19.7

Routine Medicines Protocols

Adapted from Valid International. 2006. *Community-based Therapeutic Care (CTC): A Field Manual*. Oxford, UK: Valid International.

MEDICINE/SUPPLEMENT	WHEN TO GIVE	AGE / WEIGHT	PRESCRIPTION	DOSE
ANTIBIOTIC	On admission	All beneficiaries	**Amoxicillin** 50-100 mg/kg bodyweight/day	3 times a day for 5 days (8 hourly)
ANTIMALARIAL (artemisinin-based combination therapy [ACT])	Test on admission; Repeat test later if initial test negative and malaria suspected. If no test, treat based on symptoms.	All beneficiaries	**Artesunate** (AS) 50 mg and **Amodiaquine** (AQ) 153 mg: ½ AS and ½ AQ 1 AS and 1 AQ	Once a day for 3 days
ANTIHELMINTHIC DRUG	After 1 week *If signs of re-infection appear, an anthelminthic drug can be given again after three months.*	< 12 months	DO NOT GIVE	NONE
		<10 kg	**Albendazole** 200 mg or **Mebendazole** 250 mg	Single dose
		≥10 kg	**Albendazole** 400 mg or **Mebendazole** 500 mg	
MEASLES VACCINATION	Inpatient care: On admission and discharge Outpatient care: On week 4 (or upon discharge) *In case of measles epidemic, a measles vaccination is given on admission and repeated on week four (or upon discharge). If the child receives a measles vaccination before the age of 12 months, a repeat vaccination is given at the age of 12 months.*	From 6 months	Standard	Two doses as per EPI guidelines
VITAMIN A SUPPLEMENTATION	On week 4 (or upon discharge) *Children with bilateral pitting oedema should not be given vitamin A until discharged. In case there are signs of vitamin A deficiency, children are referred and treated in inpatient care (see **National Guidelines**).*	6 months ≥12 months	100,000 IU 200,000 IU	Single dose

Iron and Folic Acid:

- In outpatient care iron and folic acid should not be given. In case severe anaemia is identified according to the national Integrated Management of Childhood Illness (IMCI) guidelines, the child is referred and treated in inpatient care (see **National Guidelines**).
- In inpatient care, if the child is on a therapeutic milk diet, he/she is given folic acid 5 mg on day one and 1 mg per day from day two onwards until discharge and iron 3 mg/kg bodyweight/day after two days on F100, when gaining weight. If the child is on a RUTF diet, neither folic acid nor iron is given.
- Iron and folic acid should never be provided together with a malaria treatment. Malaria is treated first.

Edited by Dr. Abdul Rehman Pirzado pirzado@gmail.com

Supplementary Medicines Protocols

* Refer to the Job Aid: Drug Doses. Adapted from Valid International. 2006. *Community-based Therapeutic Care (CTC): A Field Manual*. Oxford, UK: Valid International.

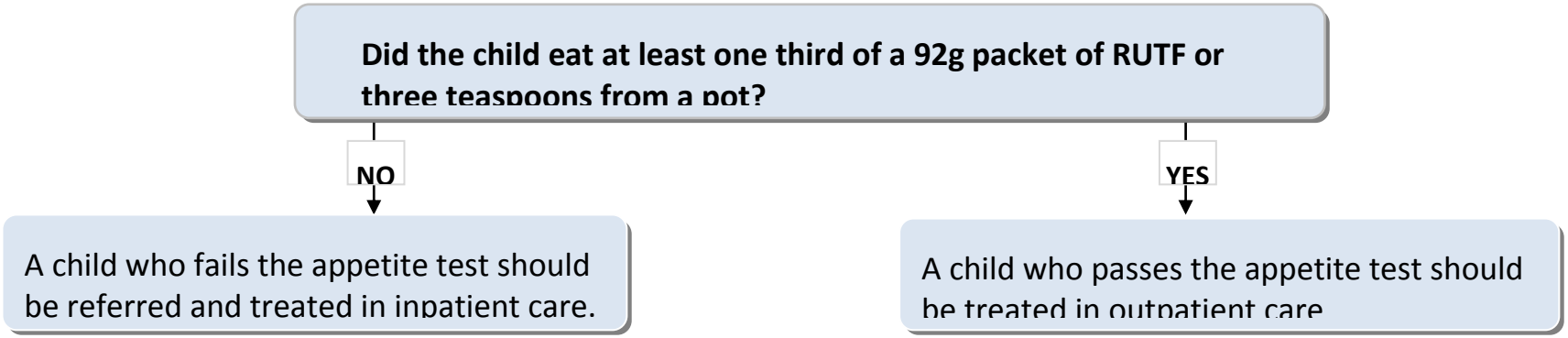
MEDICINE/SUPPLEMENT	PURPOSE	PRESCRIPTION	SPECIAL INSTRUCTIONS
CHLORAMPHENICOL GENTAMYCIN	Given as second-line antibiotic for children not responding to amoxicillin for continued fever that is not due to malaria Child with SAM who needs second-line antibiotic is referred to inpatient care	See **Job Aid: Drug Doses**	Continue for 7 days
TETRACYCLINE EYE OINTMENT	Treatment of eye infection	Apply 3 times a day: morning, afternoon and at night before sleep	Wash hands before and after use. Wash eyes before application. Continue for 2 days after infection is gone
NYSTATIN	Treatment of candida	100,000 units (1 ml) 4 times a day after food (use dropper; show caregiver how to use it)	Continue for 7 days
PARACETAMOL	For children with fever over 38.5°C	See **Job Aid: Drug Doses**	Single dose only—DO NOT give to take home
BENZYL BENZOATE	Treatment of scabies	Apply over whole body. Repeat without bathing on following day. Wash off 24 hours later.	Avoid contact with eyes. Do not use on broken or skin with secondary infection.
GENTIAN VIOLET	Treatment of minor abrasions or fungal infections of the skin	Apply on lesion.	Can be repeated at next visit and continued until condition resolved
QUININE	Second-line antimalarial for children who have not responded to artemisinin-based combination therapy (ACT)	See **Job Aid: Drug Doses**	
FERROUS SULPHATE/FOLATE	Treatment of anaemia identified according to national Integrated Management of Childhood Illness (IMCI) guidelines	See **Job Aid: Drug Doses**	Given ONLY after 14 days in the programme
METRONIDAZOLE	For treatment of giardiasis and amoebiasis	See **Job Aid: Drug Doses**	Continue for 5 days

