

UNDERSTANDING OF NUTRITION & MALNUTRITION



Intergrated management of acute
malnutrition- somalia



Learning objectives

By the end of this session, participants should:

- Be able to define key concepts on nutrition and malnutrition
- Identify and classify acute malnutrition
- Understand the causes of malnutrition using the conceptual framework for malnutrition
- Know and appreciate the consequences of malnutrition

Nutrition Versus Malnutrition

What is nutrition?

- The process by which food is taken from the environment into the body and used to: produce energy, Growth, protection from disease and help chemical processes take place in the body.

What's malnutrition?

- A condition that results/ develops when the body doesn't get right amount of nutrients.
- People get malnourished if their diet does not provide adequate calories, proteins and micronutrients (minerals and vitamins) for proper growth and maintenance or they are unable to fully utilize the those nutrients.

Cont....

It can mean either; over nutrition/ undernutrition

In Somalia we are more interested in under-nutrition, although there are cases of obesity among children and adults.

Under nutrition: a consequence of a deficiency in nutrients in the body

- Types of under-nutrition:
 - Acute malnutrition- (wasting)
 - Chronic malnutrition (Stunting)
 - Micronutrient deficiencies
- Under nutrition is caused primarily by an inadequate dietary intake, resulting into deficiency of required/essential nutrients.

Types of malnutrition

Acute Undernutrition

- Wasting – too thin for one's height
- Weight for height Z scores (WHZ)
- Mid upper arm circumference (MUAC)

Chronic Undernutrition

- Stunting – too short for one's age
- Height for age z scores (H/LAZ)

Chronic Overnutrition

- Overweight / obese – too large for one's height
- Body mass index (weight for height measure)

Micronutrient Malnutrition

- Excess or Inadequacy
- Clinical or subclinical
- Clinical signs or biochemical assessments

Types of Malnutrition

- **Stunting/Chronic malnutrition** – growth failure or stunting. Indicated by a low height for age
 - **Acute malnutrition** - determined by the patient's degree of wasting. Acute malnutrition is categorised into:
 - Moderate Acute Malnutrition (MAM)
 - Severe Acute Malnutrition (SAM)
- SAM can further be divided into:
- Marasmus
 - Kwashiorkor
 - Marasmic - kwashiorkor

Chronic malnutrition (Stunting).

- Long-term under nutrition that stunts growth
- Begins *in utero* and continues through infancy and childhood
- Limited catchup possible after 2 years of age (ie. irreversible)
- Has long term impacts on health, development, economic productivity and future generations



Age: 2 y 9 mo
Wt: 10.7 kg
Ht: 78.3 cm

Age: 2 y 6 mo
Wt: 11.6 kg
Height: 86.4 cm

Severe acute malnutrition.

Kwashiorkor



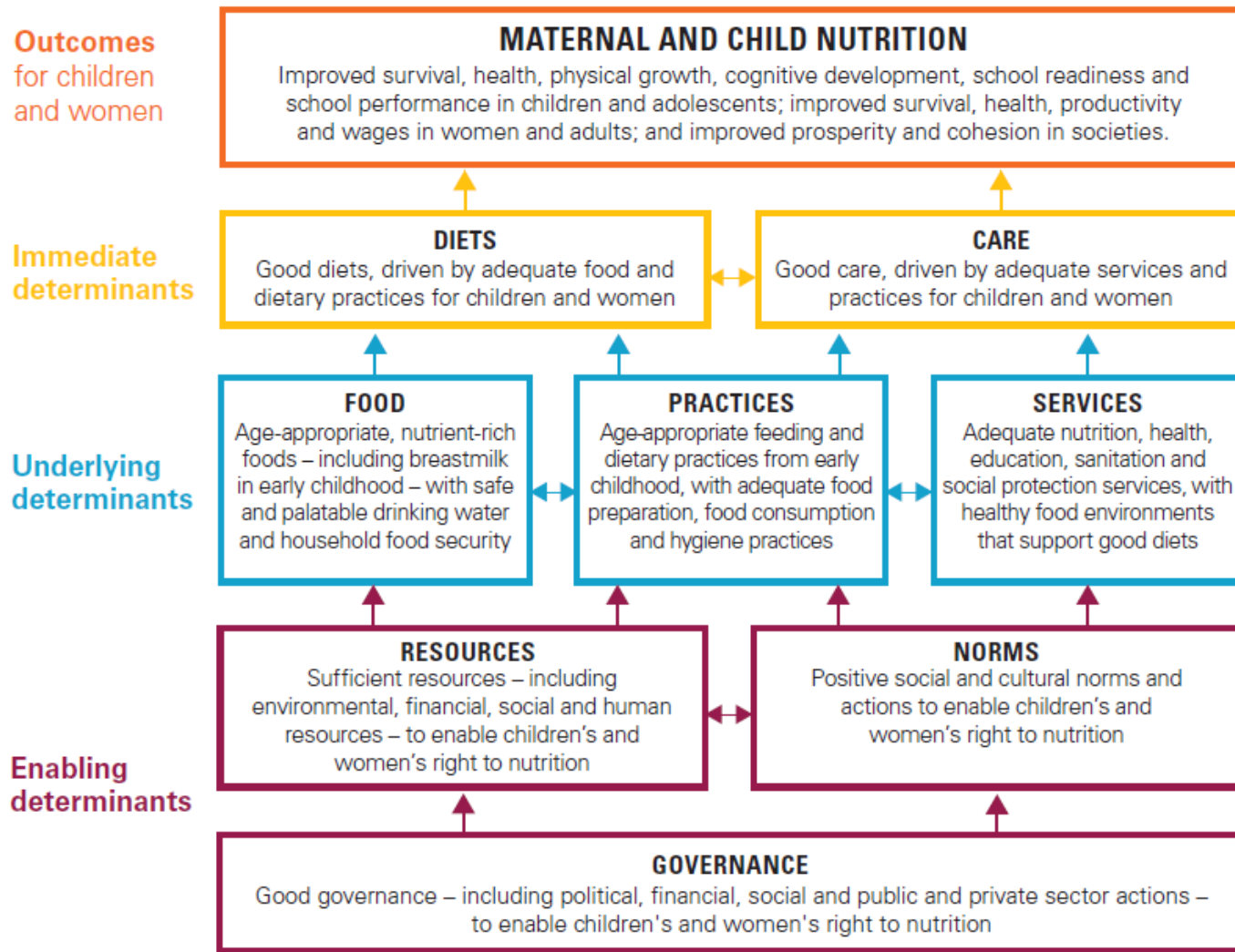
<http://www.realhopeforhaiti.org/wp-content/uploads/2011/12/Naika-2c.jpg>

Marasmus



https://edc2.healthtap.com/ht-staging/user_answer/reference_image/10405/large/Fluid_retention.jpeg?1386669889

Conceptual framework of malnutrition



UNICEF Conceptual Framework on the Determinants of Maternal and Child Nutrition, 2020.
A framework for the prevention of malnutrition in all its forms.

Adequate Diet for underfive children aged 6-9 months

LAGA BILAABO 6 BILOOD ILA 9 BILOOD

The infographic illustrates the process of feeding a child aged 6-9 months. It features a central illustration of a woman in a blue hijab feeding a child in a yellow shirt and floral dress with a spoon. To the left, a circular inset shows a woman and child, and another inset shows hands being washed with soap and water. To the right, two rows of illustrations show hands holding a spoon with a yellow substance, with a red 'X' over the second row indicating an incorrect technique. Below the central illustration are four panels of food items: a variety of grains and legumes, fresh fruits and vegetables, animal products like fish, meat, and eggs, and a glass of water. The top right corner shows two sunsets, one with a sun and one with a moon.

Adequate Diet for underfive children aged 9-12 months

LAGA BILAABO 9 BILOOD ILAA-12 MONTHS

The infographic illustrates the components of an adequate diet for children aged 9-12 months. It features a central illustration of a mother in a blue hijab feeding a child on a mat. Surrounding this are several panels:

- Top Left:** A circular inset showing a mother holding a baby.
- Top Right:** A vertical column of five food icons (porridge, banana, porridge, avocado, porridge) and a vertical column of five sun and tortoise icons representing sunlight.
- Middle Left:** An inset showing hands being washed with water from a yellow jug.
- Bottom Right:** Two spoons; the one on the left contains a safe amount of oil, while the one on the right contains a larger amount marked with a red 'X', indicating that honey is not recommended.
- Bottom Row:** Four panels displaying a variety of food items:
 - Panel 1: Grains, beans, and vegetables like corn and carrots.
 - Panel 2: Fruits including banana, orange, papaya, watermelon, and apples.
 - Panel 3: Proteins such as fish, chicken, and eggs, along with a glass of milk.
 - Panel 4: Legumes, seeds, and a glass of water.

Adequate Diet for underfive children aged 12-24 months

LAGA BILAABO 12 BILOOD ILA-24 MONTHS



Interactions between malnutrition and major diseases

Disease	Impact of malnutrition on disease	Impact of infectious disease on nutritional status
Diarrhoea or dysentery	<ul style="list-style-type: none"> •Increased duration •Increased severity •Increased risk of dying 	<ul style="list-style-type: none"> •Malabsorption •Appetite loss
Acute Respiratory Tract Infections	<ul style="list-style-type: none"> •Increased severity •Increased risk of dying 	<ul style="list-style-type: none"> •Appetite loss •Increased metabolic rate resulting in muscle breakdown
Measles	<ul style="list-style-type: none"> •Increased duration •Increased severity, especially if deficient in vitamin A •Increased risk of dying 	<ul style="list-style-type: none"> •Appetite loss •Decreased levels of plasma vitamin A •Prolonged immune suppression resulting in increased ARI and diarrhoea •Increased metabolic rate resulting in muscle breakdown •Loss of proteins into the gut
Malaria	<ul style="list-style-type: none"> •Some evidence of increase severity in deficiencies of vitamin A and zinc 	<ul style="list-style-type: none"> •Appetite loss •Increased metabolic rate •Destruction of red blood corpuscles leading to anaemia •Impaired foetal development, low birth weight

Impact/Consequences

We should worry for 2 main reasons:

- Malnutrition is closely linked with child mortality.
- Malnutrition has long-term adverse effects such as:
 - cognitive function
 - school achievement;
 - mental health
 - working capacity



Overview of Integrated Management of Acute Malnutrition (IMAM)



Integrated management of acute malnutrition (IMAM) -
Somalia



Learning Objectives

The objectives of programmes for the management of acute malnutrition are:

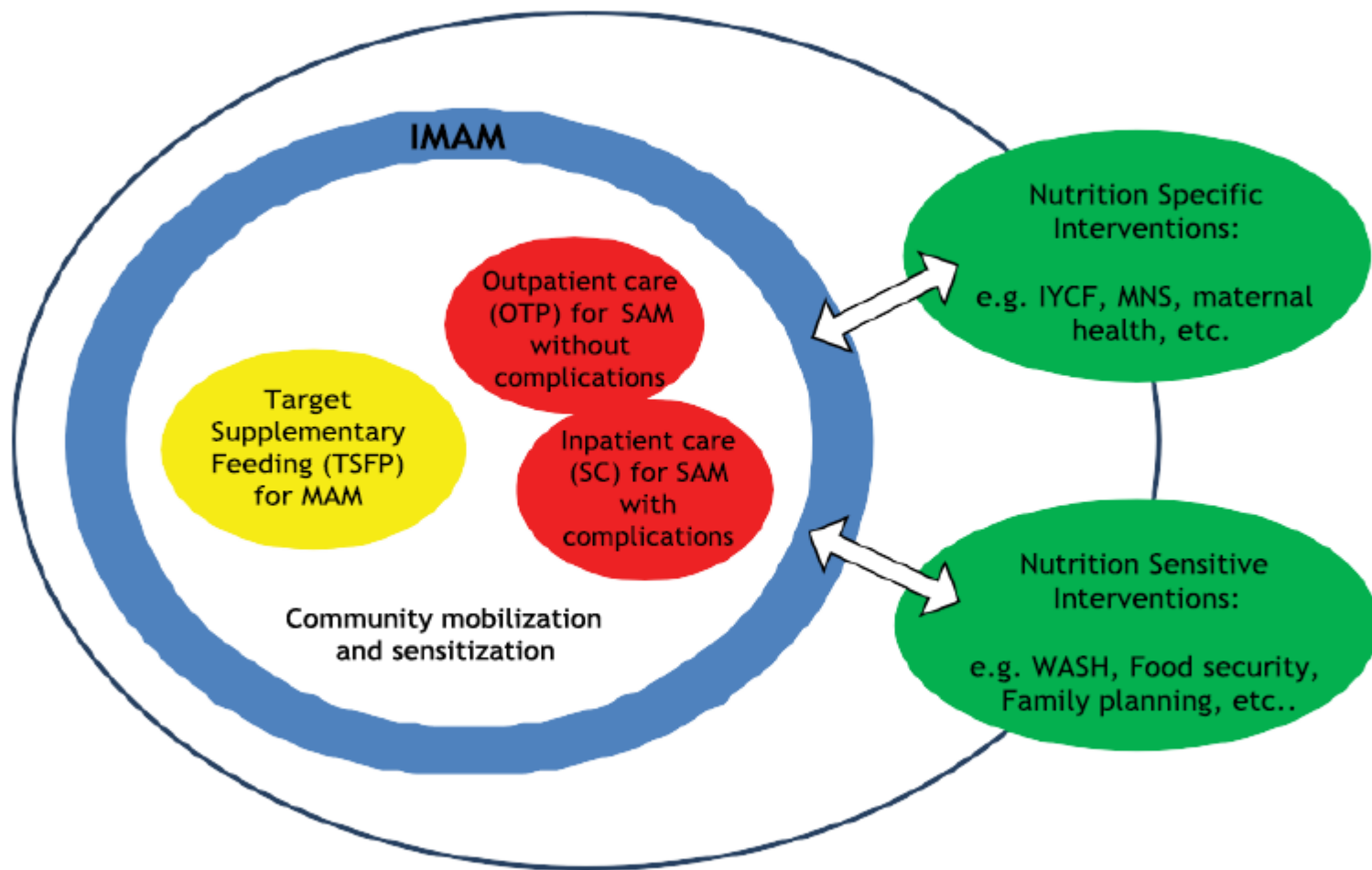
- Understand the background of the IMAM Approach
- To prevent the development of severe acute malnutrition
- Identify the principles of IMAM.
- Identify the components of IMAM and how they work together.

What is IMAM?

IMAM – Integrated Management of Acute Malnutrition

- It is a Community and Facility based approach to managing acute malnutrition.
- Most children with SAM without medical complications can be treated as outpatients at accessible, decentralised sites.
- Children with SAM and medical complications are treated as inpatients.
- Community outreach for community involvement and early detection and referral of cases.
- In some countries referred to as Community Based Management of Acute Malnutrition (CMAM)

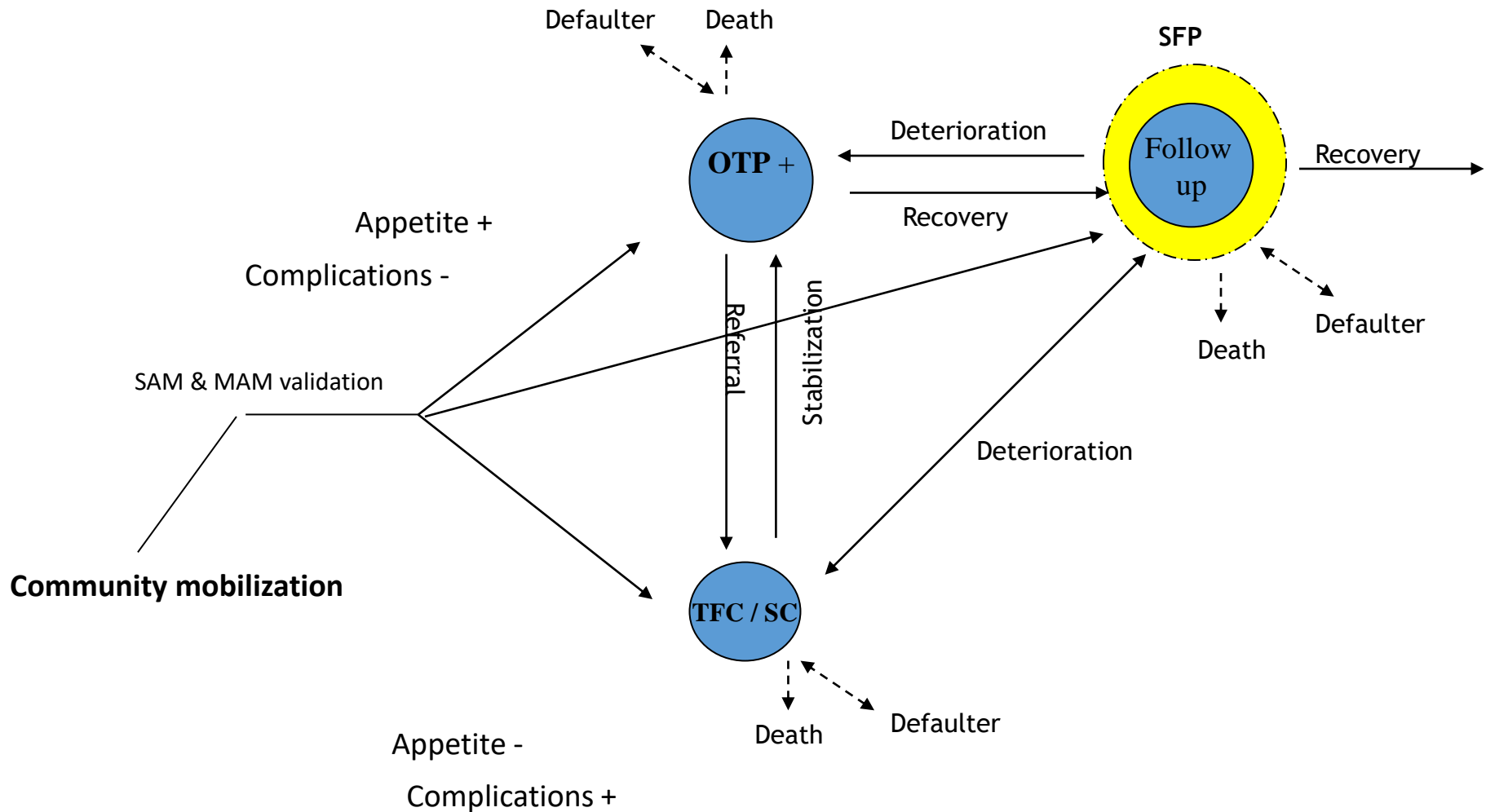
New IMAM Guide: Core Components of IMAM



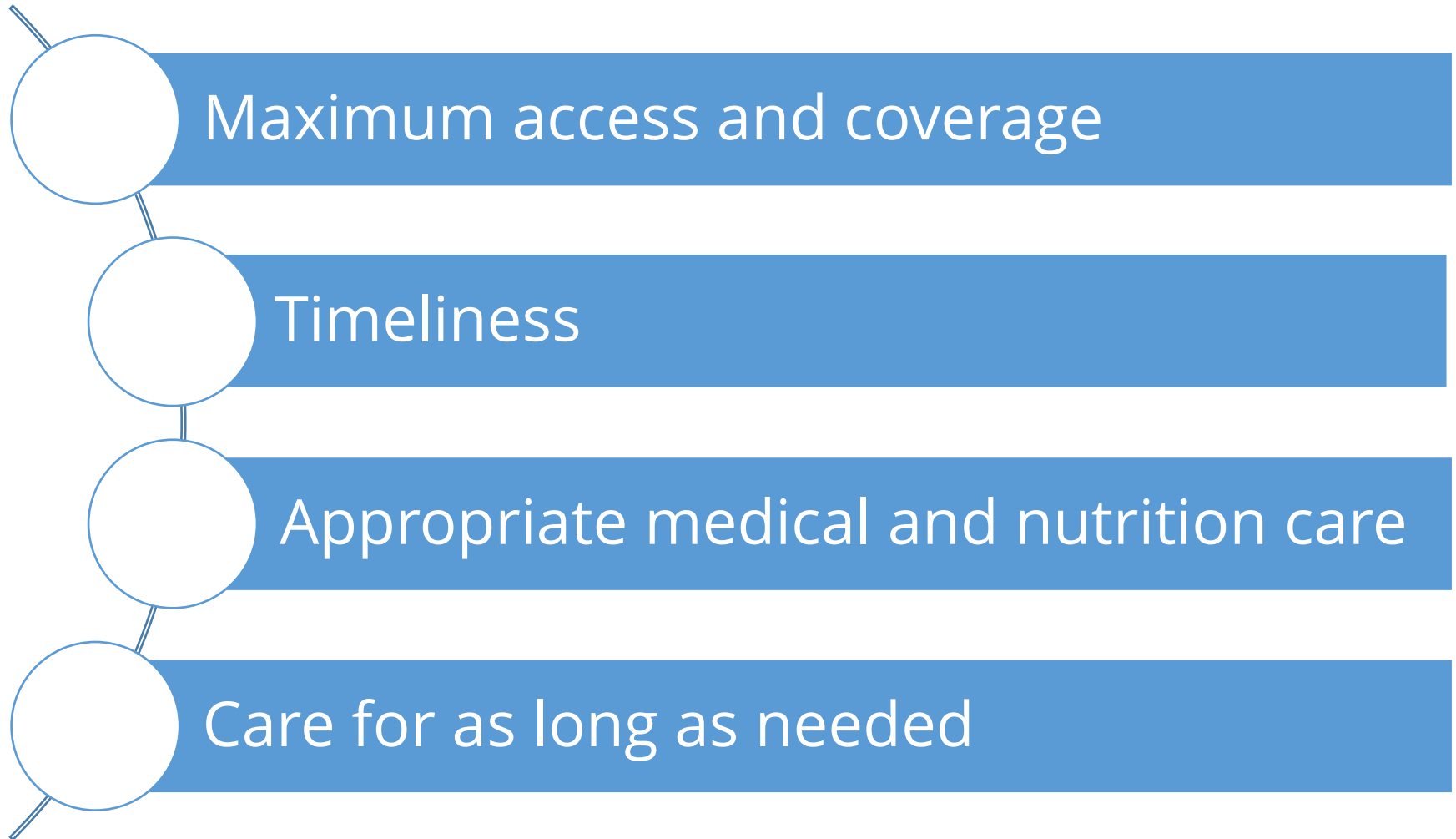
The 4 components

1. **Community mobilization:** Active case finding and referral and sensitization, program ownership due to involvement.
2. **Targeted Supplementary Feeding Program (TSFP)** for treatment of cases of Moderate Acute Malnutrition (MAM)
3. **Outpatient Therapeutic Program (OTP)** for treatment of cases of Severe Acute Malnutrition Inpatient (SAM) without medical complications and have good appetite.
4. **Stabilization Center (SC)** for inpatient treatment of cases of complicated acute malnutrition