Appetite Test

[For children 6-59 months]

* *The appetite is tested upon admission and at each follow-up visit to the health facility in outpatient care and in inpatient care in the transition phase.*

1. Conduct in a quiet separate area to give the caregiver and child time to get accustomed to the ready-to-use therapeutic food (RUTF).
2. Explain the test's procedure (steps #3 and #4) and purpose to the caregiver. The purpose of the appetite test is to determine if the child with SAM has appetite and can be treated in outpatient care, or the child with SAM has poor appetite and needs to be referred for treatment in inpatient care
3. Advise the caregiver to wash hands before giving the RUTF.
4. Advise the caregiver to sit with the child in his/her lap and gently offer the RUTF. The caregiver should encourage the child to eat the RUTF without force-feeding. The child should receive plenty of clean water to drink from a cup while eating the RUTF.
5. Observe the child for 30 minutes and then answer the following question:



Edited by Dr. Abdul Rehman Pirzado pirzado@gmail.com

• Sugar Water Protocol [How to Make & Who to Give To]

Sugar Water Should Be Given To:

- ☐ All children who have travelled for long distances or have waited a long time for attention should be given sugar water as soon as they arrive. If possible, especially when it is very hot, give sugar water to all children awaiting treatment in outpatient care.
- ☐ All children refusing ready-to-use therapeutic food (RUTF) or being referred to inpatient care.
- ☐ All children that are at risk of hypothermia or septic shock should be given sugar water whether or not they have a low blood glucose level.
- ☐ A child who has taken the diet during the day will not develop hypoglycaemia overnight and does not need to be woken for night-time feeding. If the diet has not been taken during the day, the mother should give at least one feed during the night.

To Make Sugar Water 10 Percent Dilution:

- ☐ Take clean drinking water (slightly warm if possible to help dilution)
- ☐ Add the required amount of sugar to clean drinking water and shake or stir vigorously.

Water	Sugar	
100 ml	10 g	2 heaped teaspoons
200 ml (average cup)	20 g	4 heaped teaspoons
500 ml (small bottle)	50 g	10 heaped teaspoons
1 litre	100 g	20 heaped teaspoons

Action Protocol in Outpatient Care

REFERRAL TO HOME VISIT	SIGN or STATUS	REFERRAL TO INPATIENT CARE
	GENERAL CONDITION	Deteriorating
Child is not losing oedema	BILATERAL PITTING OEDEMA	Grade +++
		Any grade of bilateral pitting oedema with severe wasting (marasmic kwashiorkor)
		Increase in bilateral pitting oedema
		Bilateral pitting oedema not reducing by week 3
	ANOREXIA *	Poor appetite or unable to eat – Failed appetite test
	VOMITING *	Intractable vomiting
	CONVULSIONS *	Ask mother if the child had convulsions during the since the previous visit
	LETHARGY, NOT ALERT *	Child is difficult to awake
	UNCONSCIOUSNESS *	Child does not respond to painful stimuli
	HYPOGLYCAEMIA	A clinical sign in a child with SAM is eye-lid retraction: child sleeps with eyes slightly open. Low level of blood glucose < 3 mmol/l, < 54 mg/dl
	DEHYDRATION	Severe dehydration based primarily on recent history of diarrhoea, vomiting, fever or sweating and on recent appearance of clinical signs of dehydration as reported by the mother/caregiver
	HIGH FEVER	Axillary temperature ≥ 38.5° C, rectal temperature ≥ 39° C taking into consideration the ambient temperature
	HYPOTHERMIA	Axillary temperature < 35° C, rectal temperature < 35.5° C taking into consideration the ambient temperature
	RESPIRATION RATE	≥ 60 breaths/minute for children under 2 months
		≥ 50 breaths/minute from 2-12 months
		≥ 40 breath /minute from 1-5 years
		≥ 30 breaths /minute for children over 5 years
		Any chest in-drawing
	ANAEMIA	Palmer pallor or unusual paleness of skin
	SKIN LESION	Broken skin, fissures, flaking of skin
	SUPERFICIAL INFECTION	Any infection requiring intramuscular antibiotic treatment
Child is not gaining weight or losing weight on follow-up visit	WEIGHT CHANGES	Below admission weight on week 3
		Weight loss for three consecutive visits
		Static weight for three consecutive visits
Child has returned from inpatient care or refuses referral to inpatient care	REQUEST	Mother/caregiver requests treatment of child in inpatient care for social reasons (decided by supervisor)
Child is absent or defaulting	NOT RESPONDING	Child that is not responding to treatment is referred to inpatient care or hospital for further medical investigation.

* Integrated Management of Childhood Illness (IMCI) danger sign

Edited by Dr. Abdul Rehman Pirzado

Key Messages Upon Admission to Outpatient Care

Adapted from Valid International. 2006. Community-based Therapeutic Care (CTC): A Field Manual. Oxford, UK: Valid International.

1. RUTF is a food and medicine for very thin and swollen children only. Do not share it.
2. Sick children often don't like to eat. Give small regular meals of RUTF and encourage the child to eat often (if possible, 8 meals a day). Your child should have _____ packets a day.
3. For young children, continue to breastfeed. Offer breast milk first before every RUTF feed.
4. RUTF is the only food sick and thin/swollen children need to recover during their time in Outpatient Care. Always give RUTF before other foods, such as porridge (use local name).
5. Always offer the child plenty of clean water to drink while eating RUTF. Children will need more water than normal.
6. Wash the child's hands and face with soap before feeding. Keep food clean and covered.
7. Sick children get cold quickly. Always keep the child covered and warm.
8. For children with diarrhoea, continue feeding. Give them extra food and water.
9. Return to the health facility whenever the child's condition deteriorates or if the child is not eating sufficiently.

Note: Ask the caregiver to repeat the messages to be sure they have been correctly understood.

Upon the next visits to the health facility, the health and nutrition messages are expanded (see **Job Aid. Health and Nutrition Education Messages)**

Look-Up Table for Use of RUTF in Outpatient Care

Amounts of RUTF to Give to a Child per Day or Week Based on a Dose of 200 kcal/kg Bodyweight/Day Using 92 g Packets Containing 500 kcal

Child's Weight (kg)	Packets per Day	Packets per Week
4.0* – 4.9	2	14
5.0 – 6.9	2.5	18
7.0 – 8.4	3	21
8.5 – 9.4	3.5	25
9.5 – 10.4	4	28
10.5 – 11.9	4.5	32
≥ 12	5	35

* Infants < 4 kg are referred to inpatient care

Edited by Dr. Abdul Rehman Pirzado pirzado@gmail.com

Danger Signs for Inpatient Care

Alert a physician if danger sign occur:

	Normal Ranges:	Danger sign:	Suggests:
Pulse and Respirations	**2 to 12 months:** • Pulse 80 up to 160 in child • Respirations 20 up to 60* **12 to 60 months (5 years):** • Pulse 80 up to 120 • Respirations 20 up to 40	Confirmed increase in pulse rate of 25 or more beats/ minute ***along with*** Confirmed increase in respiratory rate of 5 or more breaths/ minute	• Infection **or** • Heart failure (possibly from overhydration due to feeding or rehydrating too fast)
Respirations Only	**2 to 12 months:** • Respirations 20 up to 60* **12 to 60 months (5 years):** • Respirations 20 up to 40	**2 months up to 12 months:** • Fast breathing is considered 50 breaths/minute or more **12 months up to 60 months (5 years):** • Fast breathing is considered 40 breaths/ minute or more	• Pneumonia
Temperature		• Any sudden increase or decrease • Rectal temperature below 35.5°C (95.9°F)	• Infection • Hypothermia (possibly due to infection, a missed feed, or child being uncovered)

In addition to watching for increasing pulse or respirations and changes in temperature, watch for other danger signs such as:

- Anorexia (loss of appetite)
- Change in mental state (e.g., becomes lethargic)
- Jaundice (yellowish skin or eyes)
- Cyanosis (tongue/lips turning blue from lack of oxygen)
- Difficult breathing
- Difficulty feeding or waking (drowsy)
- Abdominal distention
- New edema
- Large weight changes
- Increased vomiting
- Petechiae (bruising)

* Some children 2-12 months of age will normally breathe fast (i.e., 50-60 breaths per minute) without having pneumonia. However, unless the child's normal respiratory rate is known to be high, he/she should be assumed to have either overhydration or pneumonia. Careful evaluation, taking into account prior fluid administration, will help differentiate the two conditions and plan appropriate treatment.

Edited by Dr. Abdul Rehman Pirzado

RUTF Packets Per Day to Give to a Child with SAM in Inpatient Care

	TRANSITION PHASE	REHABILITATION PHASE
	150 kcal/kg bodyweight/day	**200 kcal/kg bodyweight/day**
Child's weight (kg)	*Packets per Day (92 g Packets Containing 500 kcal)*	*Packets per Day (92 g Packets Containing 500 kcal)*
3.5 – 3.9	1.2	1.5
4.0 – 4.9	1.5	2
5.0 – 6.9	2.1	2.5
7.0 – 8.4	2.5	3
8.5 – 9.4	2.8	3.5
9.5 – 10.4	3.1	4
10.5 – 11.9	3.6	4.5
≥ 12	4	5