Components of the management links



Principles of IMAM



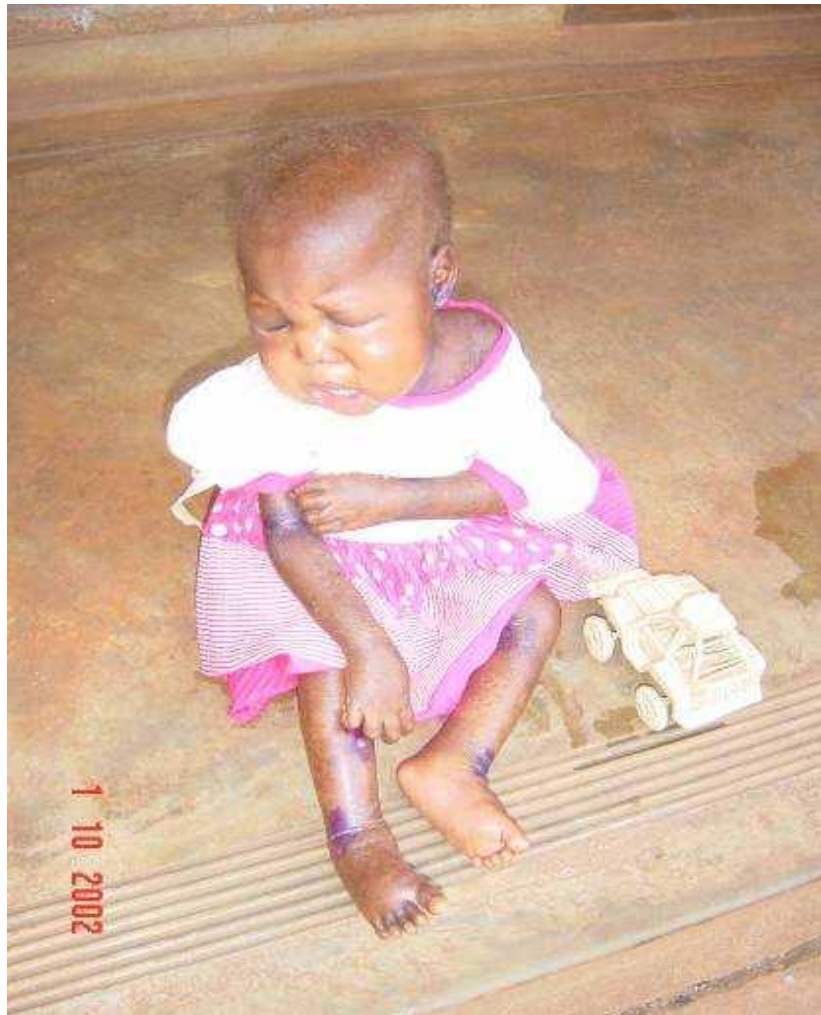
Principles of IMAM: Timeliness

Early Vs late presentation

- Find children before AM becomes serious and medical complications arise



Principles of IMAM: Appropriate medical and nutritional care



Principles of IMAM: Care for as long as needed

- Care for the management of Acute Malnutrition is provided as long as needed
- Services to address Acute Malnutrition can be integrated into routine health services of health facilities, if supplies are present
- Additional support to health facilities can be added during certain seasonal peaks or during a crisis

Programme set-up in Somalia

Ideally all components IMA for the management of acute malnutrition should be implemented in an integrated way. This is not possible in our Context during funding availability.

- OTP and SC
- only OTP
- isolated SFP
- OTP and SFP



Malnutrition Diagnosis



Learning Objectives

- To learn how to correctly take weight, height and MUAC measurements
- To know how to correctly check for and classify Oedema
- Learn how to correctly read and determine the Weight for Height Standard Deviation using the weight for height tables
- Examine the patient for clinical signs of acute malnutrition

Measurement of malnutrition

- There are four methods to assess an individual's nutritional status;
 1. anthropometry,
 2. biochemical assessment,
 3. clinical assessment
 4. dietary intake.

- Anthropometry is the method most commonly used in emergencies, in combination with clinical assessment of visible wasting and bilateral oedema.

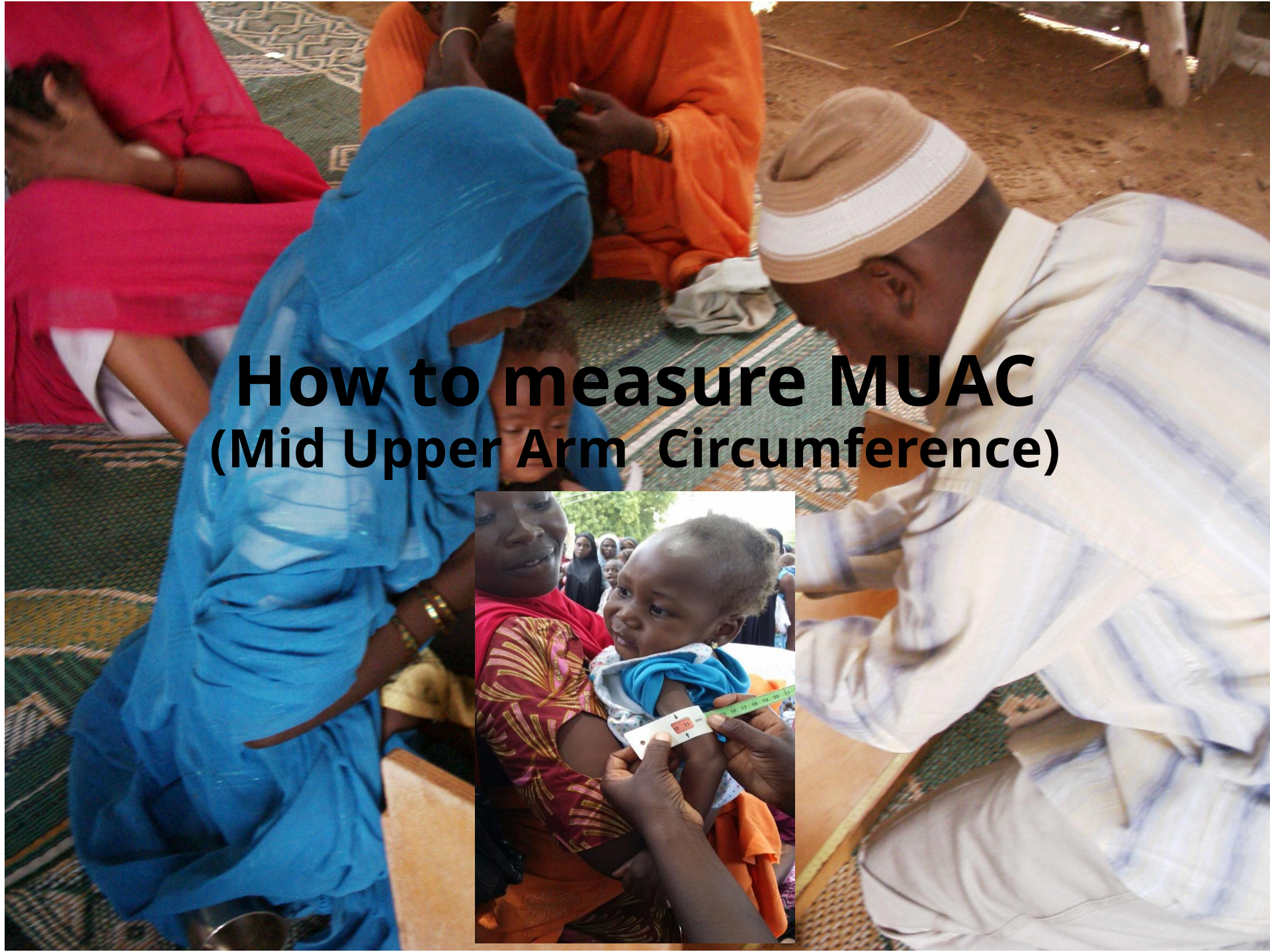
Body measurements and Clinical assessment

- Age and sex
- Anthropometry
 - Weight
 - Height (or length)
 - Middle-upper Arm Circumference (MUAC)
- Clinical signs
 - Presence of bilateral pitting oedema
 - *Presence of medical complications*
 - *Absence of appetite*

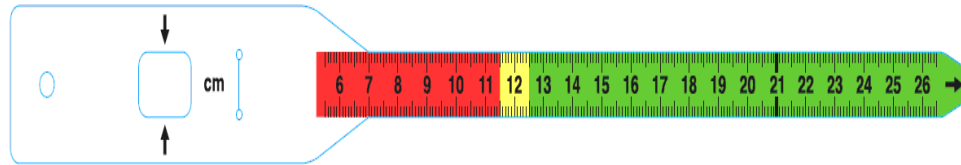
What is Anthropometry?

- The measurement of physical dimensions and gross body composition:
 - height (or length in children under 24 months or under 87cm in height),
 - weight,
 - MUAC (mid-upper arm circumference), age, sex .
- The information tother with age and sex is used to generate nutritional indices- WFH, HFA, WFL.
- The level of malnutrition is defined by cut-off points. Children falling below a specific cut-off point are classified with a specific degree of malnutrition.

How to measure MUAC (Mid Upper Arm Circumference)



MUAC taking

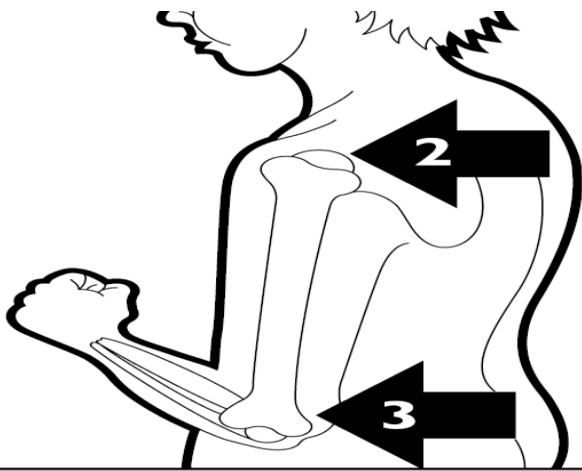


- Indicator of the body mass expressed in mm
- currently for children more than 6 months
- Measure the MUAC only on the left arm
- MUAC should be recorded with a precision of 1 mm (e.g. 124mm)
- Make sure that MUAC tape is not too tight or too loose on the upper arm. This is the most common mistake
- Read the result on the window at the point of the indicated by the 2 arrows at eye level.

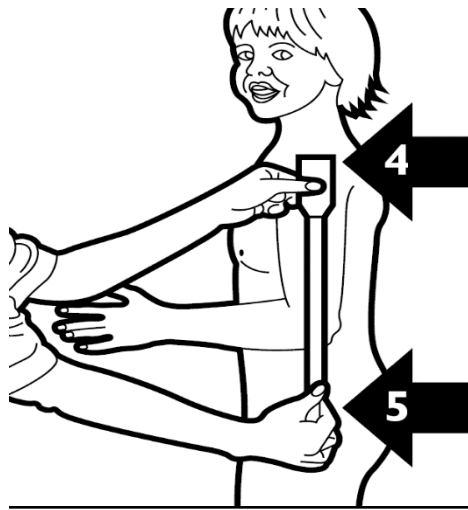
Arm circumference "insertion" tape



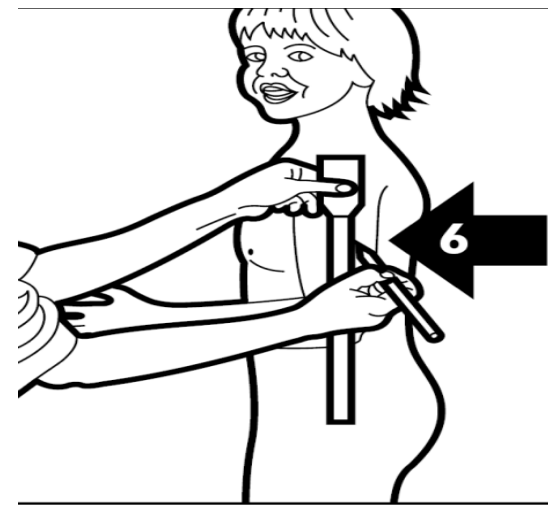
<p>1. Locate tip of shoulder</p>	<p>2. Tip of shoulder 3. Tip of elbow</p>	<p>4. Place tape at tip of shoulder 5. Pull tape past tip of bent elbow</p>	<p>6. Mark midpoint</p>
<p>7. Correct tape tension</p>			
<p>8. Tape too tight</p>			
	<p>10. Correct tape position for arm circumference</p>		
<p>9. Tape too loose</p>			



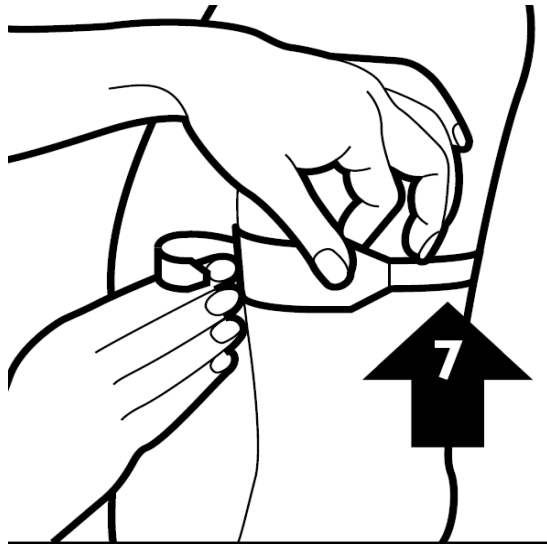
- 2. Tip of shoulder
- 3. Tip of elbow



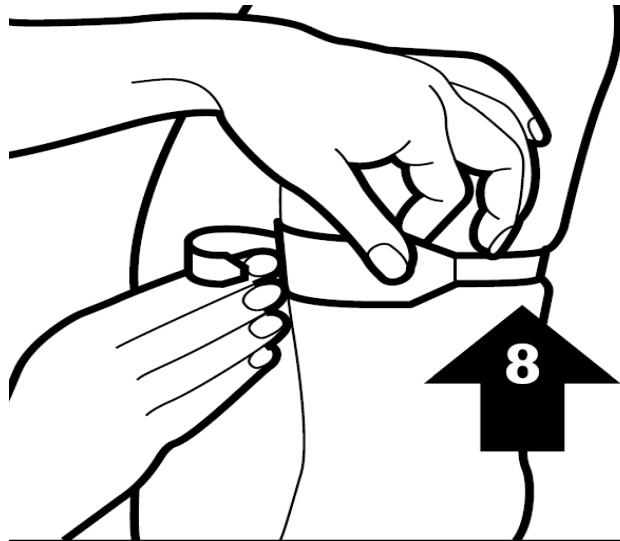
- 4. Place tape at tip of shoulder
- 5. Pull tape past tip of bent elbow



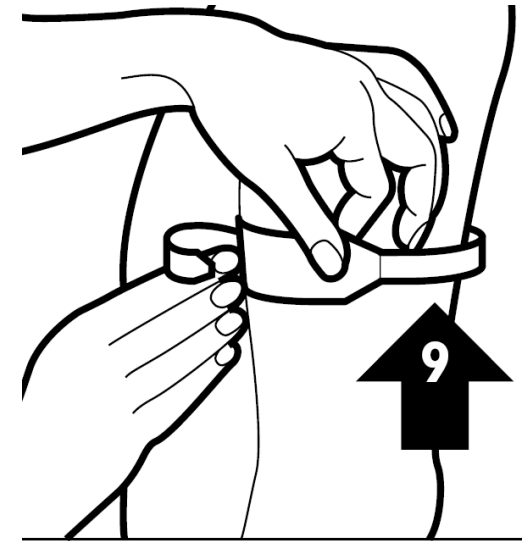
- 6. Mark midpoint



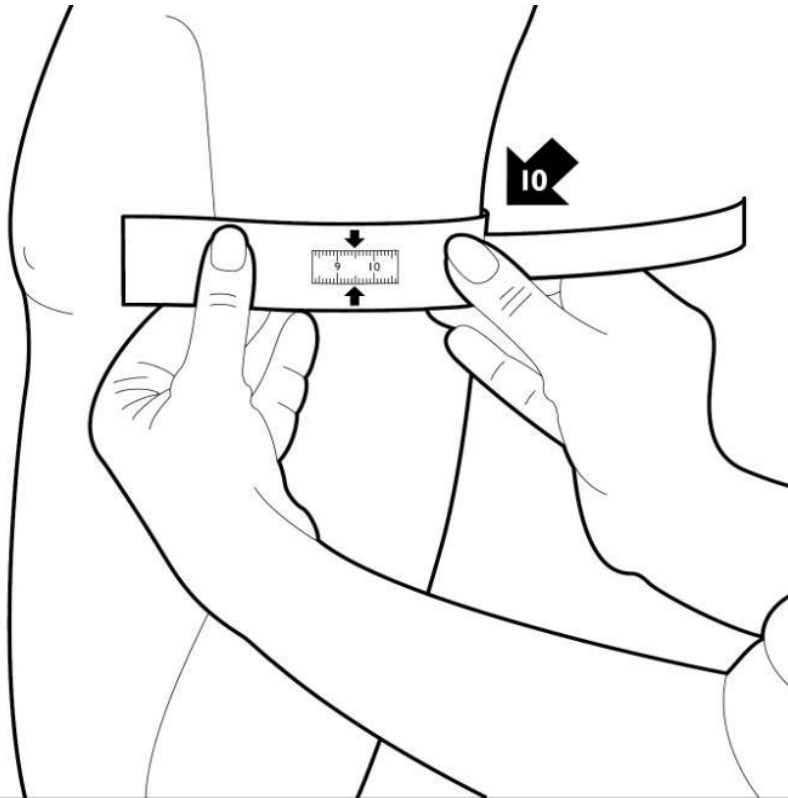
- 7. Correct tape tension



- 8. Tape too tight



- 9. Tape too loose



10. Correct tape position for arm circumference



MUAC interpretation (for children 6 -59 months)

> 135mm	No Malnutrition
Between 125 and 135mm	At risk of Malnutrition
Between 115 and 124 mm	Moderate Acute Malnutrition
< 115 mm	Severe Acute Malnutrition

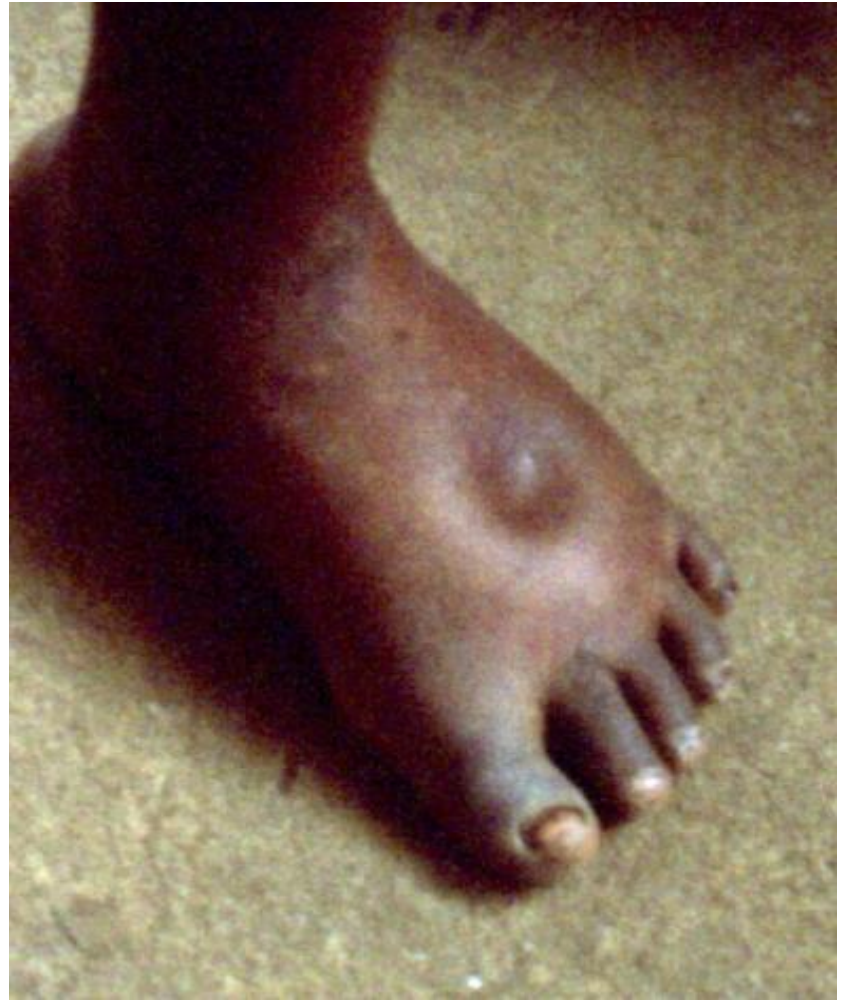
How to Assess for oedema

Checking for presence of oedema

You must formally test for oedema with finger pressure
- you cannot tell by just looking

- **Press with both thumbs on both the feet of the child during 3 seconds** (count twenty one, twenty two, twenty three)
- **Remove the thumbs and look:**
 - if the thumbs have left a **little pit in both feet** it is nutritional oedema
- **Repeat the same at the legs, then hands, then forehead**
- **Write down by classification**

Testing is not painful!!