Edited by Dr. Abdul Rehman Pirzado pirzado@gmail.com

F75 for use with Severe Wasting in Stabilization Phase

Weight of child (kg)	Volume of F-75 per feed (ml)[a]			Daily total (130 ml/kg)	80% of daily total [a] (minimum)
	Every 2 hours (12 feeds)	Every 3 hours[c] (8 feeds)	Every 4 hours (6 feeds)		
2.0	20	30	45	260	210
2.2	25	35	50	286	230
2.4	25	40	55	312	250
2.6	30	45	55	338	265
2.8	30	45	60	364	290
3.0	35	50	65	390	310
3.2	35	55	70	416	335
3.4	35	55	75	442	355
3.6	40	60	80	468	375
3.8	40	60	85	494	395
4.0	45	65	90	520	415
4.2	45	70	90	546	435
4.4	50	70	95	572	460
4.6	50	75	100	598	480
4.8	55	80	105	624	500
5.0	55	80	110	650	520
5.2	55	85	115	676	540
5.4	60	90	120	702	560
5.6	60	90	125	728	580
5.8	65	95	130	754	605
6.0	65	100	130	780	625
6.2	70	100	135	806	645
6.4	70	105	140	832	665
6.6	75	110	145	858	685
6.8	75	110	150	884	705
7.0	75	115	155	910	730
7.2	80	120	160	936	750
7.4	80	120	160	962	770
7.6	85	125	165	988	790
7.8	85	130	170	1014	810
8.0	90	130	175	1040	830
8.2	90	135	180	1066	855
8.4	90	140	185	1092	875
8.6	95	140	190	1118	895
8.8	95	145	195	1144	915
9.0	100	145	200	1170	935
9.2	100	150	200	1196	960
9.4	105	155	205	1222	980
9.6	105	155	210	1248	1000
9.8	110	160	215	1274	1020
10.0	110	160	220	1300	1040

[a] Volumes in these columns are rounded to the nearest 5 ml.
[b] Feed two-hourly for at least the first day. Then, when the child has little or no vomiting, modest diarrhea (< 5 watery stools per day), and is finishing most feeds, change to three-hourly feeds.
[c] After a day on three-hourly feeds: If no vomiting, less diarrhea, and finishing most feeds, change to four-hourly feeds.

F75 for use with Severe (+++) Bilateral Pitting Edema in Stabilization Phase

Weight with +++ edema (kg)	Volume of F-75 per feed (ml)[a]			Daily total (100 ml/kg)	80% of daily total[a] (minimum)
	Every 2 hours (12 feeds)	Every 3 hours[c] (8 feeds)	Every 4 hours (6 feeds)		
3.0	25	40	50	300	240
3.2	25	40	55	320	255
3.4	30	45	60	340	270
3.6	30	45	60	360	290
3.8	30	50	65	380	305
4.0	35	50	65	400	320
4.2	35	55	70	420	335
4.4	35	55	75	440	350
4.6	40	60	75	460	370
4.8	40	60	80	480	385
5.0	40	65	85	500	400
5.2	45	65	85	520	415
5.4	45	70	90	540	430
5.6	45	70	95	560	450
5.8	50	75	95	580	465
6.0	50	75	100	600	480
6.2	50	80	105	620	495
6.4	55	80	105	640	510
6.6	55	85	110	660	530
6.8	55	85	115	680	545
7.0	60	90	115	700	560
7.2	60	90	120	720	575
7.4	60	95	125	740	590
7.6	65	95	125	760	610
7.8	65	100	130	780	625
8.0	65	100	135	800	640
8.2	70	105	135	820	655
8.4	70	105	140	840	670
8.6	70	110	145	860	690
8.8	75	110	145	880	705
9.0	75	115	150	900	720
9.2	75	115	155	920	735
9.4	80	120	155	940	750
9.6	80	120	160	960	770
9.8	80	125	165	980	785
10.0	85	125	165	1000	800
10.2	85	130	170	1020	815
10.4	85	130	175	1040	830
10.6	90	135	175	1060	850
10.8	90	135	180	1080	865
11.0	90	140	185	1100	880
11.2	95	140	185	1120	895
11.4	95	145	190	1140	910
11.6	95	145	195	1160	930
11.8	100	150	195	1180	945
12.0	100	150	200	1200	960

[a] Volumes in these columns are rounded to the nearest 5 ml.
[b] Feed two-hourly for at least the first day. Then, when the child has little or no vomiting, modest diarrhea (< 5 watery stools per day), and is finishing most feeds, change to three-hourly feeds.
[c] After a day on three-hourly feeds: If no vomiting, less diarrhea, and finishing most feeds, change to four-hourly feeds.

Edited by Dr. Abdul Rehman Pirzado pirzado@gmail.com

Infants Under 6 months in Inpatient Care **With Breastfeeding** Caregiver: F100-Diluted or F75

Look-Up Table for Maintenance Amounts of F100-Diluted (Severe Wasting) or F75 (Bilateral Pitting Oedema Until the Oedema is Resolved) for Breastfed Infants

Child's Weight (kg)	F100-Diluted or F75 in case of oedema (ml per feed if 12 feeds per day)	F100-Diluted or F75 in case of oedema (ml per feed if 8 feeds per day)
≥ 1.2	20	25
1.3 – 1.5	25	30
1.6 – 1.7	30	35
1.8 – 2.1	30	40
2.2 – 2.4	35	45
2.5 – 2.7	40	50
2.8 – 2.9	40	55
3.0 – 3.4	45	60
3.5 – 3.9	50	65
4.0 – 4.4	50	70

Infants under 6 months in Inpatient Care **With No Prospect of Breastfeeding**: F100-Diluted or F75

Stabilisation Phase Look-Up Table for Volume of F100-Diluted (Severe Wasting) or F75 (Bilateral Pitting Oedema) for Non-Breastfed Infants Under 6 Months