Classification

- + (mild) → oedema on both feet
- ++(moderate) → oedema on both feet and both legs
- +++ (Severe) → oedema on both feet, both legs and hands or/and face

Bilateral oedema is always a sign of severe malnutrition

Remember! Nutritional oedema:

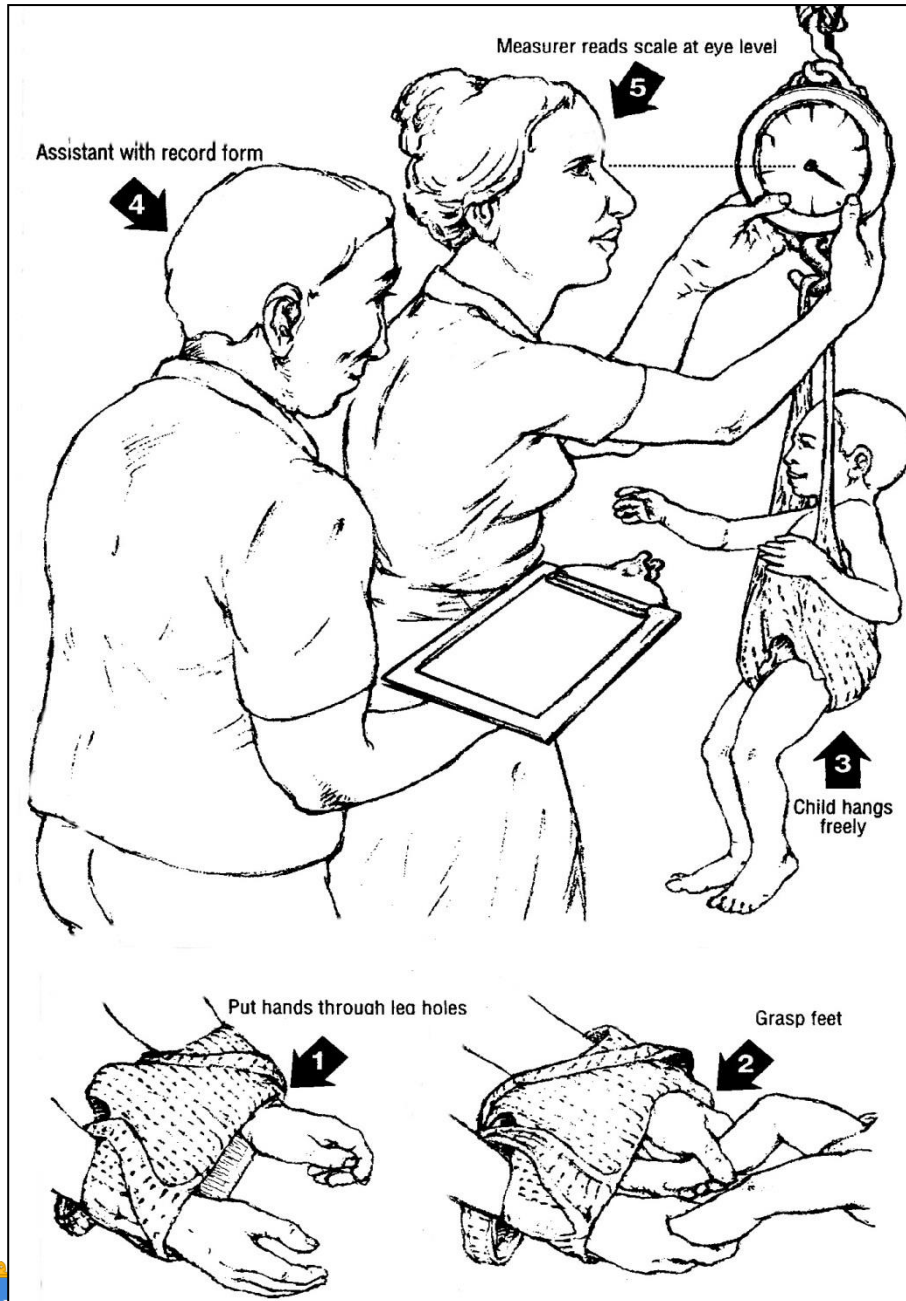
- starts from both feet, extending upwards to the arms, face and entire body
- is pitting (leaves an impression on pressure).
- does not change with time of the day or posture.
- is present on both feet. If oedema is only in one foot, it is not nutritionally related oedema

How to measure weight Using a Salter scale

How to measure weight

- For Children:
 1. Use of Salter scale of 25kg for children with weighing pants but preferably use a basin hanging on a hook on the Salter scale
 2. Electronic scale
- For Adults and Adolescents
Use of electronic scale





1. **Adjust the scale to zero**

- With the basin hanging in place before weighing.
- Repeat this process before each weighing

2. **Weight the child naked**

- Unless the caretaker objects for cultural reasons. (In this case take weigh with as little clothes as possible)

3. **Gently put the child in the middle of the basin**

- Make sure the child doesn't touch anything

4. **Read the weight on the scale**

- While the pointer is at **eye level**, make sure you are right in front of the scale (don't read side ways or high or low).
- until **100 g accurate**

5. **Write down the weight immediately** so you don't forget it



Example of weight errors



At eye level=23.0kg



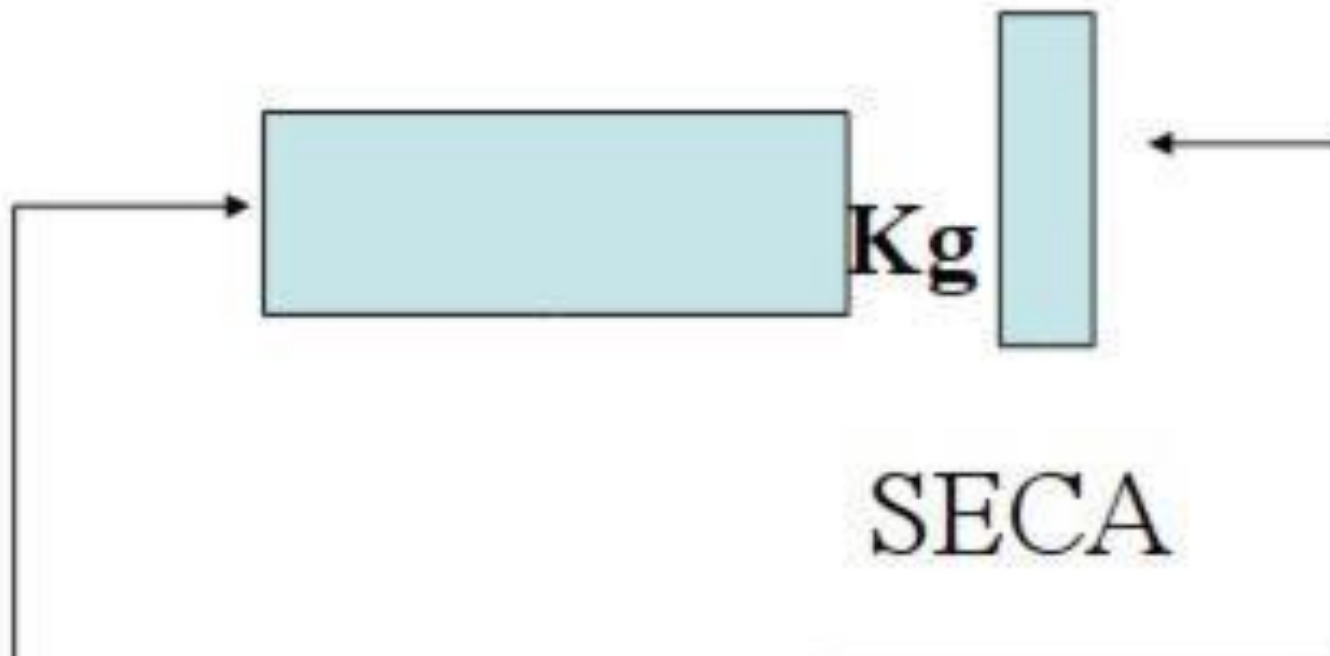
Above the head=22.9kg



From Below =23.1kg

How to measure weight Using an electronic scale

How to use the ELECTRONIC /UNISCALE - display and switch window



Display Window

Is where the weight is shown in Kg and one tenth of a Kg

Switch Window

Turns the scale on and makes the scale work in different ways. When the window is covered up for a short time, the scale is switched on or the way in which it works is changed.

Using the switch window



The best way to cover the switch window is to use your foot:

- Pass one foot close over the top of the switch window from one side to the other.
- DO NOT step on or touch the window. It is not a push button switch.

1. Put the scale on the floor. Choose the flattest, most level surface you have. Do not stand on the scale yet.

2. Look at the display window. It should be blank.

3. Move your foot quickly across the switch. The scale will switch on and you will see:

4. In 5 seconds, the scale will adjust itself to zero. You are ready to weigh a person.

5. Stand on the scale. Stand still. Make sure that feet or clothes do not cover the switch window. You should see:

and then and then

6. The 1 will move back and forth from side to side to show you the scale is working. The you should see the weight in the display , for example:

Weighing adults and children who can stand on their own



1. Turn on the scale
2. Ask the person to step on the scale. Wait until the display shows weight.
3. Ask the person to get off the scale. Wait until the display shows 0.0 before weighing the next person.

Weighing children who are held by their mothers



1. Turn on the scale. Move your foot across switch window.
2. Ask the mother to step on the scale by herself. She can give her child to you or another person to hold.

Make sure her feet or clothes do not cover the switch window. You will see the mother's weight in the display, for example:

58.3

3. With the mother on the scale pass your foot slowly across the switch window. Then wait a couple seconds.

00.0

4. Ask the mother to step off the scale. You should see:

--.-

5. Ask the mother to step back on the scale with her child. You should see the child's weight.

5.4

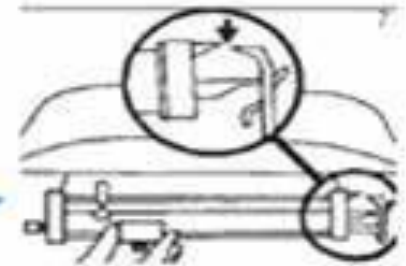
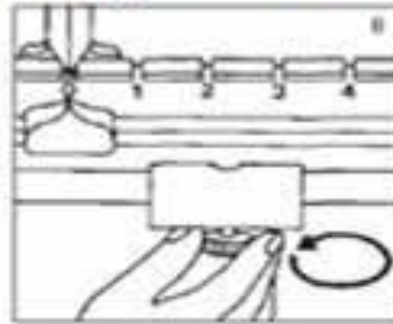
6. Ask the mother to step off the scale. You should see:

--.-

7. Pass your foot across the switch window to reset the scale before weighing the next other. You should see:

0.0

For the infant scale (SECA), 1- you have first to tare the scale using the lower black weight – fix it tightly with the screw and do not touch it.



2- Move the upper sliding weights to the anticipated weight of the child using the small and big cursor.
3- Put the child on the scale and adjust the cursor, first in kg and then in g.



How to measure Height/length

How to take the height/length?

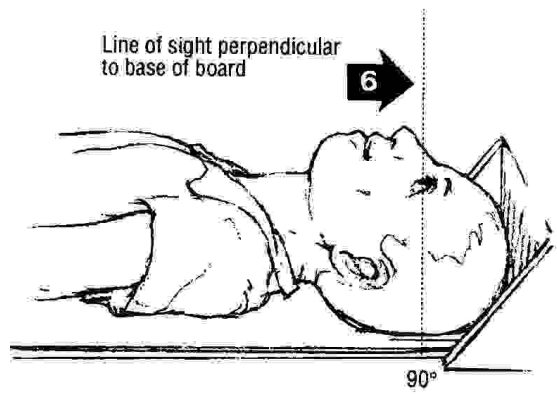
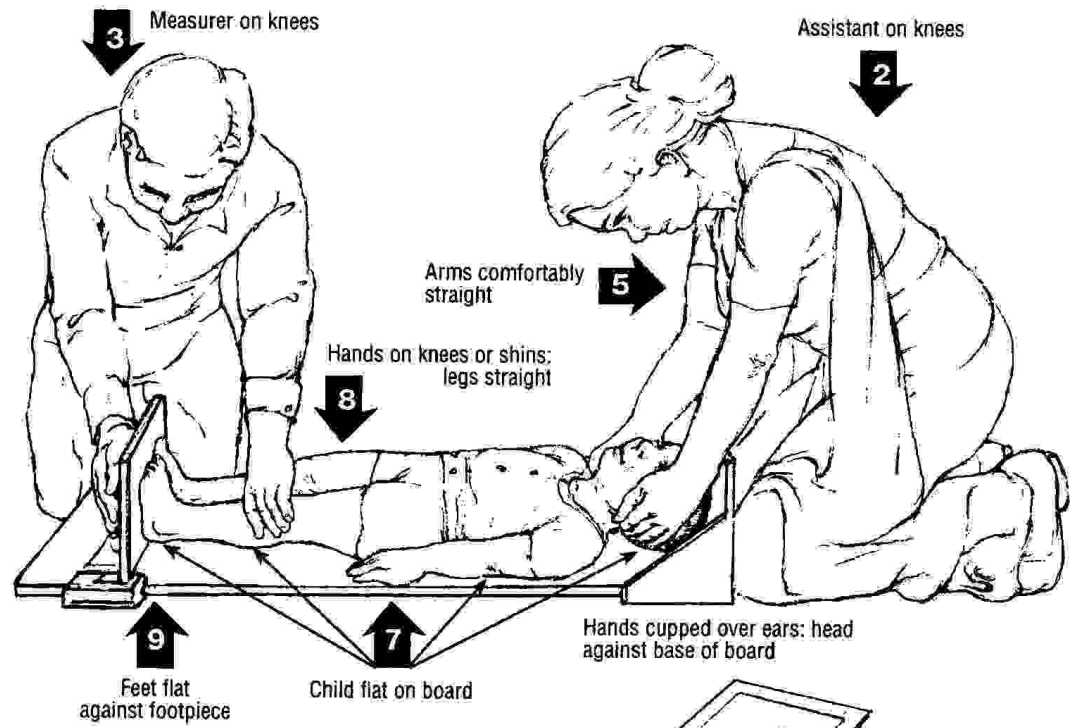
- Need of measuring board (Height board)
- 2 measurers and the support from caretaker when taking the height of children
- If possible, children 2 years or older should be measure standing up.
- Children below 2 years (less than 87cm) should be measured while lying down.
- Remove any shoes, socks and/or head cover
- Record measurement to the nearest 0.5 cm

Taking length for Children below 2 years (less than 87cm) Lying down

- Put the height board flat on the ground
- Lay the child down on the board with its head towards the fixed board, the feet towards the movable cursor
- Get on your knees straight behind the fixed board, hold the head of the child firmly between the two hands so that the child looks straight up, while pushing the head against the fixed board

Taking length for Children below 2 years (less than 87cm) Lying down

- A second person sits on his knees at the side of the board at the place where the feet of the child are.
- With one hand he holds the knees pressed against the board,
- With the other hand he moves the cursor until it is completely against the feet of the child.
- The person holding the cursor reads the height of the child while his eyes are straight above the measuring tape,
- Write down the height immediately so you don't forget it



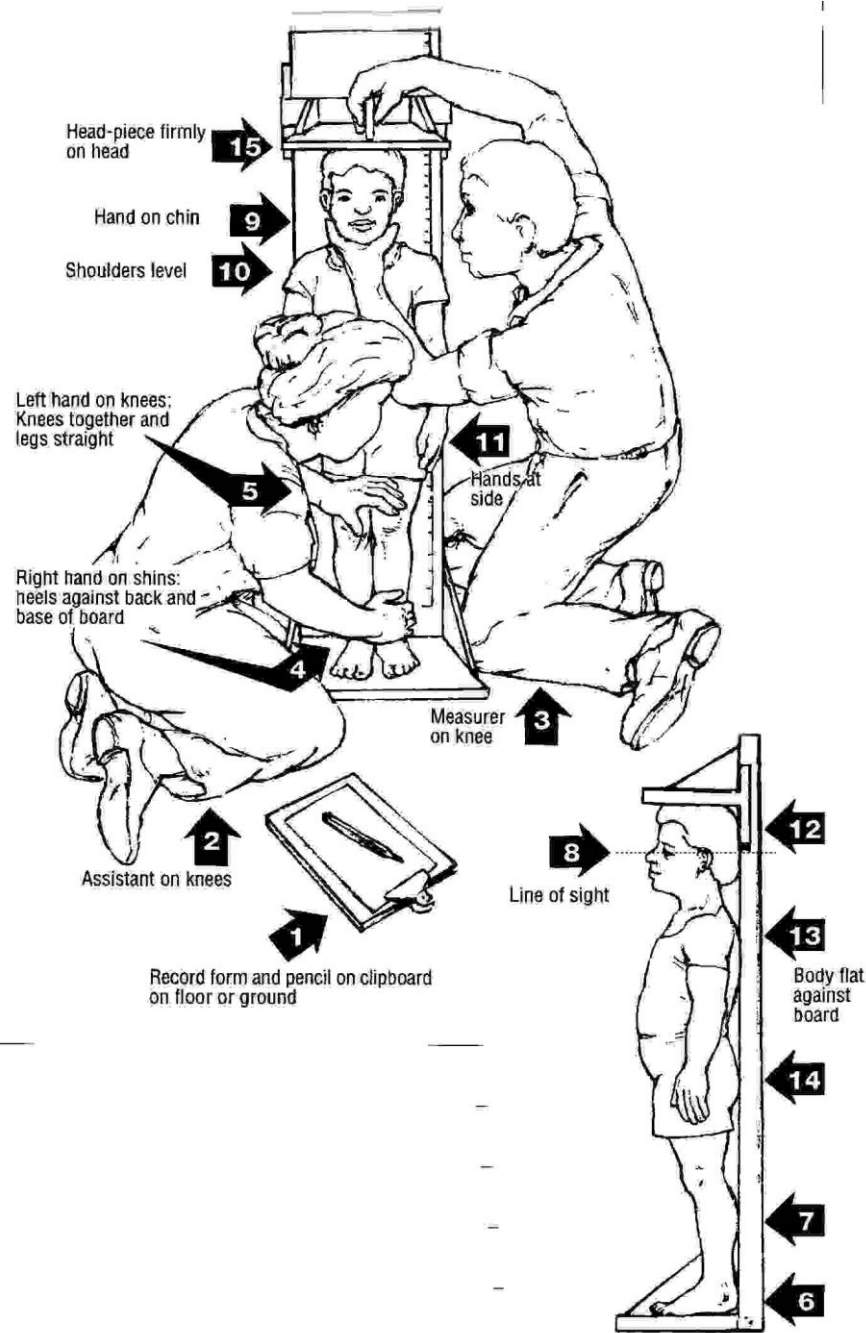


Taking length for Children >87cm or 2 years and more, Standing up.