Child's Weight (kg)	F100-Diluted or F75 in case of oedema (ml per feed if 12 feeds per day)	F100-Diluted or F75 in case of oedema (ml per feed if 8 feeds per day)
≤ 1.5	25	30
1.6 – 1.8	30	35
1.9 – 2.1	30	40
2.2 – 2.4	35	45
2.5 – 2.7	40	50
2.8 – 2.9	40	55
3.0 – 3.4	45	60
3.5 – 3.9	50	65
4.0 – 4.4	50	70

Transition Phase Look-Up Table for Volume of F100-Diluted for Non-Breastfed Infants

Child's Weight (kg)	F100-Diluted (ml per feed if 8 feeds per day)
≤ 1.5	45
1.6 – 1.8	53
1.9 – 2.1	60
2.2 – 2.4	68
2.5 – 2.7	75
2.8 – 2.9	83
3.0 – 3.4	90
3.5 – 3.9	96
4.0 – 4.4	105

Rehabilitation Phase Look-Up Table for Volume of F100-Diluted for Non-Breastfed Infants

Child's Weight (kg)	F100-Diluted (ml per feed if 6-8 feeds per day)
≤ 1.5	60
1.6 – 1.8	70
1.9 – 2.1	80
2.2 – 2.4	90
2.5 – 2.7	100
2.8 – 2.9	110
3.0 – 3.4	120
3.5 – 3.9	130
4.0 – 4.4	140

Edited by Dr. Abdul Rehman Pirzado pirzado@gmail.com

F100 for Use in Transition Phase

Transition Phase Look-Up Table for Volume of F100 per Feed if No RUTF is Taken, Based on 150 kcal/kg Bodyweight/Day

Weight (kg)	F100 (ml per feed if 8 feeds per day)	F100 (ml per feed if 6 feeds per day)	F100 (ml per feed if 5 feeds per day)
3.0 - 3.4	60	75	85
3.5 – 3.9	65	80	95
4.0 – 4.4	70	85	110
4.5 – 4.9	80	95	120
5.0 – 5.4	90	110	130
5.5 – 5.9	100	120	150
6.0 – 6.9	110	140	175
7.0 – 7.9	125	160	200
8.0 – 8.9	140	180	225
9.0 – 9.9	155	190	250
10 – 10.9	170	200	275
11 – 11.9	190	230	275
12 - 12.9	205	250	300
13 - 13.9	230	275	350
14 - 14.9	250	290	375
15 - 19.9	260	300	400
20 - 24.9	290	320	450
25 - 29.9	300	350	450
30 - 39.9	320	370	500
40 - 60	350	400	500

- **F100** for use in Rehabilitation Phase (Free Feeding)

Weight of Child (kg)	Range of volumes per four-hourly feed of F-100 (6 feeds daily)		Range of daily volumes of F-100	
	Minimum (ml)	Maximum (ml) [a]	Minimum (150 ml/kg/day)	Maximum (220 ml/kg/day)
2.0	50	75	300	440
2.2	55	80	330	484
2.4	60	90	360	528
2.6	65	95	390	572
2.8	70	105	420	616
3.0	75	110	450	660
3.2	80	115	480	704
3.4	85	125	510	748
3.6	90	130	540	792
3.8	95	140	570	836
4.0	100	145	600	880
4.2	105	155	630	924
4.4	110	160	660	968
4.6	115	170	690	1012
4.8	120	175	720	1056
5.0	125	185	750	1100
5.2	130	190	780	1144
5.4	135	200	810	1188
5.6	140	205	840	1232
5.8	145	215	870	1276
6.0	150	220	900	1320
6.2	155	230	930	1364
6.4	160	235	960	1408
6.6	165	240	990	1452
6.8	170	250	1020	1496
7.0	175	255	1050	1540
7.2	180	265	1080	1588
7.4	185	270	1110	1628
7.6	190	280	1140	1672
7.8	195	285	1170	1716
8.0	200	295	1200	1760
8.2	205	300	1230	1804
8.4	210	310	1260	1848
8.6	215	315	1290	1892
8.8	220	325	1320	1936
9.0	225	330	1350	1980
9.2	230	335	1380	2024
9.4	235	345	1410	2068
9.6	240	350	1440	2112
9.8	245	360	1470	2156
10.0	250	365	1500	2200

[a] Volumes per feed are rounded to the nearest 5 ml.

- Infants Under 6 months in Inpatient Care **With Breastfeeding** Caregiver: F100-Diluted or F75

Look-Up Table for Maintenance Amounts of F100-Diluted (Severe Wasting) or F75 (Bilateral Pitting Oedema Until the Oedema is Resolved) for Breastfed Infants

Child's Weight (kg)	F100-Diluted or F75 in case of oedema (ml per feed if 12 feeds per day)	F100-Diluted or F75 in case of oedema (ml per feed if 8 feeds per day)
≥ 1.2	20	25
1.3 – 1.5	25	30
1.6 – 1.7	30	35
1.8 – 2.1	30	40
2.2 – 2.4	35	45
2.5 – 2.7	40	50
2.8 – 2.9	40	55
3.0 – 3.4	45	60
3.5 – 3.9	50	65
4.0 – 4.4	50	70

- Infants under 6 months in Inpatient Care **With No Prospect of Breastfeeding**: F100-Diluted or F75

Stabilisation Phase Look-Up Table for Volume of F100-Diluted (Severe Wasting) or F75 (Bilateral Pitting Oedema) for Non-Breastfed Infants Under 6 Months