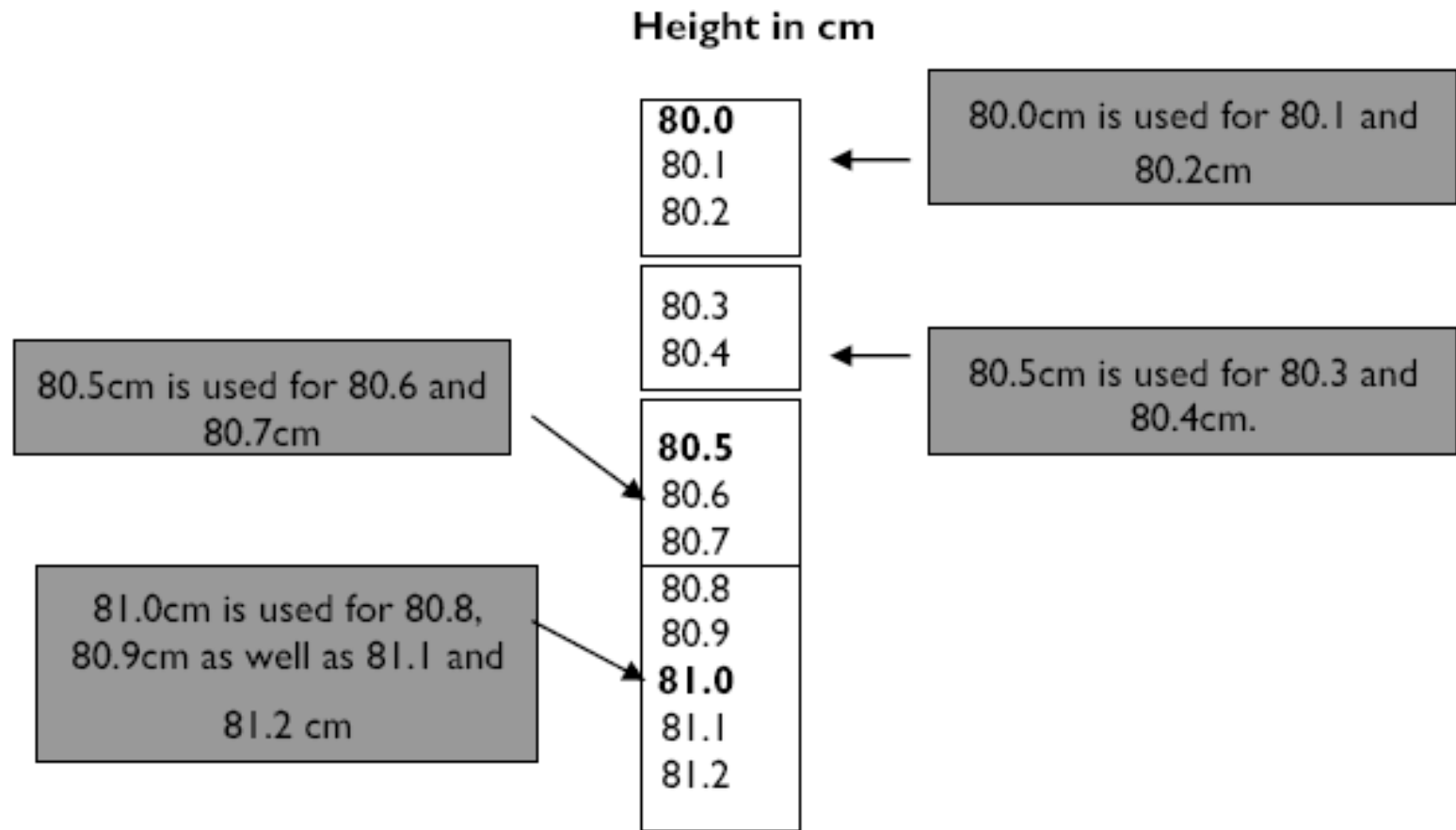
- Put the height board straight up
- Make sure the foot rests is on a flat underground
- Put the back of the board against the wall
- Ask the child to stand in the middle of the footrest, the heels pressed against the board, knees straight and shoulders/head against the board.
- The child must be looking straight forward
- One person sits on his knees on the side of the board, holding the knees of the child to make sure they are straight

Taking length for Children >87cm or 2 years and more, Standing up.

- * A second person is in front of the board and **moves the cursor until it is against the head of the child**, holding the cursor even on both sides; while holding the chin of the child
- * The second person reads the height while his **eyes are straight in front of the measuring tape**, until **1 mm accurate**
- * **Write down the height immediately** so you don't forget it



Reading the height board



Calculating weight for Height (WFH)

- Once weight and height are taken, check the weight for height ratio using a W/H table
- This will allow to classify the child as normal, moderately or severely acute malnutrition

Determining Weight-for-height (WFH) z-scores

- Weight/Height Z-score using unisex table (see annex 3 of IMAM Guideline)
- How to use the weight/height z-score tables:
- **Example:** a child is 63 cm length and weighs 6.5 kg.
- Take the table, look in the 1st column and look for the figure 63cm (=height).
- Take a ruler or a piece of card place it under the figure 63 and the other figures on the same line.
- On this line find the figure corresponding to the weight of the child, in this case 6.8.
- Look to see what column this figure is in. In this case it is in the MEDIAN WEIGHT column.
- In this example the child's weight is normal in relation to his LENGTH. He therefore has an appropriate weight for his length.

Calculating weight for Height Z-score

Use for both boys and girls (highest for either gender)													
Length cm	Weight Kg – Z-score					Length cm	Weight Kg – Z-score						
	-4,0	-3	-2	-1,5	-1		0	-4,0	-3	-2	-1,5	-1	0
Use Length for less than 87 cm													
45	1,75	1,90	2,07	2,16	2,25	2,46	66	5,5	5,92	6,4	6,65	6,92	7,5
45,5	1,81	1,97	2,14	2,23	2,33	2,55	66,5	5,6	6,02	6,5	6,75	7,03	7,62
46	1,88	2,03	2,21	2,30	2,41	2,63	67	5,7	6,11	6,6	6,86	7,14	7,74
46,5	1,94	2,10	2,28	2,38	2,48	2,72	67,5	5,8	6,2	6,69	6,96	7,24	7,85
47	2,00	2,16	2,35	2,45	2,56	2,80	68	5,8	6,29	6,79	7,06	7,35	7,97
47,5	2,06	2,23	2,42	2,53	2,64	2,89	68,5	5,9	6,38	6,89	7,16	7,45	8,1
48	2,12	2,30	2,50	2,61	2,72	2,97	69	6,0	6,47	6,99	7,26	7,56	8,2
48,5	2,18	2,37	2,57	2,68	2,80	3,06	69,5	6,1	6,56	7,08	7,36	7,66	8,3
49	2,25	2,44	2,65	2,76	2,89	3,16	70	6,2	6,65	7,18	7,46	7,77	8,4
49,5	2,32	2,51	2,73	2,85	2,97	3,25	70,5	6,3	6,74	7,27	7,56	7,87	8,5
50	2,39	2,59	2,81	2,94	3,07	3,35	71	6,3	6,82	7,37	7,66	7,97	8,6
50,5	2,46	2,67	2,90	3,03	3,16	3,46	71,5	6,4	6,91	7,46	7,76	8,1	8,8
51	2,54	2,75	2,99	3,12	3,26	3,56	72	6,5	7	7,55	7,86	8,2	8,9
51,5	2,62	2,84	3,08	3,22	3,36	3,68	72,5	6,6	7,08	7,65	7,95	8,3	9,0
52	2,70	2,93	3,18	3,32	3,47	3,79	73	6,7	7,16	7,74	8,0	8,4	9,1
52,5	2,79	3,02	3,28	3,42	3,58	3,91	73,5	6,7	7,25	7,83	8,1	8,5	9,2
53	2,88	3,12	3,38	3,53	3,69	4,03	74	6,8	7,33	7,91	8,2	8,6	9,3
53,5	2,98	3,22	3,49	3,64	3,80	4,16	74,5	6,9	7,41	8	8,3	8,7	9,4
54	3,08	3,33	3,61	3,76	3,92	4,29	75	6,9	7,49	8,1	8,4	8,8	9,5
54,5	3,18	3,44	3,73	3,88	4,05	4,42	75,5	7,0	7,56	8,2	8,5	8,8	9,6
55	3,29	3,55	3,85	4,01	4,18	4,55	76	7,1	7,64	8,3	8,6	8,9	9,7
55,5	3,39	3,67	3,97	4,14	4,31	4,69	76,5	7,2	7,72	8,3	8,7	9,0	9,8
56	3,50	3,78	4,10	4,26	4,44	4,83	77	7,2	7,79	8,4	8,8	9,1	9,9
56,5	3,61	3,90	4,22	4,40	4,58	4,98	77,5	7,3	7,87	8,5	8,8	9,2	10,0
57	3,7	4,02	4,35	4,53	4,71	5,13	78	7,4	7,94	8,6	8,9	9,3	10,1
57,5	3,8	4,13	4,47	4,66	4,85	5,27	78,5	7,4	8	8,7	9,0	9,4	10,2
58	3,9	4,25	4,6	4,79	4,99	5,42	79	7,5	8,1	8,7	9,1	9,5	10,3
58,5	4,1	4,37	4,72	4,92	5,12	5,56	79,5	7,6	8,2	8,8	9,2	9,5	10,4
59	4,2	4,49	4,85	5,05	5,25	5,71	80	7,6	8,2	8,9	9,2	9,6	10,4
59,5	4,3	4,6	4,97	5,17	5,39	5,85	80,5	7,7	8,3	9,0	9,3	9,7	10,5
60	4,4	4,71	5,09	5,3	5,52	5,99	81	7,8	8,4	9,1	9,4	9,8	10,6
60,5	4,5	4,82	5,21	5,42	5,65	6,13	81,5	7,8	8,5	9,1	9,5	9,9	10,7
61	4,6	4,93	5,33	5,54	5,77	6,26	82	7,9	8,5	9,2	9,6	10,0	10,8
61,5	4,7	5,04	5,44	5,66	5,89	6,4	82,5	8,0	8,6	9,3	9,7	10,1	10,9
62	4,8	5,14	5,56	5,78	6,01	6,53	83	8,1	8,7	9,4	9,8	10,2	11,0
62,5	4,9	5,25	5,67	5,89	6,13	6,65	83,5	8,2	8,8	9,5	9,9	10,3	11,2
63	5,0	5,35	5,77	6,00	6,25	6,78	84	8,3	8,9	9,6	10,0	10,4	11,3
63,5	5,1	5,45	5,88	6,12	6,36	6,9	84,5	8,3	9	9,7	10,1	10,5	11,4
64	5,1	5,54	5,99	6,23	6,48	7,03	85	8,4	9,1	9,8	10,2	10,6	11,5
64,5	5,2	5,64	6,09	6,33	6,59	7,15	85,5	8,5	9,2	9,9	10,3	10,7	11,6
65	5,3	5,74	6,19	6,44	6,7	7,27	86	8,6	9,3	10,0	10,4	10,8	11,7
65,5	5,4	5,83	6,29	6,55	6,81	7,39	86,5	8,7	9,4	10,1	10,5	11,0	11,9

Group Work – Calculate W/H Z Score

1. A child is 78 cm tall and weighs 8.3 kg
2. length: 80.4 cm and weight 7.9 kg.

Common measurement errors

Common mistakes



Common errors

Error	Solution
In all measurements	
Restless child	<ul style="list-style-type: none"> • Postpone measurement till child is calm. • Involve parent in procedure and help keep the child calm.
Inaccurate reading	Training and retraining stressing importance of accuracy
Recording	<ul style="list-style-type: none"> • Record results immediately after taking the measurement • Conform measurements from assistant

Common errors

Error	Solution
MUAC measurements	
Mid-upper arm point not correct (not exactly at the middle)	Find tip of shoulder and elbow carefully. Practise finding halfway between the two.
MUAC tape too loose or too tight giving an incorrect reading	Practise, supervise and retrain. Get measurer to practice on calm, older children and adults. Demonstrate.
Measuring the MAUC without straightening and relaxing the arm.	Practise, supervise and retrain. Get measurer to practice and remember to straighten the arm.

Common errors

Error	Solution
Height/length measurements	
Incorrect method for age	Measure length when child is < 2 years or < 87 cm.
Head not in correct plane, chin too high or too close to body, head not at 90° angle	Correct technique and get child to hold head straight by talking to him/her and crouching down to his or her level and looking into his/her eyes. The child will be encouraged to look at you, so position yourself to get head at right angle.
Child not straight along board, knees bent, feet pointing down when lying down	Correct technique with practise and regular retraining. Provide adequate assistance – three people needed. One for head, one for arms and middle and one for knees, feet and measurement taking. Get parent in middle to hold arms and talk to child to calm them.
Sliding board not firmly against heels/head	Settle child. Ensure adequate pressure applied. If measuring a child standing up, move headboard to compress hair and ensure head touches board. If measuring a child lying down, move the sliding board to firmly touch the bottom of the feet.
Child not straight along height board – feet apart or knees bent	Don't take measurements while child is struggling. Ensure assistants and parent all help to position child. One for legs and feet, one for head and measurement taking. Parent can talk to child.

Common errors

Error	Solution
Weight measurements	
Scale not calibrated and tared to zero	Recalibrate after every measurement. Ensure scale is tared to zero at all times Regular do calibration with a known weight.
Child wearing heavy clothing or trinkets	Remove in private or make allowances for clothing and amulets by subtracting their weight equivalent from child weight, e.g., 100 g of clothes for underwear
Child moving or anxious in hanging pant	Wait until child is calm. The more he or she moves and tries to grab measurers, the more likely the measurement is to be up to 1 kg off. One assistant to talk to child and other to position head in front of scales at the right angle to read measurement as soon as the scale stabilizes.
Reading the measurement while eyes are not at the level of the scale frame.	Supervise regularly and ensure that the scale frame is at eye level with the measurer
Measurer holding the scale tightly in place to stabilize it.	Involve mothers to ensure child stays calm.

Common errors

Error	Solution
Oedema assessment	
Confusing a fat child with a child with oedema	Supervise and remind team that oedema can't be assessed by just looking
Considering non-pitting oedema (hard oedema) as nutritional oedema	Supervise and remind participants the oedema that qualifies as nutritional oedema- it must be pitting
Considering unilateral (on one side), only hand/legs but not feet oedema as nutritional oedema	Supervise and remind participants the oedema that qualifies as nutritional oedema- it must be pitting and begins from both feet
Not pressing long enough with the thumbs	Supervise and regularly staff that when checking for oedema, they should press for at least 3 seconds.
Confusing a skin infection on the legs with nutritional oedema	All oedema cases should be verified by the supervisor.



Community mobilization (Involvement in IMAM)

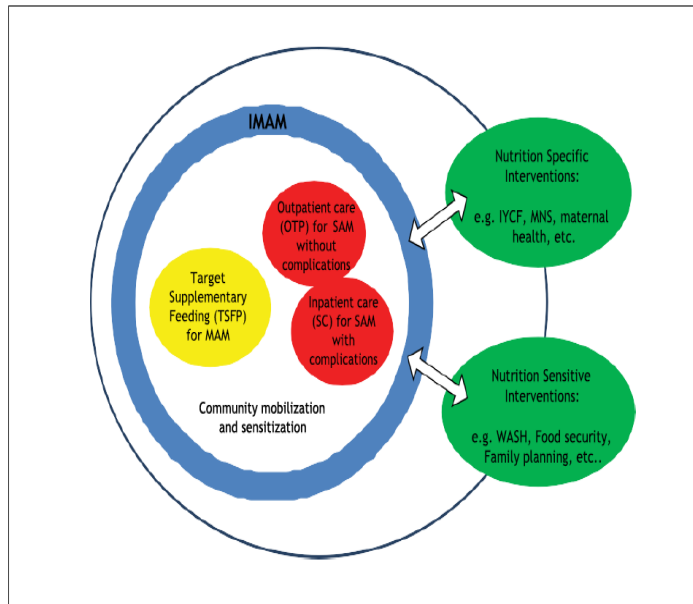


Learning objectives

- By the end of this session, participants should be able to:
 - Appreciate the importance of community mobilization as part of imam approach.
 - Understand the goal and process of community mobilization
 - Understand active case finding and referral system between the health facility and the community
 - Understand community health workers involvement in community mobilization component of IMAM
 - Understand obstacles to community involvement in IMAM
 - Understand the impact of community mobilisation

Overview of community mobilization

- Varies but ranges of activities is:
 - ✓Community assessment
 - ✓Sensitization
 - ✓Case finding and
 - ✓Follow up
 - ✓Health worker/volunteers involvement
- Key to success of IMAM
- These activities allow nutrition implementers to build a relationship with the community and motivates the community to seek and participate in nutrition services.



Often missed from planning, resources allocation and implementation of IMAM

Overview of community mobilization

- In Somalia, community involvement and mobilisation is of radical importance, for the following reasons:
- The need to provide early diagnosis, since many patients cannot be transferred to SC (and therefore, they should be identified in the community *before* they develop complications)
- The need to obtain maximum programme coverage, through identification of the children at their homes and involvement of more peripheral communities that have limited access to the centres
- The need to develop good relationships with the elders and representatives from clans and sub-clans, to ensure that the purpose and objectives of the programme are well understood, and to prevent potential misunderstandings or problems.
- The need to have good relationships with all partners and local leaders to ensure security and continuity of the programmes

Goal of community mobilizations

Community mobilization helps health workers better understand the affected communities they're working in and is central to the success of the management of malnutrition.

- Main goal of community mobilization is to improve treatment outcomes, coverage and contribute to prevention of malnutrition at community level.
- Community mobilization:
 - Provide a link for the community and the existing health facilities
 - Create awareness on the treatment of malnutrition
 - Provide early detection for and treatment of malnourished individuals
 - Promote community participation

How community mobilization in the nutrition services fit in?

- CMNS is a component of the broader mobilisation for health service
- CMNS is a key component for the success of IMAM programmes
- Household members, community members and Community Health Workers (CHWs) should be involved in nutrition care and support for the malnourished
- CMNS focuses on enhancing household capacity to support nutrition care and rehabilitation of the patient

Community mobilisation Process- Steps

There are three phases comprising of five essential steps in conducting community mobilization:

1. Planning and participatory assessment phase:

- Involves the assessment of community capacity to determine gaps and levels of participation.

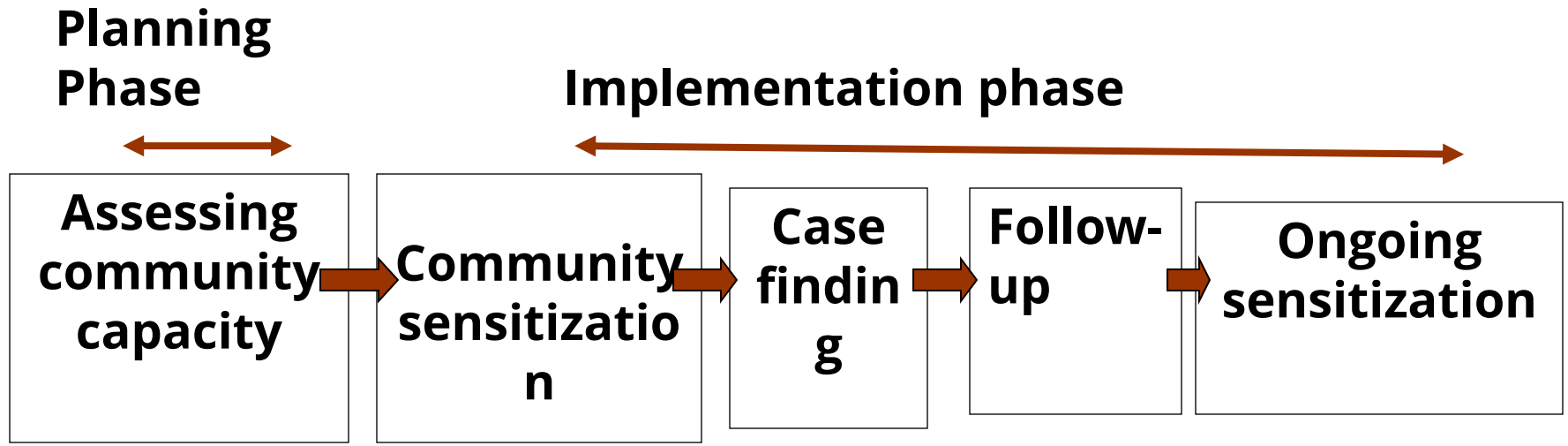
2. Collaboration stage (partnership)

- Involves the modalities of working with the community based on the information obtained in the assessment . Covers actual community involvement the programme level and at the community level (community sensitization , case-finding and follow-up visits)

3. Final stage and ongoing process:

- Programme is operational with active involvement of the community. Community takes control of the services. Partners agency takes supervisory role.

Community mobilisation Process - the steps



Step 1: assess community capacity

Aspects to look for:

- Community perceptions of acute malnutrition
- Health seeking behaviour and decision makers for accessing treatment
- Community representatives, leaders and community groups and organizations.
- Formal and informal channels of communication in the area.
- Potential barriers for children with acute malnutrition
- Existing links and communication systems between health facilities and the community
- Formal and informal health services
- Potential candidates for case finding

Step 2: community sensitization

Community sensitization is summarized in three steps:

a) *Plan messages that are simple and explicit in local terms on the following:*

- What is malnutrition? What are the signs of malnutrition?- using local terms.
- Available IMAM services and benefits
- Where (and time and day) to access the malnutrition treatment services.
- Target group for the malnutrition treatment services
- Case finding and referral system

To increase community's awareness, work through existing channels, organisations and structures within the community.

Use visual aids to enhance impact of the messages

Step 2: community sensitization

b) Make a sensitization plan

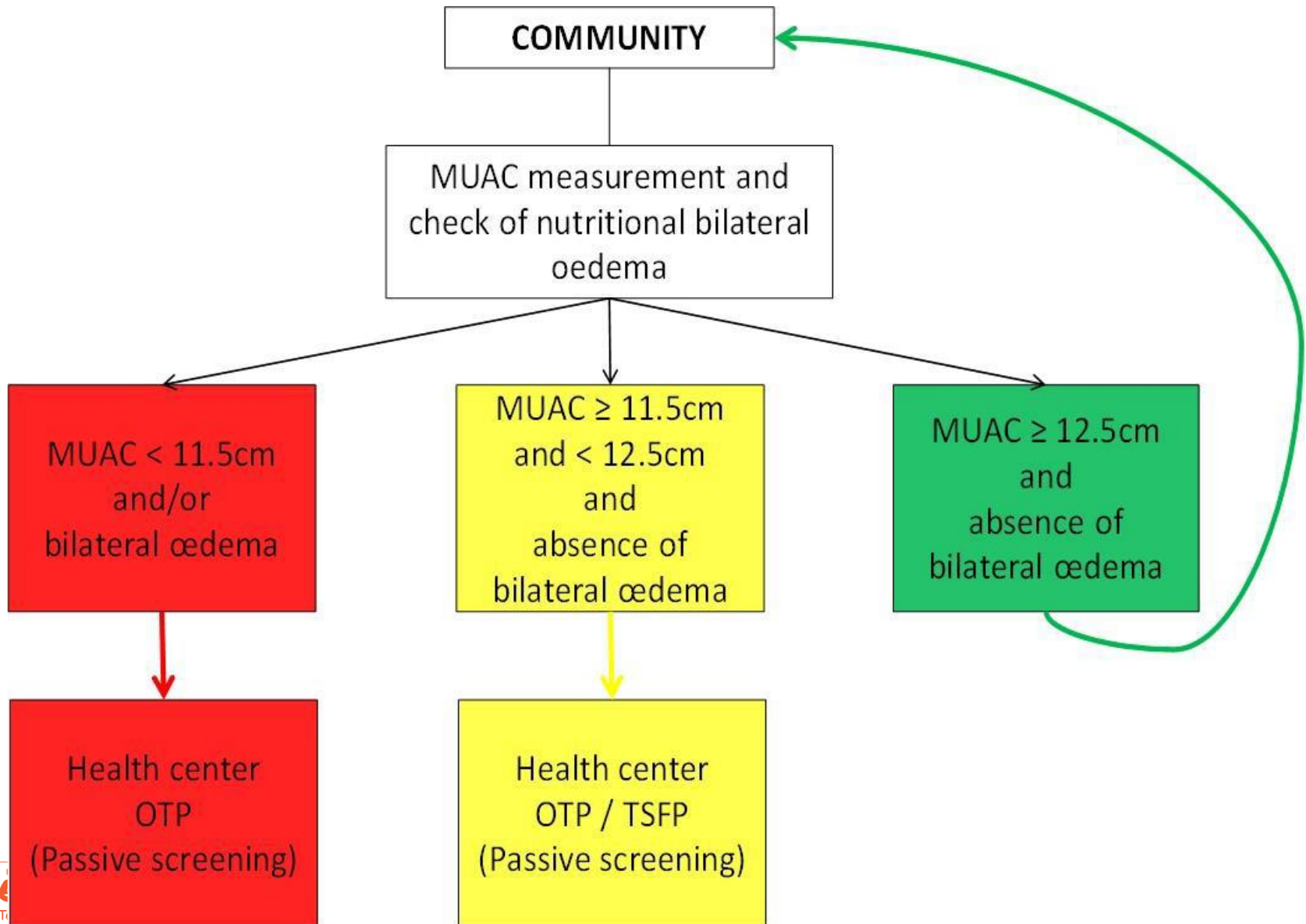
- Decide who to inform, and how to best get the information out.
- Always share and discuss the information messages with a few community figures first to make sure the messages are culturally appropriate and inoffensive.

Case finding in the community

CHWs and/or volunteers screen and identify malnourished individuals using MUAC tapes and check for presence of nutritional oedema in addition to self referrals.

- i. **Mass screening** used for identifying vulnerable groups in the target population. Often, the sick and vulnerable may not attend the mass event and remain in the house.
- ii. **Active Case Finding:** screening is done at the households and the health facility level to actively seeking out sick and malnourished individuals.
- iii. **Self-referrals:** Learned from neighbors, awareness raised by some community mobilization activities (and as part of the simplified approaches, referrals by mother trained on Family MUAC)

Referral pathways



Follow-up visits For Admitted Children

CHWs conduct home visits on a regular basis. Home visits focus in households where children/adults admitted in the program:

- Are not recovering
- Have deteriorating medical conditions
- Are not presenting for follow-up visits at the health facility
- Need constant monitoring of new practices taught during nutrition counseling sessions

Final stage and ongoing process (sensitization)

- Community sensitization is an on-going process
- Community members, by attending meetings, can regularly voice their views and suggest alternative courses for action
- The Community Own Resource Persons (CORPS) and other community workers maintain regular contact with the community to identify problems and work together to provide timely solutions

Community Health Workers Activities

Screen all the children in the community using an MUAC tape and check for bilateral oedema going from house to house and at any other opportunity (particularly “National Days” when vaccinations are given, Vitamin A, HIV, IMCI, child health days, CCM, community development programs, etc.);

- Refer those with a MUAC < 15mm to the nearest OTP centre for direct admission to the program;
- Refer those with a MUAC from 15mm to <125mm to the nearest SFC sites;
- Record every child on a tally sheet in the red, yellow, or green column (SAM, MAM, and normal) – i.e. not only those who require treatment;
- Bring to the supervisor (Outreach Worker or Nurse from the HC) all the tally sheets collected whenever they meet; and
- Participate in periodic coordination/experience sharing meetings with other volunteers and the supervisor.

Community Health Workers Tools

The village focal point/volunteer/outreach worker needs to have a kit. This should be comprised of:

- MUAC tapes (including spare tapes)
- Screening tally sheets
- Referral slips
- Pencils, paper, pencil sharpener, and an eraser
- Bag
- Mobile phone and credit with a list of key telephone numbers
- Written simple guidelines (in the local language) adapted to the level of education of the village focal point. It should be given even if the focal point/volunteer is unable to read – this will avoid humiliation and s/he will nearly always have someone in the village who can read for them if they are illiterate
- Counselling cards

Community Health Workers Data collation

From the tally sheets and during the visit to the village by the CHW/outreach worker, the following information should be collected:

- Village name (GPS coordinates should have been determined and entered in database)
- Names of persons doing the screening
- Date of screening
- Total number of children screened
- Number of children with Oedema
- Number in the red band: $<115\text{mm}$ = SAM
- Number in the yellow band: between 115 to 125mm = MAM
- Number in the green band: above or equal to 125mm = normal
- Number referred and the site to which they were referred
- Number who refused to go to a program

Obstacles to community participation in IMAM programs

Group Work

- Specific to Somalia
- Specific to JVDC



Obstacles to community participation in IMAM programs (1)

- Poor awareness and understanding of malnutrition, symptoms and causes.
- Poor awareness of the existence of treatment service in CMAM .
- Case finding can be inaccurate, resulting in too many ineligible cases arriving and being rejected, or in late referrals of malnourished children, resulting in poor outcomes. Both scenarios result in poor community perception of the program.
- Referral and admission criteria are not aligned i.e. WFH is used as the only admission criteria.
- Other locally available treatment methodologies, such as traditional treatments that may not be effective.
- Stigma within the community, influence of peers or family members, or perception of poor treatment by health care providers.

Obstacles to community participation in IMAM programs (2)

Community mobilization or site selection overlooks **important community gatekeepers or opinion-makers.**

Other services at the primary health care (PHC) facility are poorly regarded by the community.

The **location of outpatient care sites** far away from the communities.

Participation may be **interrupted by seasonal labour/weather patterns leading to migration or poor road connections etc**

Impact of community mobilization

- Increased coverage and access to information and services
- Maximizes service uptake , minimizes defaulters, and ultimately reduces deaths
- More likelihood of, and sustainability for, behavior change
- Increased ownership, support and responsibility
- More cost-effective programming
- Better response to community needs and concerns
- More culturally-appropriate strategies, messages and service



Outpatient Therapeutic Care (OTP) For Severe Acute Malnutrition



Overall objective

To equip health providers with knowledge and skills on management of severe acute malnutrition in outpatient therapeutic care and integration with existing health care services

Learning objectives

By the end of this session, participants should be able to:

- Know the objective of Outpatient Care programs for management of acute malnutrition.
- Know the admission and discharge criteria and procedures
- Understand the nutritional and medical protocols in OTP
- Understand the role of health providers in outpatient therapeutic care.
- Understand principles and procedures for home follow-up of patients



Objective Of Outpatient Therapeutic Care (OTP)

Objective: decentralised treatment services for uncomplicated severe acute malnutrition

- Uncomplicated severe acute malnutrition is treated with routine drugs and ready to use therapeutic food (RUTF) at home.
- Community Health Workers (CHW) and other community volunteers screen, monitor and follow up malnourished children in the community
- OTP services can effectively cure most severe acutely malnourished children in the community.

Activity flow in an OTP

- Triage the patients in waiting area
- Give all severely malnourished ~10% sugar-water to drink
- Do anthropometry (height, weight, MUAC, WHZ, oedema)
- Do appetite test
- Decide with the mother Out- or In- patient care
- Register the patient
- Fill out the OTP chart
- Take history and examination (*should be deferred for severely ill children*)
- Explain to the caretaker the procedures of the program/ centre

1st TRIAGE MAM/SAM TRIAGE
Based on MUAC on W/L-W/H and Bilateral pitting oedema

ACTIVE OR PASSIVE SCREENING

MUAC ≥ 125 mm
No oedema

Normal

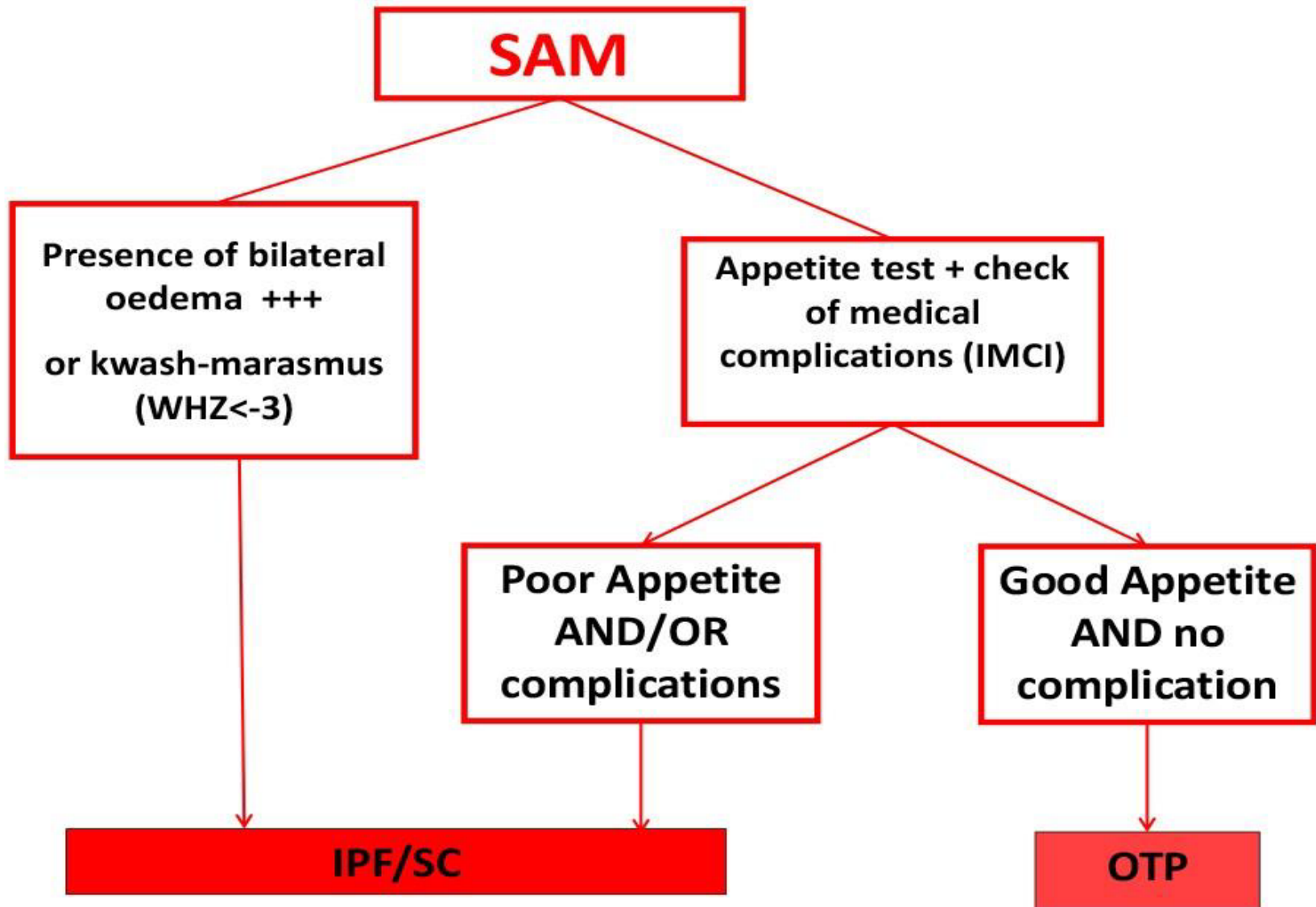
MUAC ≥ 115 mm
to < 12 mm. No oedema
W/H > -3 to ≤ 2

MAM

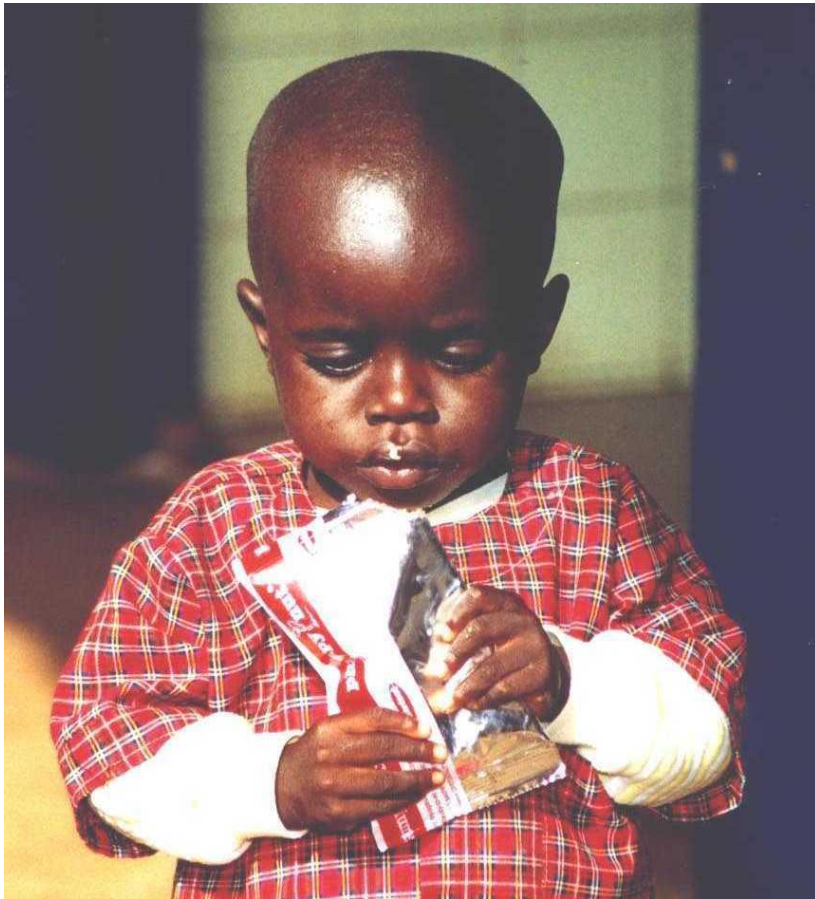
MUAC ≥ 115 mm to < 12 mm.
And/or oedema
W/H > -3 to ≤ 2

SAM

OTP/SC TRIAGE OF THE SAM PATIENTS: Decision Making



Appetite test



- A poor appetite occurs with significant metabolic disturbance, intoxication, infection, liver disease.
- A good appetite indicates that these conditions are not present or not very severe
- A poor appetite is often the only sign of severe metabolic malnutrition and physiological decompensation

Appetite test

- Do the test in a separate quiet area.
- Explain to the mother the purpose and how the test will be done.
- The mother should wash hers and the child's hands.
- The mother sits comfortably in a quiet place with the child on her lap and offers RUTF (directly from the packet or using her finger).
- The test usually takes a short time but may take up to one hour. The child **must not** be forced to take the RUTF.
- The child is offered plenty of safe and clean water to drink from a cup as he/she is taking the RUTF
- When the child has finished the amount taken is judged or measured
- The test can take between 15 minutes to an hour depending on the child's appetite and discomfort.

Appetite test results

Pass

Child takes at least amount shown in the moderate column of the table

Fail

Child does not take at least the moderate amount of RUTF indicated in the table

- A child who refuses to eat should be sent to the SC for inpatient care until appetite is re-established.
- Appetite must be tested each time the child visits the OTP as lack of appetite maybe indicative of deterioration in nutritional status and poor liver or gastrointestinal function

APPETITE TEST

“Moderate” is the minimum amount that malnourished patients should take to pass the appetite test

BODY WEIGHT	PASTE IN SACHETS (PROPORTION OF WHOLE SACHET 92G)			PASTE IN CONTAINERS (ML OR GRAMS)		
	poor	Moderate	Good	poor	moderate	good
Less than 4 kg	<1/8	1/8 – 1/4	>1/4	<15	15 – 25	>25
4 – 6.9	<1/4	1/4 – 1/3	>1/3	<25	25 – 30	>35
7 – 9.9	<1/3	1/3 – ½	>1/2	<35	35 – 50	>50
10 – 14.9	<1/2	1/2 – 3/4	>3/4	<50	50 – 75	>75
15 – 29	<3/4	3/4 – 1	>1	<100	100 – 150	>150
Over 30 kg	<1	>1		<150	>150	

OTP Admission Criteria

Indicator	Criteria for admission
Weight-for-Length / Height (6 months to 59 months)	< -3 Z-score
MUAC (cm)	< 11.5 cm for children 6-59 months
Bi-lateral Oedema	Oedema present Grade 1 (+) and 2 (++) Or wasted with any oedema.
Appetite	Good – Passes appetite test
Home Care Situation	Reasonable home circumstances and a willing caregiver
Medical / clinical condition	No medical complications and ALERT
Others	Transfer back from SC after recovery, previous discharge as cured but again SAM; second twin

Registration process

- On admission, register the patient in the register
- Provide the patient with a clinic or ration card
- Explain about the treatment (what nutrition supplies to receive, routine medications, importance of follow-up visits and what is done at each follow-up visit), and the reasons for admission to a nutrition program

Types of admissions to a TSFP

1. **New admission**: Beneficiary with SAM and no complications directly admitted to the programme. New admissions are separated by criteria of admission (WFH or MUAC)
2. **Relapse**: Beneficiary re-admitted to programme after having been successfully discharged as recovered within specified timeframe.
3. **Re-admission**: Beneficiary re-admitted to programme within 2 months after having left it for a reason that does not include recovery (default, medical referral, non-response)
4. **Transfer from TSFP**: beneficiary transferred from the TSFP to OTP due to continued weight loss leading him/her to become SAM
5. **Moved-in from other OTP site**: Beneficiary that has been moved from one OTP to another.
6. **Other**: Beneficiary that is admitted to OTP for reasons unrelated to their nutrition status (NOT counted in Total Admissions, may include adolescent or twin, etc).