Child's Weight (kg)	F100-Diluted or F75 in case of oedema (ml per feed if 12 feeds per day)	F100-Diluted or F75 in case of oedema (ml per feed if 8 feeds per day)
≤ 1.5	25	30
1.6 – 1.8	30	35
1.9 – 2.1	30	40
2.2 – 2.4	35	45
2.5 – 2.7	40	50
2.8 – 2.9	40	55
3.0 – 3.4	45	60
3.5 – 3.9	50	65
4.0 – 4.4	50	70

Transition Phase Look-Up Table for Volume of F100-Diluted for Non-Breastfed Infants

Child's Weight (kg)	F100-Diluted (ml per feed if 8 feeds per day)
≤ 1.5	45
1.6 – 1.8	53
1.9 – 2.1	60
2.2 – 2.4	68
2.5 – 2.7	75
2.8 – 2.9	83
3.0 – 3.4	90
3.5 – 3.9	96
4.0 – 4.4	105

Rehabilitation Phase Look-Up Table for Volume of F100-Diluted for Non-Breastfed Infants

Child's Weight (kg)	F100-Diluted (ml per feed if 6-8 feeds per day)
≤ 1.5	60
1.6 – 1.8	70
1.9 – 2.1	80
2.2 – 2.4	90
2.5 – 2.7	100
2.8 – 2.9	110
3.0 – 3.4	120
3.5 – 3.9	130
4.0 – 4.4	140

Entry and Exit Categories for Individual and Service Monitoring of CMAM for Children 6-59 Months

Inpatient Care	Outpatient Care
ENTRY CATEGORIES	
1. New admission: New case of child 6-59 months who meets the admission criteria -- including *relapse* after cure	*1. New admission:* New case of child 6-59 months who meets the admission criteria -- including *relapse* after cure
2. Other new admissions: New case: infants, child, adolescent, adult (< 6 months or ≥ 5 years) who needs treatment of SAM in inpatient care	*2. Other new admissions:* New case who does not meet pre-set admission criteria but needs treatment of SAM in outpatient care (special case, based on decision of supervisor)
3. Referral from outpatient care: Condition of child deteriorated in outpatient care (according to action protocol) and child needs inpatient care Or *Returned* after defaulting *(or Moved* from other inpatient care site)*	*3. Referral from inpatient care:* Case of child 6-59 months referred from inpatient care after stabilisation and continues treatment in outpatient care Or *Returned* after defaulting *(or Moved* from other outpatient care site)*
EXIT CATEGORIES	
1. Discharged cured: Child 6-59 months who meets discharge criteria, i.e., special cases that were not referred to outpatient care earlier	*1. Discharged cured:* Child 6-59 months who meets discharge criteria
2. Discharged died: Child 6-59 months who dies while in inpatient care	*2. Discharged died:* Child 6-59 months who dies while in outpatient care
3. Discharged defaulted: Child 6-59 months who is absent for two days	*3. Discharged defaulted:* Child 6-59 months who is absent for three consecutive visits
4. Discharged non-recovered: Child 6-59 months who remained in inpatient care does not reach discharge criteria after two months in treatment	*4. Discharged non-recovered:* Child 6-59 months who does not reach discharge criteria after four months in treatment
5. Referred to outpatient care: Condition of child has stabilised, child's appetite has returned, the medical complication is resolving and the child is referred to outpatient care to continue treatment	5. *Referred to inpatient care:* Condition of child has deteriorated or child is not responding to treatment (per the action protocol), and child is referred to inpatient care

*Movement between sites is possible in mobile populations or during emergencies.

Health and Nutrition Education Messages

KEY BEHAVIORS TO PROMOTE[1]

Essential Nutrition Actions

- Optimal breastfeeding during the first 6 months of life
- Optimal complementary feeding starting at 6 months with continued breastfeeding to 2 years of age and beyond
- Continued feeding when the child is ill
- Optimal nutrition care of malnourished children
- Prevention of vitamin A deficiency for women and children
- Adequate iron and folic acid intake, and the prevention and control of anaemia for women and children
- Adequate iodine intake by all members of the household
- Optimal nutrition for women

Household Hygiene Actions

- Treatment and safe storage of drinking water
- Handwashing with soap or ash at critical times: after defecation, after handling children's faeces, before preparing food, before feeding children, before eating
- Safe disposal of faeces
- Proper storage and handling of food to prevent contamination

Other Care Practices

- Antenatal care attendance, including: at least four visits, tetanus toxoid vaccine, iron/folic acid supplementation
- Full course of immunisations for all children before their first birthday
- Children and women sleeping under insecticide-treated bed nets
- Recognition when a sick child needs treatment outside of the home and seeking care from appropriate providers
- Recognition of pregnancy danger signs

2. IMPORTANCE OF BREASTFEEDING

Importance of Breastfeeding for the Infant/Young Child

Breast Milk:

- Saves infants' lives
- Is a whole food for the infant, and contains balanced proportions and sufficient quantity of all the needed nutrients for the first 6 months
- Promotes adequate growth and development, thus preventing stunting
- Is always clean
- Contains antibodies that protect against diseases, especially against diarrhoea and respiratory infections
- Is always ready and at the right temperature
- Is easy to digest; nutrients are well absorbed
- Protects against allergies; breast milk antibodies protect the baby's gut preventing harmful substances to pass into the blood
- Contains enough water for the baby's needs (87% of water and minerals)
- Helps jaw and teeth development; suckling develops facial muscles
- Provides frequent skin-to-skin contact between mother and infant, which leads to better psychomotor, affective and social development of the infant
- Provides the infant with benefits from the colostrum, which protects him/her from diseases; the amount is perfect for newborn stomach size
- Promotes brain development; increased Intelligence Quotient (IQ) scores

Importance of Breastfeeding for the Mother

- Putting the baby to the breast immediately after birth facilitates the expulsion of placenta because the baby's suckling stimulates uterine contractions
- Reduces risks of bleeding after delivery
- When the baby is immediately breastfed after birth, breast milk production is stimulated

[1] Adapted from Ghana Sustainable Change Project. 2008. *Priority Nutrition Messages*. Accra, Ghana: AED.