Routine Medicines given in the OTP

- Routine medicines are given to all children admitted to the OTP (see protocol)
- Medicines are given as a single dose treatment so that the health worker can observe them being taken and avoid problems with compliance
 - The single exception is the first line antibiotics, Amoxicillin, the first dose of which should be given in front of the health worker and explanation given to the mother/caregiver on how to continue this treatment at home.
- Additional medicines are given to children based on clinical diagnosis during each weekly medical check. (see supplemental drugs protocol)

Summary of the systematic treatment

DRUGS	ROUTINE MEDICINES
Amoxicillin	1 dose at admission + treatment for 7 days at home for new admissions only
Albendazole/Mebendazole	1 dose on the 4 th week (4 th visit) – all patients
Measles vaccine (from 9 months old)	1 vaccine on the 4 th week (4 th visit) – all patients
Vitamin A	1 dose on the 4 th week (4 th visit) – all patients

Routine antibiotics-Amoxicillin

- Note: Syrup can be given but check the strength per 5ml FIRST: there are syrups of 125mg OR 250mg per 5ml.

Table 13: Dosage of Amoxicillin

WEIGHT RANGE	AMOXICILLIN (50 – 100 MG/KG/D)	
	DOSAGE – TWICE PER DAY	
Kg	IN MG	CAP/TAB (250MG)
<5kg	125 mg * 2	½ cap*2
5 – 10	250 mg * 2	1 cap * 2
10 – 20	500 mg * 2	2 caps * 2
20 - 35	750 mg * 2	3 caps * 2
> 35	1000 mg * 2	4 caps * 2

De-worming

- Give de-worming both to those transferred from SC to OTP and to those admitted directly to OTP at the 4th outpatient visit at the same time as the measles vaccination.
- Worm medicine is only given to children that can walk.

AGE	<1 YEAR	1 TO 2 YEARS	>= 2YEARS
Albendazole 400mg	Not given	½ tablet	1 tablet
Mebendazole 500mg	Not given	½ tablet	1 tablet

Vitamin A

- Give vitamin A once on the 4th visit to all children.
- At this time there should be sufficient recovery to store the massive dose of vitamin A in the liver. There is sufficient vitamin A in the RUTF to treat sub-clinical vitamin A deficiency. Do not give high doses of vitamin A routinely on admission to OTP.
- Do not keep any child with clinical signs of vitamin A deficiency as an outpatient; the condition of their eyes can deteriorate very rapidly and they should always be transferred for in-patient management.
- If an epidemic outbreak of measles is in progress, give vitamin A to all children

AGE	VITAMIN A IU ORALLY
6 to 11 months	One blue capsule (100,000IU = 30,000µg)
12 months and more	Two blue capsules or 1 red capsule (200,000IU = 60,000µg)

Uncomplicated cases of malaria treated in OTP.

Body weight (kg)	Number of tablets of artemether+lumefantrine					
	Day 0		Day 1		Day 2	
	1st dose	2nd dose	3rd dose	4th dose	5th dose	6th dose
5 - <15	½	½	½	½	½	½
15 - <25	1	1	1	1	1	1
25 - <35	1½	1½	1½	1½	1½	1½
≥ 35	2	2	2	2	2	2

Medicines for specific groups of SAM children in OTP

- One dose of Folic acid (5mg) can be given to children with clinical anaemia. There is sufficient folic acid in the RUTF to treat mild folate deficiency.
- High dose folic acid should not be given where sulfadoxine (©Fansidar (SP)) is used to treat malaria.

Name of Product	When to Give	Prescription	Special Instructions
Second line antibiotic	DO NOT USE & TRANSFER TO INPATIENT.		
Tetracycline eye ointment	For treatment of eye infection. Systematic treatment for malnourished children with measles	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 has gone
Nystatin Drop	For treatment of candida	100,000 units (1 ml) 4 times a day after food (use dropper and show the carer how to use it)	Continue for 7 days

NUTRITIONAL MANAGEMENT



- Patient receives a weekly supply of take home RUTF e.g. Plumpynut®
- RUTF contains the required energy and micronutrients to meet the nutritional needs of the severely malnourished child
- RUTF prescription per day is based on the WEIGHT of the child
- RUTF food – **should not be shared**
- Give RUTF with small sips of clean safe water

RUTF DOSAGE

CLASS OF WEIGHT (KG)	RUTF PASTE		RUTF SACHETS (92G)		BP100®	
	GRAMS PER DAY	GRAMS PER WEEK	SACHET PER DAY	SACHET PER WEEK	BARS PER DAY	BARS PER WEEK
3.0 – 3.4	105	750	1 ¼	8	2	14
3.5 – 4.9	130	900	1 ½	10	2 ½	17 ½
5.0 – 6.9	200	1400	2	15	4	28
7.0 – 9.9	260	1800	3	20	5	35
10.0 – 14.9	400	2800	4	30	7	49
15.0 – 19.9	450	3200	5	35	9	63
20.0 – 29.9	500	3500	6	40	10	70
≥ 30.0	650	4500	7	50	12	84

KEY MESSAGES TO CAREGIVERS

Share the following key messages with the caregiver before providing the weekly ration:

- How much RUTF to give daily – depending on weight of the child.
- RUTF is already pre-cooked so does not require cooking/ preparation.
- Sick children often do not like to eat. Give small regular meals of RUTF and encourage the child to eat often throughout the day (if possible 8 meals/ day).
- For young children, continue to put the child to the breast regularly.
- Children with diarrhoea should continue to feed and drink plenty of water.
- Continue with medication and keep child warm

SURVEILLANCE/FOLLOW-UP OF PATIENTS IN OTP

At each weekly visit,

OUT-PATIENT	FREQUENCY
MUAC is taken	Every week
Weight and oedema	Every week
Appetite test is done	Routinely or whenever there is poor weight gain
Body temperature is measured	Every week
The IMCI clinical signs (stool, vomiting, etc.)	Every week
Height/Length is measured	At admission and if child substitution is suspected
W/H z score can be calculated	As required -Day of admission and discharge

Role of OTP workers/health workers

- Look over the patient monitoring card with assigned CHW and highlight areas that will require special attention during home visits
- Conduct group health education with all patients attending for weekly review
- Promote RUTF as medicine and NOT as food to be shared
- Pay special attention to non responders – home visits
- Link patient with other community-based support programmes
- If patient has clinical signs or history that suggest HIV/AIDS encourage VCT services

Criteria and procedure for discharge

W/H \geq -1.5 Z Score and MUAC \geq 125cm **for two consecutive visits *AND*** no Oedema for 14 days.

Note:

- Ensure immunisation is up-to-date
- Adequate arrangements have been made for follow-up
- Refer patient to the nearest supplementary feeding programme (SFP) if available

OTHER DISCHARGE CRITERIA

The patient is:	If:
Cured	No oedema, W/H \geq -1.5 Z-score or MUAC \geq 125 mm for 2 consecutive visits
Defaulted	Absent for two (2) consecutive visits
Died	Died while registered in the out-patient community nutrition care
Non-recovered	Non-response at discharge should very rarely occur in OTP, although this may arise when a family/caretaker refuses to go to the IPF for diagnosis and treatment, where there are intractable social problems, or where there is an underlying condition for which there is no treatment available in the SC (e.g. many cases of cerebral palsy). Where available, further management of these patients should be transferred to other agencies with expertise in the care of such cases (medical referral).
Transferred to in-patient	Condition deteriorated; child transferred to in-patient care
Transferred to out-patient	Child transferred to another OTP

LINKAGE BETWEEN OTP WITH SC, TSFP AND COMMUNITY MOBILISATION

OTP centres do not operate alone in isolation in the management of acute malnutrition.

Targeted SFP:

- OTP receives patients whose nutrition status deteriorates in SFP
- OTP cured/recovered are sent to SFP for consolidation for 3 months

SC (stabilization centre):

- OTP refers patients with medical complications
- Once children have regained appetite and medical condition are controlled then they are discharged to OTP

Community mobilization:

- All programmes, the key success consist of a good community mobilization that will ensure early diagnosis of cases
- Helps identify and refer patients to OTP
- Patients who do not evolve well are visited at home

CRITERIA TO MOVE FROM OTP TO SC: “INTERNAL TRANSFER TO IN-PATIENT CARE”

- Outpatients who develop signs of a serious medical complication (pneumonia, dehydration, etc) are transferred to the SC for management of their condition until they are fit to return to OTP.

Transfer any patient being treated in the OTP to the SC if they develop any of the followings:

- Failure of the appetite test (see failure-to-respond procedure)
- Increase/ development of oedema
- Development of refeeding diarrhoea sufficient to lead to weight loss
- Fulfilling any of the criteria of “failure to respond to treatment”
 - Weight loss for 2 consecutive weighings
 - Weight loss of more than 5% of body weight at any visit
 - Static weight for 3 consecutive weighings
- Major illness or death of the main caretaker so that the substitute caretaker is incapable or unwilling to look after the malnourished patient or requests transfer to in-patient care.

Failure to respond to treatment

- Most children respond rapidly and well to treatment.
- Those that do not respond need to have their history and examination repeated and the reason for non-response determined.
- Making these diagnoses is the main role of the clinician in the treatment of the malnourished.

Failure to respond

CRITERIA FOR FAILURE TO RESPOND	TIME AFTER ADMISSION
Failure to gain any weight (non-oedematous children)	21 days
Weight loss since admission to program (non-oedematous children)	14 days
Failure to start to lose oedema	14 days
Oedema still present	21 days
Failure of Appetite test	At any visit
Weight loss of 5% of body weight (non-oedematous children) ²⁸	At any visit
Weight loss for two successive visits	At any visit
Failure to start to gain weight satisfactorily after loss of oedema (kwashiorkor) or from day 14 (marasmus) onwards.	At any visit

Reason of no gain weight in OTP

- Poor appetite, the child eats less than 75% of the daily ration for at least 3 consecutive days. → Investigate the reason of poor appetite (illness, taste, environment)
- The Plumpy'Nut is shared with other members of the family. → Education to the mother
- The child suffers from underlying causes: TB, HIV, intestinal worms, Kala Azar, Otitis... → Medical investigation if necessary, refer to hospital

Possible causes of failure to respond to treatment (1)

- Inappropriate admission into out-patient therapeutic instead inpatient care
- Poor quality of outpatient therapeutic care services:
 - Appetite Test conducted poorly/not done
 - Inadequate instructions given to caretaker
 - Inaccurate quantity of RUTF dispensed to child
- Frequent absenteeism/ irregular attendance
- Poor care at household level
- Poor environment sanitation and hygiene conditions

Possible causes of failure to respond to treatment (2)

- **Patient's underlying health condition;**
 - Micronutrient deficiencies
 - Mal-absorption
 - Rumination
 - Infection: especially diarrhoea, dysentery, pneumonia, tuberculosis, urinary infection/ otitis media, malaria, HIV/AIDS, schistosomiasis / leishmaniasis, hepatitis/cirrhosis.
 - Other serious underlying disease: congenital abnormalities (e.g. Down's syndrome), neurological damage (e.g. cerebral palsy), inborn errors of metabolism

Possible causes of failure to respond to treatment (3)

Patient's socio-economic factors

- Sharing RUTF with other siblings or caregiver
- Unwilling caregiver
- Parent/caregiver overwhelmed with other work and responsibilities
- Psychological trauma (particularly refugee situations and families living with HIV/AIDS)

Actions to take

Failure to respond diagnosis in an OTP warrants:

- i. Referral to inpatient care for full medical assessment
- ii. Home Visit if :
 - Care giver has refused admission to inpatient care
 - Care giver does not bring the child for weekly appointments
 - Inadequate care is suspected as the cause e.g. suspected food sharing, poor hygiene

Practice sessions

Practical exercise – 3

Nuria – 22 months old

- Height = 83.3 cm
- Weight = 8.2 kg
- Oedema ++
- Hair is coarse and light in colour
- Open skin lesions on feet

Inpatient or Outpatient??

Practical exercise - 2

- Ali Idow – 4 months old
- Height = 43.8 cm
- Weight = 3.4 kg
- Mother reports he is not breastfeeding and is losing weight at home
- Mother reports he has diarrhea and a low-grade fever

Inpatient or Outpatient??

Practical exercise - 5

- Issac – 58 months old
- Height = 112.4 cm
- Weight = 14.9 kg
- He is weak but eats the Plumpy Nut well
- He presents with moderate anemia

Inpatient or Outpatient??



MANAGEMENT OF SEVERE ACUTE MALNUTRITION - INPATIENT



Integrated management of acute malnutrition (IMAM) - CSZ



Overall Objective

To equip learners with basic knowledge on in-patient care for severe Acute Malnutrition

Learning objectives

By the end of the session, participants should be able to:

- Know the phases of care for in-patient care of SAM
- Understand the admission and discharge criteria for in-patient care for children 0-59 months
- Know the care aspects of cases admitted in the IFP
- Understand basic nutrition care aspects on management of SAM cases

Phases for inpatient care

The management of severe acute malnutrition in the inpatient setting is divided into three phases:

- 1. Stabilisation Phase:** meant to stabilise the patient. treatment of medical complications and start of cautious feeding using F-75
- 2. Transition Phase:** Use of F-100 and gradual introduction of RUFT
- 3. Transfer/return to OTP for the recovery phase or rehabilitation phase:** rapid weight gain phase (catch-up growth). Where OTP is not available, the children remains under care in the in-patient until fully recovered

SAM in-patient Admission Criteria

Infants <6 months or infant less than 3kg with a female caregiver capable of breastfeeding and/or care

Infant too weak or feeble to suckle effectively (irrespective of her WFL or WFA or other anthropometry)

OR

The infant is not gaining weight at home (by serial measurement of the weight during growth monitoring i.e. change in WFA)

OR

Weight-for-Length less than -3 Z

OR

Presence of bilateral pitting oedema

SAM in-patient Admission Criteria

Anthropometry/Oedema(6-59months)

W/H < -3 z-score with *medical complications*

OR

MUAC < 115mm with *medical complications* or with *any grade of oedema*

OR

Oedema +++

OR

Oedema +/- with *medical complications*

Medical Complications

Anorexia, poor appetite

Intractable vomiting

Convulsions

Lethargy, not alert

Unconsciousness

Hypoglycaemia

High fever

Severe dehydration

Persistent diarrhoea

Lower respiratory tract infection

Severe anaemia

Eye signs of vitamin A deficiency

Skin lesion

Hypothermia

Other SAM in-patient Admission Criteria

Choice	Caregiver refuses Outpatient Care
No caregiver	No suitable, willing caregiver to look after the patient when she/he is in the OTP.
Transfer from Outpatient Care Program or MAM program	<p>From Outpatient care program/MAM program due to:</p> <ul style="list-style-type: none"> • Deterioration in medical condition • Failure of the appetite test • Increase/development of oedema • Development of refeeding diarrhoea sufficient to lead to weight loss • Fulfilling any of the criteria of “failure to respond to treatment” • Weight loss during 3 consecutive visits or static weight during 5 visits • Major illness or death of the main caretaker such that the substitute caretaker requests in-patient care • Non-recovery after three months in OTP/SFP

Triage

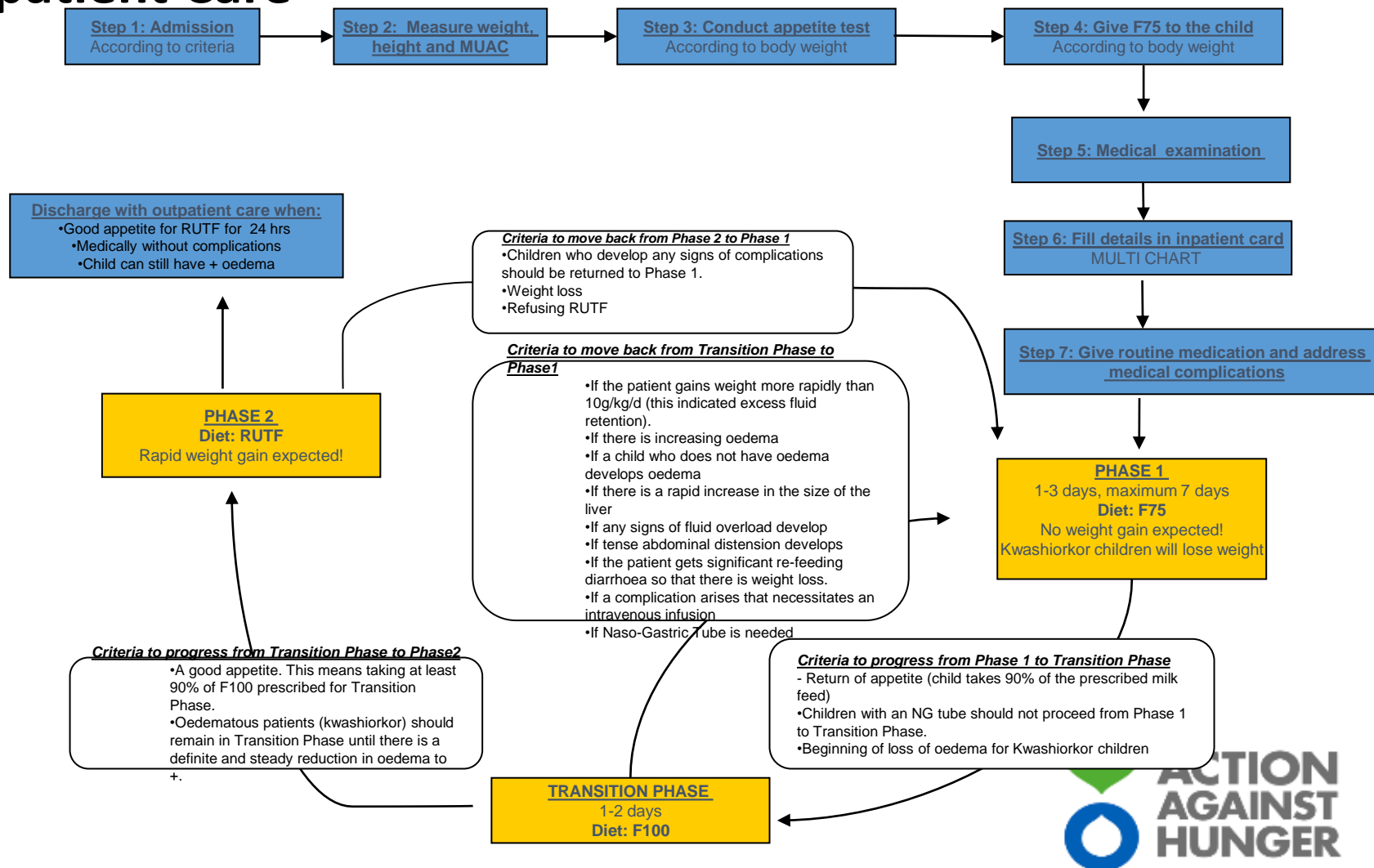
1. Identify children that need urgent treatment

Any child with severe medical problems, e.g., high fever, not alert, severe dehydration, convulsions, hypoglycaemia, etc. **Find and treat these case before any other**

2. Give all severely malnourished ~10% sugar-water or F-75 to drink on arrival as they wait to be screened.



Flow of Rehabilitation and inter-phase transfer in Inpatient Care



Routine medicines in IFP

Medication	When	Notes
Amoxicillin	At admission	
Mebendazole or Albendazole	At discharge	
Measles	At admission	Check immunization status
Malaria	At admission	according to the national protocol: (try not to use quinine: danger of fluid overload and hypoglycaemia)

Note: Children who have been transferred from outpatient care should not receive routine medications that have already been administered before. Based on the child's condition, the doctor can prescribe specific medications including second-line and third-line antibiotics in order to resolve the medical complications.

Patient monitoring in the IFP

Clinical Measurement	Frequency
Weight	Daily
MUAC	On admission and discharge
Oedema	Daily
Height/WFH	On admission and discharge
Body temperature	Daily
Standard clinical signs	Daily
Appetite	Daily
Absence during feeding hours, vomits, appetite, NG feeding, IV fluids, transfusions	Daily
Medications	Daily

Nutritional treatment in IFP- children 6-59 months

1. Begin with F-75 every 3-4 hours. F-75 for 2-3 days
2. Transition to F-100 for children with little/no appetite and oedema or failed appetite test for RUTF.
3. Introduce RUTF gradually (based on body weight).
4. Once child can eat 75% of the daily ration, oedema is resolving and no medical complications, transfer to OTP

Notes:

- F-75 should be given for a maximum of 7 days.
- Children transferred from OTP due to statistic weigh gain can consume RUTF instead of the formula milks if they have appetite.
- All feeding is monitored and reported in the multi-chart

Nutritional treatment in IFP- children 6-59 months

5. For breastfeeding children, mothers are advised to breastfeed prior to giving any formula milk or RUTF
6. Nasal gastric feeding is done when a child is not taking sufficient amount of the formula milk (*may be due to intractable vomiting, too weak to feed, unconscious*)
7. No foods are given when a child is admitted in the stabilization centre
8. The formula milks are given using a cup and for weak children feeding is done by spoon/dropper/syringe-never use feeding bottles and teats.
9. When managing severe complication such as shock, medical treatment takes precedence over nutritional therapy

Nutritional treatment in IFP- infants <6months or <3kgs

- Focus is on ensuring effective breastfeeding or re-establishing breastfeeding while supplementing the infant until breastmilk is sufficient to allow proper growth.
- Edematous infants receive F-75 and transition to F-100 diluted once oedema has resolved
- Non-oedematous infants are given f-100 diluted
- Amounts given are based on weight- weight chart available in the guideline
- Use the supplemental suckling technique for feeding on formula milks
- When weight gain reaches 20g/day decrease amount of formula milk by 50%
- Encourage mother to breastfeed very often to stimulate milk production and let down (every 3 hourly or more often)
- No phases

Criteria To Failure To Respond

Common causes of failure to respond to treatment include:

- Poor or lack of feed intake monitoring
- Insufficient, excess, wrongly formulated feeds
- Vitamin or mineral deficiency
- Malabsorption
- Rumination
- Poor infection and medical complications management or control,
- Other serious underlying disease: congenital abnormalities (eg Down's syndrome), neurological damage (eg cerebral palsy), inborn errors of metabolism.
- Failure to complete the multi-chart correctly – poor monitoring
- Insufficient staff (particularly at night)
- poorly trained staff – unnecessary use of NG tubes, infusions etc
- Inaccurate weighing machines

Criteria To Failure To Respond

CRITERIA FOR FAILURE TO RESPOND	TIME AFTER ADMISSION
Failure to improve/regain appetite	Day 4
Failure to start to lose oedema	Day 4
Oedema still present	Day 10
Failure to fulfil the criteria for recovery-phase (OTP)	Day 10
Clinical Deterioration AFTER admission	At any time

Discharge procedures

Prior to discharge:

- Throughout, keep the patient's family informed of the patient's progress and the discharge plan.
- Schedule routine health and nutrition education in groups and individually as necessary.
- If possible, during Phase 2 conduct cooking demonstrations with caregivers on how to use local foods and maintain balanced diets.

Discharge procedures- children 6-59 months

If the child meets discharge criteria:

- Child has a good appetite
- Child does not have oedema or resolving
- Child is clinically stable

Discharge to complete treatment in OTP

- Identify an OTP site for follow-up
- Fill out an OTP Transfer/referral slip card and give caregiver a copy
- Dispense one week supply of RUTF
- Fill in the SC/Inpatient register/card/multichart with discharge/transfer details
- Explain to caregiver on how to give any continuing medications
- Ensure that basic health, hygiene and nutritional counselling has been given
- Instruct the family to visit the OTP site in a week

Discharge procedures- infants <6 months

- It is clear that the **infant is gaining weight on breast milk alone** after the Supplemented Suckling technique has been used,
- There is **no medical problem**,
- The **mother has been adequately supplemented with vitamins and minerals**.

There are no anthropometric criteria for discharge of the fully breast-fed infant who is gaining weight.

Link Breastfeeding mother to TSFP for PLWs

Advice the caregiver to:

- At discharge discuss and advise the carer on appropriate feeding and caring practices
- Give structured play therapy
- Where facilities exist, refer to a supplementary feeding program (SFP)
- Ensure vitamin A is given every 6 months
- Ensure booster immunizations are given

Advise to bring the beneficiary for regular follow-up checks

- If there is no SFP, refer the child back to the local clinic for continued nutrition counselling and follow up by community workers

IFP Admissions categories

- **New admission** : Beneficiary with SAM directly admitted to the programme because s/he meets the admission criteria and has not been under treatment elsewhere for this episode of SAM.
- **Relapse**: Beneficiary re-admitted to the programme after having been successfully discharged as recovered within the last two months (this is a new episode of SAM)
- **Re-admission**: Beneficiary re-admitted to the programme within two months after having left it for a reason that does not include recovery (e.g. after defaulting or non-response or medical referral).
- **Transfer-in from OTP**: Beneficiary who has been transferred from OTP to SC - due to deterioration of his/her nutritional status and/or medical complications - to continue treatment for SAM.
- **Other**: Beneficiary who is admitted to the SC for reasons unrelated to their nutritional status (not meeting SC admission criteria).

Note: Reporting principles are similar to OTP

IFP Exit categories

- **Stabilised and referred to OTP:** Beneficiary who has been discharged from the Inpatient Care/SC and promoted to OTP after having successfully completed the treatment of medical complications in the Inpatient Care
- **Recovered /Cured:** Beneficiary who has reached the recovered criteria defined for the programme (completes nutritional rehabilitation in the IFP)
- **Death :** Beneficiary who died from any cause while registered in the programme.
- **Defaulter:** Beneficiary who is absent for two consecutive weighings
 - **Defaulter unconfirmed:** Beneficiary who is absent for two consecutive weighings, i.e. on day 3, and whose final outcome is not known (since no defaulter tracing was done)
 - **Defaulter confirmed :** Beneficiary who is absent for two consecutive weighings (i.e. on day 3) for whom a home visit has confirmed that the beneficiary is alive and is a 'true' defaulter
- **Medical referral (m):** Beneficiary who has a serious illness that requires diagnosis and/or treatment beyond the scope of available nutrition programmes (i.e. Inpatient Care/SC , OTP, targeted SFP) and is therefore referred to a higher level health facility.
- **Non-response :** Beneficiary who has not reached discharge criteria after a pre-defined length of time despite all investigations and transfer options.
- **Other :** This category is included in order to allow reporting of beneficiaries for whom the outcome is unclear (e.g. because the card was lost), or when it is discovered that a beneficiary was admitted by mistake.



Management of Moderate Acute Malnutrition



Learning objectives

By the end of this session participants should be able to:

- State the objective of management of Moderate Acute Malnutrition
- Identify patients affected by moderate acute malnutrition
- Know how to manage moderate acute malnutrition using standard protocols including food commodities and routine medications.
- Know the how to monitor programs and assess performance

Moderate Acute Malnutrition

Moderate Acute malnutrition is when one falls under the following anthropometric criteria:

- Weight-for-height \geq or equal to -3 - < -2 z-scores (WHO)
- MUAC < 12.5 cm for children below 5 years old
- MUAC < 21 cm for Pregnant and breastfeeding women



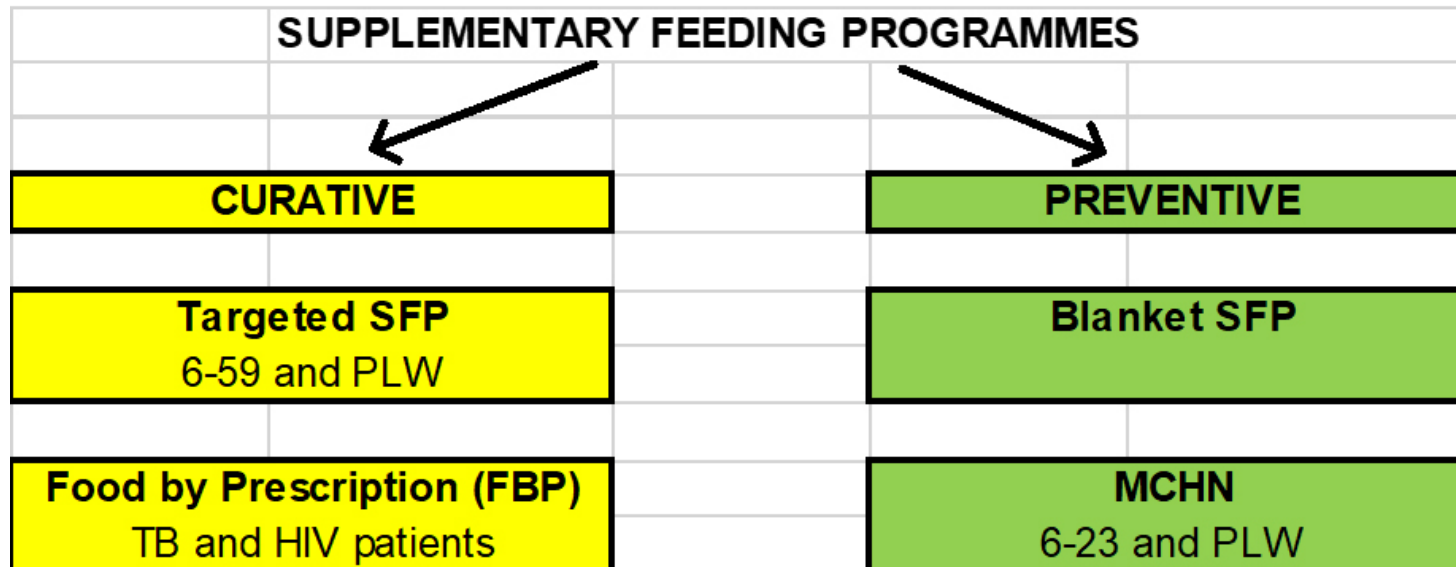
Objective of SFPs

To treat moderate acute malnutrition (MAM) and prevent individuals with MAM from becoming severely malnourished.

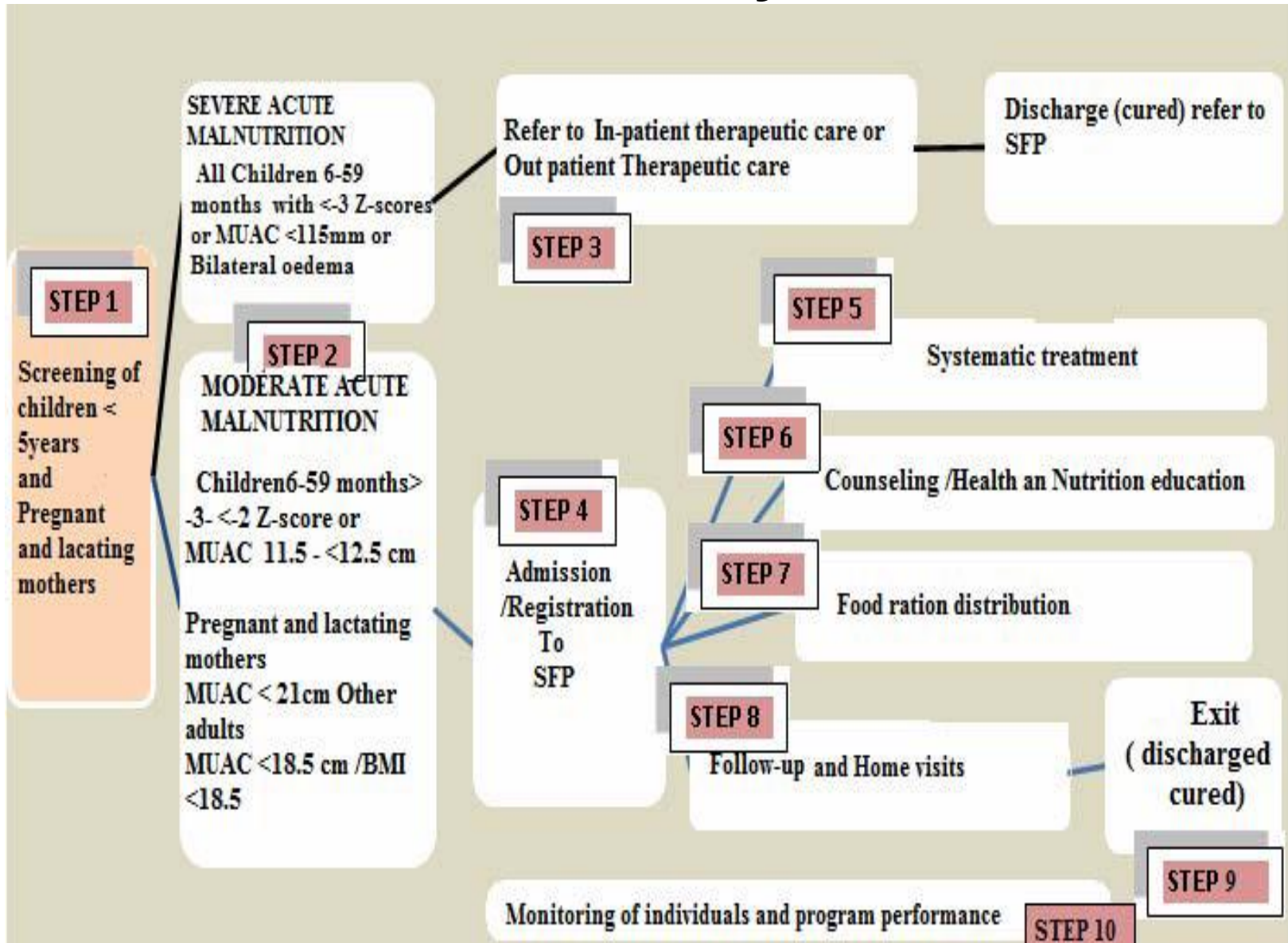
Types of SFPs

- ▶ Blanket SFP – addressed to all members of a particular at-risk group
- ▶ Targeted SFPs – addressed to those that presents MAM

Both types of SFPs are related to other services, namely community mobilization and OTP/SC



Admission and activity flow in TSFP



Diagnosis procedures

Anthropometric measurements

- ▶ Screen children 6-59 months, Pregnant and Lactating mothers, presenting with clinical wasting for malnutrition;
 - Measure weight
 - Measure height
 - Measure MUAC
 - Check oedema (if present refer for therapeutic care)
- Check for any medical (or other) conditions (no appetite, Intractable vomiting Convulsions , Lethargy, not alert , Unconsciousness , Lower respiratory tract infection (LRTI), High fever, Severe dehydration, Severe anaemia, Hypoglycaemia, Hypothermia, Infant ≥ 6 months and < 4 kg)

Calculate indicators and determine Nutritional Status

- **Calculate**
 - Weight-for-height for children <5yrs
 - BMI for adults**
- **Determine nutritional status**
 - Use cut-off points to determine the level of moderate acute malnutrition (at risk or moderate)
- **Record**
 - Record measurements on patient card

Conduct Causal Assessment of MAM

1. Health status

- Assess patient's general health:
- For children, check immunization status and Vit A supplementation
- For PLW, check micronutrient deficiencies and iron/folate supplementation status

2. Food consumption and care practices

- Breastfeeding practices (note: exclusive for <6months)
- Food consumption and frequency
- Childcare practices

Choice Of Treatment

- If the patient is moderately malnourished, refer for nutrition and medical treatment as well as nutrition counseling
- If the patient is at risk of malnutrition, refer for nutrition counseling
- If there is inadequate food at household level: refer individual to available food-based program
- If the individual is sick, requires immunization, micronutrient supplementation or suffers from micronutrient deficiencies, refer to the relevant health services

Admission Criteria into TSFP

For children 6-59 months

- Weight for height between <-2 and $>$ or equal -3 Z-score
- OR**
- MUAC between 11.5 cm and <12.5 cm,
- AND**
- No nutritional oedema, has appetite
 - No medical complications

Also

- Discharges from OTP
- Second twin
- Return after defaulting
- Relapse

For Pregnant and lactating women

- Pregnant women: MUAC <210 mm (or 230mm)* and visibly pregnant or with confirmation of pregnancy
- Lactating women with infant < 6 months: MUAC <210 mm

Admission Criteria For other groups

Food by Prescription programme (FBP):

- It is an essential component of the comprehensive care and treatment package for TB and HIV patients.
- Each malnourished TB/HIV beneficiary receives 250 gm of Corn Soya Blend (CSB+) and 25 gm of vegetable oil per day for 30 days per month (7.5 kg of CSB+ and 0.75 kg of oil per month per person). Total/Maximum length of stay for TB is nine months and for HIV clients is six months.¹¹

Registration process

- On admission, register the patient in the register
- Provide the patient with a clinic or ration card
- Explain about the treatment (what nutrition supplies to receive, routine medications, importance of follow-up visits and what is done at each follow-up visit), and the reasons for admission to a nutrition program

Types of admissions to a TSFP

1. **New admission**: Beneficiary with MAM directly admitted to the programme. New admissions are separated by criteria of admission (WFH or MUAC)
2. **Relapse**: Beneficiary re-admitted to programme after having been successfully discharged as recovered within specified timeframe.
3. **Re-admission**: Beneficiary re-admitted to programme within 2 months after having left it for a reason that does not include recovery (default, medical referral, non-response)
4. **Follow-up from OTP (EX-SAM)**: beneficiary that is discharged from the OTP as cured and referred to TSFP for follow-up to avoid relapsing back to SAM.
5. **Moved-in from other TSFP site**: Beneficiary that has been moved from one TSFP to another.
6. **Other**: Beneficiary that is admitted to TSFP for reasons unrelated to their nutrition status (NOT counted in Total Admissions, may include adolescent or twin, etc).

Routine treatment

Name of Product	When	Age/ Weight	Prescription	Dose
VITAMIN A*	AT ADMISSION if NOT using RUSF and if NOT taken in the last 3 months	6 months to < 1 year	100 000 IU	Single dose on admission
		≥ 1 year	200 000 IU	
MEASLES VACCINATION	AT ADMISSION	From 9 months	(standard)	Single dose on admission
ALBENDAZOLE	AT ADMISSION	< 1 year	DO NOT GIVE	NONE
		12 - 23 months	200 mg (1/2 tablet)	Single dose on Second visit
		≥ 2 years	400 mg (1 tablet)	

- **VITAMIN A:** Children showing clinical signs of Vitamin A deficiency (eye signs) or active measles should be given Vitamin A start without delay. Based on the severity of the condition, the nurse will decide if the child also needs to be referred to the nearest health facility for treatment according to WHO guidelines.
- **Note: IRON FOLATE:** Do not give unless signs of/or diagnosed with anaemia.
- **No routine medication for EX SAM follow up.**



Routine medication for Pregnant and Lactating Women

Pregnant and Lactating Women generally receive preventive medicines in the MCH clinic; no additional routine medications are distributed during treatment in TSFP.

Nutritional support

- Take-home (dry-ration): Weekly, bi-monthly to monthly food commodities e. g Ready-to-Use Supplementary Food (RUSF) or CSB++ or similar Fortified Blended Food.
- On-site feeding (wet ration): 2 to 3 cooked meals /day, only considered if security forces, or no chance for supplement ration to be used at home (no firewood, orphans, etc.)

Nutritional support

Beneficiary	Food Commodity	Quantity/person/day	Comments
Recommended food commodities for TSFP:			
Children 6-59 months	RUSF 	100 g (1 sachet)	Key ingredients: Peanuts, sugar, whey, vegetable oil, milk, soy protein, cocoa, Vitamins & Minerals
			Nutrient profile: 540 kcal, 13g protein (10.5%), 31g fat (55%) Contains EFA Meets RNI and PDCAAS
Pregnant and Lactating Women	Super Cereal (CSB+) 	250 g	Key ingredients: Corn/wheat/rice, soya, Vitamins and Minerals
			Nutrient profile: 939 kcal, 31-38g protein (16%), 16-20g fat (19%) Meets RNI and PDCAAS
	Oil	25 g	222 kcal Total: CSB+ and Oil = 1,161kcal

Nutritional education and one-on-one counselling

- All patients should receive nutrition information
- The sensitization should include:
 - Getting information about the cause of malnutrition, and how to avoid a relapse
 - Food preparation (demonstration) and conservation
 - Special care for the malnourished child
 - Best family care practices
 - Optimal IYCF practices
- Mother-child pairs found with IYCF challenges should be referred to a counsellor for IYCF counselling.