- Breastfeeding is more than 98% effective as a contraceptive method during the first 6 months provided that breastfeeding is exclusive and amenorrhea persists
- Immediate and frequent suckling prevents engorgement
- Reduces the mother's workload (no time is involved in boiling water, gathering fuel, preparing milk)
- Breastmilk is available at anytime and anywhere, is always clean, nutritious and at the right temperature
- It is economical
- Stimulates bond between mother and baby
- Reduces risks of breast and ovarian cancer

Importance of Breastfeeding for the Family

- The child receives the best possible quality of food, no matter what the family's economic situation
- No expenses in buying formula, firewood or other fuel to boil water, milk or utensils; the money saved can be used to meet the family's other needs
- No medical expenses due to sickness that formula could cause; the mothers and their children are healthier
- As illness episodes are reduced in number, the family encounters few emotional problems associated with the baby's illness
- Births are spaced thanks to the contraceptive effect
- Time is saved
- Feeding the baby reduces work because the milk is always available and ready

Importance of Breastfeeding for the Community

- Not importing formula and utensils necessary for its preparation saves hard currencies that could be used for something else
- Healthy babies make a healthy nation
- Savings are made in the health area; a decrease in the number of child illnesses leads to decreased national medical expenses
- Improves child survival; reduces child morbidity and mortality
- Protects the environment (trees are not used for firewood to boil water, milk and utensils, thus protecting the environment); breast milk is a natural renewable resource

Recommended Breastfeeding Practices and Possible Points of Discussion for Counselling

Recommended Breastfeeding Practice	Possible Points of Discussion for Counselling *(Choose most relevant to mother's situation)*
Put infant skin-to-skin with mother immediately after birth.	• Skin-to-skin with mother keeps newborn warm. • Skin-to-skin with mother helps stimulate brain development.
Initiate breastfeeding within the first hour of birth.	• This first milk 'local word' is called colostrum. It is yellow and full of antibodies which help protect your baby. • Colostrum provides the first immunization against many diseases. • Breastfeeding from birth helps the milk 'come in' and ensures plenty of breast milk.
Exclusively breastfeed (no other food or drink) for 6 months.	• Breast milk is all the infant needs for the first 6 months. • Do not give anything else to the infant before 6 months, not even water • Giving water will fill the infant and cause less suckling; less breast milk will be produced.
Breastfeed frequently, day and night.	• Breastfeed the baby often, at least 8-12 times for a newborn and 8 or more times after breastfeeding is well-established, day and night, to produce lots of breast milk. • More suckling (with good attachment) makes more breast milk.
Breastfeed on demand (or cue) every time the baby asks to breastfeed.	• Crying is a late sign of hunger. • Early signs that baby wants to breastfeed: – Restlessness – Opening mouth and turning head from side to side – Putting tongue in and out – Sucking on fingers or fists
Let infant finish one breast and come off by him/herself before switching to the other breast.	• Switching back and forth from one breast to the other prevents the infant from getting the nutritious 'hind milk'. • The 'fore milk' has more water content and quenches infant's thirst; the 'hind milk' has more fat content and satisfies the infant's hunger.
Continue breastfeeding until 2 years of age or longer.	• Breast milk contributes a significant proportion of energy and nutrients during the complementary feeding period and helps protect babies from illness. • In the first year, breastfeed before giving foods to maintain breast milk supply.
Mother needs to eat and drink to satisfy hunger and thirst.	• No one special food or diet is required to provide adequate quantity or quality of breast milk. • Breast milk production is not affected by maternal diet. • No foods are forbidden. • Mothers should be encouraged to eat supplemental foods where they are accessible.
Avoid feeding bottles.	• Foods or liquids should be given by a spoon or cup to reduce nipple confusion and the possible introduction of contaminants.

Recommended Complementary Feeding Practices

Age	Frequency (per day)	Amount of food an average child will usually eat at each serving* (in addition to breast milk)	Texture (thickness/ consistency)	Variety
6-8 months	2-3 times food	2-3 tablespoons 'Tastes' up to ½ cup (250 ml)	Thick porridge/pap Mashed/ pureed family foods**	Breastfeeding + staples (porridge, other local examples) Legumes (local examples) Vegetables/fruits (local examples) Animal foods (local examples)
9-11 months	4 times foods and snacks	½ cup/bowl (250 ml)	Finely chopped family foods Finger foods Sliced foods	
12-23 months	5 times foods and snacks	¾ -1 cup/bowl (250 ml)	Family foods Sliced foods	
Note: If baby is not breastfed	Add 1-2 extra times food and snacks			Add 1-2 cups of milk per day
Responsive/active feeding		Be patient and actively encourage your baby to eat.		
Hygiene		• Feed your baby using a clean cup and spoon, never a bottle, as this is difficult to clean and may cause your baby to get diarrhoea. • Wash your hands with soap and water before preparing food, eating and feeding young children.		

*Adapt the chart to use a suitable cup/bowl to show the amount. The amounts assume an energy density of 0.8 – 1 kcal/g.
** Use iodized salt in preparing family foods.

Recommended Complementary Feeding Practices and Possible Points of Discussion for Counselling

Recommended Complementary Feeding Practice	Possible Points of Discussion for Counselling (choose most relevant to mother's situation)
At 6 months of age, add complementary foods (e.g., thick porridge 2-3 times a day) to breastfeeds.	• Give local examples of first types of complementary foods.
As baby grows older, increase feeding frequency, amount, texture and variety.	• FATV: Gradually increase the frequency (F), amount (A), texture (T) (thickness/consistency) and variety (V) of foods.
From 6-8 months of age, breastfeed plus give 2-3 servings of foods.	• Start with 2-3 tablespoonfuls of cooked porridge or mashed foods (give examples of cereals and family foods). • At 6 months, these foods are more like 'tastes' than actual servings. • Increase gradually to ½ cup (250 ml cup). Show amount in cup brought by mother.
From 9-11 months of age, breastfeed plus give 4 servings of food or snacks per day.	• Give finely chopped, mashed foods and finger foods. • Increase gradually to ½ cup (250 ml cup). Show amount in cup brought by mother.
From 12-23 months of age, give 5 servings of food or snacks per day, plus breastfeed.	• Give family foods. • Give ¾ to one cup (250 ml cup/bowl). Show amount in cup brought by mother. • Other solid foods (snacks) can be given as many times as possible each day and can include [give examples]. • Foods given to the child must be stored in hygienic conditions to avoid diarrhoea and illness.
Give baby 2-3 different family foods: staple, legumes, vegetables/fruits, and animal foods at each serving.	• Try to feed different foods at each serving.
Continue breastfeeding until 2 years of age or longer.	• During the first and second years, breast milk is an important source of nutrients for your baby. • During the first year, breastfeed first to maintain breast milk supply.
Be patient and actively encourage baby to eat all his/her food.	• At first, baby may need time to get used to eating foods other than breast milk. • Use a separate plate to feed the child to make sure he/she eats all the food given.
Wash hands with soap and water before preparing food, eating and feeding young children.	• Foods given to the child must be stored in hygienic conditions to avoid diarrhoea and illness.
Feed baby using a clean cup and spoon.	• Cups are easy to keep clean.

Emotional & Physical Stimulation for Children

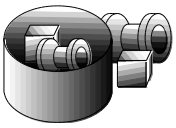
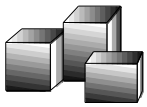
Adapted from WHO Management of Severe Malnutrition: A Manual for Physicians and Other Senior Health Workers 1999

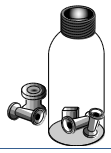
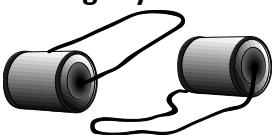
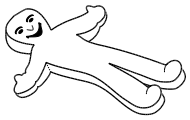
At each play session and for all ages:

- Teach local songs and finger and toe games.
- Have the child vocalise/repeat what he/she hears.
- Describe all activites.
- Teach action words with activities (e.g., say “bang bang” while beating a drum).
- Encourage next motor milestone while playing: bouncing, crawling, standing, walking.

For Children Who Cannot Easily Move:

- Passive limb movements
- Splashing in a warm bath

AGE	TOY	TO MAKE
6+ months	**Ring on a string** 	String together cotton reels and other small objects with holes. Tie the string in a ring, leaving a long piece of string hanging.
9+ months	**In-and-out toy** 	Use plastic or cardboard container and small objects that child can’t swallow.
9+ months	**Blocks** 	Use small wood blocks and sanded smooth. Decorate with carving or non-toxic paint if possible.
9+ months	**Nesting toys** 	Cut off bottom of two containers of identical shape but different size.
12+ months	**Rattle** 	Cut long strips of plastic from coloured plastic bottles. Place in small clear plastic bottle. If available, use non-toxic glue to secure the top on firmly . Do not use this toy if the child is at risk of choking on the rattle’s contents.

AGE	TOY	TO MAKE
12+ months	**Drum** 	Use a tin with a tight lid.
18+ months	**Posting Bottle** 	Use a large clear plastic bottle with a small neck and place objects like spools that child can't swallow but can fit through the neck. Don't seal lid.
18+ months	**Pull-along toy** 	Make a hole in the centre of top and bottom of a round tin. Thread string (about 60 cm long) through the holes and tie the ends inside the tin. To make noise while pulling, put metal bottle tops inside of the tin and close lid.
18+ months	**Doll** 	Cut out two doll shapes from a piece of cloth and sew the edges together, leaving a small opening. Turn doll inside out and stuff with scraps of materials. Stitch opening closed and draw or sew a face on doll.
18+ months	**Stacking bottle tops** 	Cut at least 3 same-sized round plastic bottles in half and stack tops.
18+ months	**Mirror** 	A tin lid with no sharp edges. If you cannot smooth the edges of the tin lid, do not use this toy as it could harm the child.
18+ months	**Puzzle** 	Draw a figure (e.g., a doll) in color on a square or rectangular piece of cardboard. Cut the figure into a few larger pieces.
18+ months	**Book** 	Cut out 3 equal-sized rectangular pieces of cardboard. Glue or draw simple and familiar pictures on both sides of each piece. Make 2 holes on one side of each piece and thread string through.