Key messages to caregivers before providing the ration at first visit

- Remind patients and caregivers that the ration is **only for the patient.**
- Explain how long the ration should last
- Carefully explain to the caregiver what is expected for the next visit and its importance.
- Conduct a cooking demonstration for those taking blended foods

Surveillance/follow-up of patients in TSFP

- ▶ Make an appointment with the patient for the next visit (follow-up), and encourage the caregiver to come to the next nutrition education (and counseling) and food ration allocation sessions
- ▶ Explain the expected progress.
- ▶ Explain to the patient or caregiver that a CHW is likely to visit his/her home for follow-up. Introduce the CWH if she/he is present. Mention the name of the caregiver if he/she is not around.

Surveillance / Follow up of TSFP patients

At each follow-up visit:

- ▶ Assessment for oedema.
- ▶ Measurement of weight.
- ▶ Measurement of MUAC.
- ▶ Medical checks and treatment if necessary.
- ▶ Assess evolution of the patient: organise home visit or refer if no evolution.
- ▶ Distribute food items.
- ▶ Update ration card and SFP card.
- ▶ Give health education.

Monthly:

- Measure height/length.

When necessary:

Refer to medical facility for health problems that cannot be treated at the SFP

Follow-up at the blanket SFP

- No individual monitoring is required in Blanket SFPs. There is no registration of beneficiaries.
- A general report on geographic location, date of distribution, number of beneficiaries and ration composition is required for logistical purposes and evaluation.
- All beneficiaries should remain in the programme for the duration of the blanket feeding operation (often around 4 months).

Discharge criteria from TSFP and exit categories

Cured	MUAC \geq 12.5 cm for 2 consecutive visits
(discharge according to the same criteria used for admission)	W/H \geq -1.5 Z-score for 2 consecutive visits
Defaulter	Absent for 2 consecutive visits
Dead	Died during time registered in TSFP
Non-cured/refused to be referred to hospital or OTP	Has not reached the discharge criteria within 4 months
Referral to OTP	Has reached the SAM criteria
Transfer to another TSFP	Move to another TSFP near his/her home

- Note: A child that is sent to a different TSFP to continue treatment is not discharged from the programme. A transfer slip should be given to the mother and the same ration card will be used.

Type of exit and criteria of discharge for Ex-cured SAM

<p>End of follow up</p> <p>(discharge according to the same criteria used for admission)</p>	<p>MUAC \geq 12.5 cm for 2 consecutive visits</p>
	<p>W/H \geq -1.5 Z-score for 2 consecutive visits</p>
<p>Default</p>	<p>Absent for 2 consecutive visits</p>
<p>Dead</p>	<p>Died during time registered in TSFP</p>
<p>Non-cured/refused to be referred to hospital or MAM TSFP</p>	<p>Has not reached the discharge criteria within 4 months</p>
<p>Referral to TSFP as MAM</p>	<p>Has reached the SAM criteria</p>
<p>Transfer to another TSFP for follow up</p>	<p>Move to another TSFP near his/her home</p>

Discharge criteria TSFP

Discharge pregnant and lactating mothers when they attain a MUAC that is above >21cm for a period of 4 months.

Discharge criteria: Pregnant and lactating women

Pregnant women (from the second trimester)

MUAC > 210 mm

Lactating women whose child is <6 months

For 2 consecutive visits

Failure to respond to treatment in SFP

- Failure to reach discharge criteria after 4 months in the program
- No weight gain after 6 weeks in the program
- Weight loss over 4 weeks in the program
- Weight loss exceeding 5% of body weight at any time

Reasons for failure to respond

- Problems with the application of the protocol (when many children are not recovering)
- Nutritional deficiencies that are not being corrected by the diet supplied in the SFP
- Frequent absences from the TSFP
- Insufficient complementary feeding at home (TSFP ration is meant to supplement home meals)
- Home/ Social circumstances of the patient (ex. Sharing or selling of the food)
- An underlying physical condition/ illness (to be examined by an experienced nurse)
- other causes

Monitoring

Performance indicators:

- New admissions/admissions
- Cure Rate (percentage of exits recovered) > 75 % (SPHERE)
- Default rate (percentage of exits defaulted) < 15 % (SPHERE)
- Mortality Rate (percentage of exits as death) < 3 % (SPHERE)
- Non-response rate (percentage of exits as no-recovered)
- Average weight gain >3 g/kg bodyweight/day

Monitoring

Performance indicators:

- New admissions/admissions
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 - Mortality Rate (percentage of exits as death) < 3 % (SPHERE)
 - Non-response rate (percentage of exits as no-recovered)
 - Average weight gain >3 g/kg bodyweight/day
- Note: High defaulting and non response rates in targeted SFPs should lead to detailed investigation of their causes and adequate adjustments of the programmes.

Performance indicators for Somalia IMAM Programme

Performance Indicator	SC		OTP		TSFP	
	Acceptable	Alarming	Acceptable	Alarming	Acceptable	Alarming
Cure Rate (%)	>85 %	<50 %	> 90 %	< 50 %	> 80 %	< 50 %
Death Rate (%)	<5 %	>10 %	<3 %	> 10 %	< 1 %	> 5 %
Defaulting Rate (%)	<10 %	>25 %	<10 %	> 25 %	< 15%	> 30 %
Coverage (%)	Rural: > 50; Urban; >70 and IDP Camps: >90					

Group Work – Calculate Performance Indicators

TOTAL FOR ALL SITES	Total Number of Children Screened in the Month	Beneficiaries at the beginning of the month	ADMISSIONS								TOTAL ADMISSIONS
			NEW CASES		RELAPSES		TRANSFER IN FROM OTHER TSFPs or OTP GRADUATE		RETURNED DEFAULTERS		
			Male	Female	Male	Female	Male	Female	Male	Female	
Jun-21	1159	4304	1130	1273	0	0	183	282	0	0	2868
Jul-21	11991	6283	929	1100	0	0	363	426	0	0	2491
Aug-21	18131	6994	1060	1230	0	0	402	479	0	0	3040
Sep-21	13968	7602	1049	1150	0	0	249	315	0	0	2546
Oct-21	15353	7765	895	1075	0	0	313	299	0	0	2526
Nov-21	16905	7720	1222	1416	0	0	290	373	0	0	3153
Dec-21	9041	7587	790	950	0	0	329	379	0	0	2171
TOTAL	86202	20810	6073	7293	0	0	906	1314	0	0	15586

EXITS										TOTAL EXITS
Cured		Died		Defaulter		Non respondents		TRANSFERS OUT		
Male	Female	Male	Female	Male	Female	Male	Female	To OTP	To another TSFP	
1022	1250	0	0	8	8	0	0	0	3	2291
935	1092	0	3	2	4	0	0	0	71	2107
1030	1297	0	0	5	7	0	0	0	0	2339
1071	1176	0	0	1	7	0	0	0	0	2255
1212	1335	0	0	8	7	0	0	0	0	2562
1516	1747	0	1	6	7	0	0	0	0	3277
1032	1183	1	0	1	2	0	0	0	0	2219
4349	5466	0	0	73	41	0	0	0	1795	11724

MAM programming links/integration

- IYCF, maternal and general nutrition education
- Health and WASH education e.g. environmental sanitation and personal hygiene
- Food demonstration using local foods and culturally appropriate recipes
- Promotion of other health services e.g. growth monitoring, nutrition surveillance, immunisation, family planning, safe motherhood
- Referrals to complementary services, including IYCF support, maternal health, FP, HIV, MHPSS, GBV, FSL interventions



Supplies Ordering & Stock Control



Integrated management of acute malnutrition (IMAM) -
somalia



Learning Objective

By the end of the session, participants should be able to:

- Appreciate why appropriate supply ordering and stock control are important
- Gain an understanding of supply chain for IMAM and various responsibilities
- Understand how to calculate supply needs and thus be able to order supplies and check consumption
- Learn basic warehouse and storage to ensure proper management of supplies in stock.

Supplies currently used in SC

- Therapeutic supplies:

- Therapeutic milks – F75 & F100
- ReSoMal



- Routine medicines: (amoxicillin, gentamicin, anti-helminthic, anti-malarial, measles vaccine) and specific drugs for the complications (vitamin A, folic acid, anti-fungal, second and third-line antibiotics, frusemide, glucose, magnesium sulphate injection, etc. – see section on complications).

- Reporting tools: Screening tally sheet, Registration book, Monthly report

- Anthropometric equipment: SECA, salter Scale, Height Board, MUAC tape.



Supplies currently used in OTP

- Therapeutic supplies:

- RUTF (Plumpy Nut)



- Routine medicines:

- Amoxicillin, Vitamin A, Albendazole

- Reporting tools:

- Screening tally sheet,
- Registration book otp,
- Otp chart
- Monthly report

- Anthropometric equipment: SECA, salter Scale, Height Board, MUAC tape.



Supplies currently used in TSFP

- Therapeutic supplies
 - CSB/UNIMIX
 - Supplementary plumpy
- Routine medicines:
 - Amoxicillin, Vitamin A, Albendazole
- Reporting tools: Screening tally sheet, Registration book, Monthly report,
- Anthropometric equipment: SECA, salter Scale, Height Board, MUAC tape.



Supply chain – Health facility responsibility

- Accurately estimating supplies requirements based on current and expected caseload of malnourished patients
- Make timely supply requests
- Ensure appropriate storage of nutritional supplies
- Put in place a stock management system
- Report on stock status at the end of every month – helps to estimate consumption per facility over time hence enabling planning

Estimating supply needs/consumption

- In order to make appropriate supply requests and to assess if amounts consumed fit with the number of beneficiaries enrolled.
- The basis of estimating both need and consumption is how much a beneficiary will consume in a particular time period.
- To do this you need to remember some key facts
 - take the example of OTP and RUTF (Plumpy Nut)

A	Number of OTP beneficiaries served 1 month	120
B	Monthly consumption/child (24 sachets/child/week)	96
C	Monthly sachet consumption for OTP	= AxB= 11520
D	Monthly carton consumption for OTP (150 sachets/carton)	=C/150= 77
E	Monthly net weight (MT) (13.8kg/carton)	=Dx13.8/1000 =1.0626

Warehousing and storage



Warehousing

- Warehouse/storage space should have a good roof, well ventilated, free from rodents and dry.
- Products should be stored 40 cm off the wall and 10 cm off the floor
- Bags/cartons must not lie directly on the floor. Stacks of bags should be no more than 2 m high.





Storage

- Separate damaged bags (always keep reserve of good empty bags so that you can repack goods from damaged bags)
- Separate each products and clearly label the respective sites



Storage

- For security reasons, only a few authorized persons should access the store. Have guards or security system in place. Where possible insure items.



Source: WFP

Inventory

- Keep an inventory of all the items in store; the inventory should at least have the following;
 - ✓ item
 - ✓ quantity (in, received, out)
 - ✓ date received
 - ✓ date dispatched
 - ✓ from whom, by whom
 - ✓ balance
 - ✓ expiring dates
- Train personnel on how to handle commodities to reduce damage and waste.



Simplified Approaches for the treatment of acute malnutrition



Learning objectives

By the end of this session participants should be able to:

- Define the simplified approaches
- Know the advantage and disadvantages associated with the simplified approaches
- Understand the common simplified approaches

What are simplified approaches?

A number of simplifications to the existing national and global protocols for the treatment of child wasting. These simplifications are designed to improve effectiveness, quality, coverage and reduce the costs of caring for children with uncomplicated wasting.

Different names used all to mean simplified approaches

- Combined protocols
- Modified program with expanded admission criteria
- COMPAS
- OPTIMA

Note: ComPAS and OPTIMA are not simplified approaches but research names that were used when carrying out research on some of the adaptations.

Common simplified approaches

The common simplified approaches include:

1. Family MUAC
2. CHW-led treatment
3. Reduced frequency of follow-up visits.
4. Expanded admission criteria: The cut-off limit is increased to admit all children $<125\text{mm}$
5. Use of single treatment product:
6. Modified RUTF dosage:

In accordance with WHO guidelines and national protocols, the following should continue when using the simplified approaches:

- Routine medication Protocols,
- Edema is always included as an admission criterion for SAM, even in "MUAC only" programs.
- Health facility treatment for SAM or MAM with complications or no appetite.

Why the simplified approaches?

- The cost of IMAM remains high
- Different products used
- Coverage still mediocre
- Prioritizing of SAM treatment over MAM treatment.

1. Family MUAC

Train mothers and/or other caregivers (fathers, aunts, grandmothers, uncles, older siblings) to identify early onset of malnutrition in children using a simple to use Mid-Upper Arm Circumference (MUAC) tape



Advantages of the Family MUAC

- Easy to understand
- Can lead to early diagnosis of malnutrition thus timely intervention
- Early diagnosis help reduce the admission rates in the SC increased frequency of screening as mothers/caregivers have access to the children constant
- Its not expensive (initial cost for training can be high)
- Increased community involvement can lead to program acceptance.

Potential disadvantages of Family MUAC

- Errors in measurement
- Demotivation of the mothers/caregivers due to:
 - Refusal of admission by health workers
 - Supplies stockouts at facilities
 - Lack of respect from CHWs and health workers
 - Delay at point of services

Monitoring and reporting

Collect data on:

- Mothers doing the correct/incorrect measurements
- New mothers/caregivers trained
- Mothers/caregivers that receive MUAC tapes
- Any other information (dependent on the program objectives)

2. Admission and discharge criteria based on MUAC and/or Oedema

Admitting and discharging children to a treatment program based on Mid-Upper Arm Circumference (MUAC) or oedema

3. Reduced frequency of visits.

Follow up visits are changed from weekly to bi-weekly or monthly

4. CHW-led treatment

CHWs admit and treat wasting without medical complications at community level

Advantages:

- Reduced waiting time
- Increased access to services
- Increased community involvement
- Reduced workload on the health facilities workforce



Potential challenges of CHW-led treatment

- Issues with quality
- Challenges collecting data
require regular supervision (this can be affected by limited number of supervisors < accessibility etc)
- Safety of supplies, materials and equipment
- Lack of motivation among the CHWs
- Increased workload on the CHWs

5. Modified RUTF dosage

There are 2 types of modifications on RUTF dosage:

- Giving same amount irrespective of weight e.g 2 sachets per day for SAM cases and 1 sachet per day for MAM cases
- Dosage reduction during the course of treatment as the child gains weight e.g from 175calories/kg/day to 125calories/kg/day

6. Expanded admission criteria.

The cut-off limit is increased to admit all children <125mm

Advantages of using the simplified approaches

- Optimal use of resources
- Improved program coverage
- Continuity of care
- Ease in logistics (purchase of a single product, simplified purchasing procedures, inventory management)
- Less time when MUAC+Oedema adaptation is used.
- Easy to implement

Current practice and related simplified approach

Current practice	Simplified approaches
MUAC and edema screenings conducted by Community Health Workers and other health center staff	Family MUAC: caregivers are trained and equipped to screen their own children for malnutrition by measuring Mid-Upper Arm Circumference and assessing for edematous malnutrition.
Treatment of children with wasting without medical complications takes place in a central location, typically an outpatient health post, clinic, or facility.	CHW-led treatment of Wasting: Enabling and empowering community health workers (CHWs) to treat wasting without medical complications at community level
Current treatment protocol calls for weekly follow-up visits for children receiving treatment.	Reduced Frequency of Follow-up Visits: Reducing the frequency of follow-up visits for wasted children admitted into treatment from weekly to bi-weekly or monthly.
Children are admitted and discharged for treatment using three possible criteria: MUAC and/or oedema and/or weight for height.	MUAC and/or edema only: Use of MUAC and/or edema as the only criteria for admissions and discharge.
Whilst severe wasting is usually treated systematically, children with moderate wasting are not always eligible for treatment	Expanded admissions criteria: Increasing the MUAC cut-off to admit all children <125mm, so that children across the spectrum of wasting who are considered higher risk are eligible for treatment.
Current treatment models use two different products to treat severe wasting (RUTF) and moderate wasting (FBF or RUSF).	Use of a single treatment product: Use of a single treatment product: Treating of wasted children, without complications, with one product—RUTF—across the entire spectrum of wasting
Under current protocol RUTF dosage is based on weight, and thus increases over the course of treatment. Furthermore, current dosage tables can be hard to administer and adhere to.	Modified Dosage: normally used in combination with a single treatment product, but not necessarily, dosage of treatment product can be reduced to; 2 sachets/day for severe wasting and 1 sachet/day for moderate wasting as determined by MUAC or oedema status. OR reducing the amount as the child gains weight.



Gender Based Violence in Nutrition



Learning Objectives

- Define key terms associated with gender and traditional expectations,
- Understand the interaction between gender inequality and hunger,
- Provide examples of the various ways in which gender inequality causes undernutrition in women, girls and boys,
- Describe the nutritional and other far-reaching outcomes of GBV.

Context Specific GBV information - Somalia

Somalia's population continues to suffer one of the most complex and protracted humanitarian crises in the world.

Gender Based Violence (GBV) continues to be an issue of major concern in Federal Members States Galmudug, South West State, Jubaland, Hirshabelle Puntland and in recent spikes in Intimate Partner Violence, sexual

exploitation, sexual harassment and abuse have multiplied GBV risks for women girls with worsening

Women, adolescent, girls and children represent 95 percent of the survivors that reported incidents of GBV in 2020. Most 75 percent were from displaced communities.

Cont....

geographical landscape in Somalia. This situation is made worse by COVID-19-related restrictions in Somalia which resulted in the closure

At present, the GBV Area of Responsibility (AoR) in Somalia has 52 partners that report on the 5Ws. Out of this number, only very few are specialized service providers

Response efforts by Government, international and national organizations to meet the needs of women and girls become a quite small in relation to the huge population in need

autonomy of its survivors. GBV survivors can suffer sexual and reproductive health consequences, including forced and unwanted pregnancies, unsafe abortions, traumatic fistula, sexually-transmitted

GBV risk mitigation Programming

- Involve women and other at-risk groups as staff and leaders in the planning, design, implementation and monitoring of nutrition activities (with due caution where this poses a potential security risk or increases the risk of GBV)
- Implement strategies that increase the safety, availability and accessibility of nutrition services for women, girls and other at-risk groups (e.g. locate services in safe areas; establish supplemental feeding schedules in collaboration with women, girls and other at-risk groups; consider the need to bring feeding supplements to GBV survivors and their children in safe shelters; etc.)

Cont....

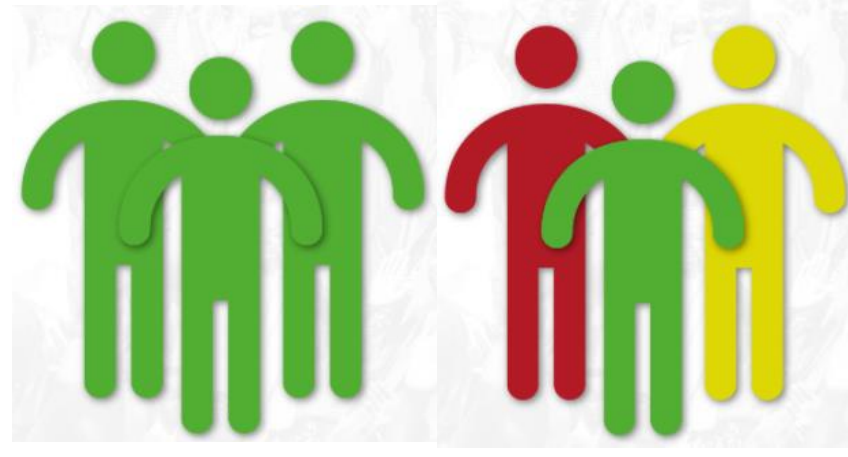
- Implement proactive strategies to meet the GBV-related needs of those accessing nutrition services (e.g. locate nutrition facilities next to women-, adolescent- and child-friendly spaces and/or health facilities; consider including a GBV caseworker as part of the nutrition staff; organize informal support groups for women at feeding centres; etc.)

What Is Gender?

- Gender refers to characteristics of women, men, girls and boys that are socially constructed. This includes NORMS, behaviours and Roles associated with being a women, man , girl or boys, as well as relationship with each other. As social construct, gender varies from society to society and can change over time.

Gender Norms

- Gender Norms are models of behavior, dress, appearance, role, attitude that are dictated by a society regarding the male and female genders over their individual life cycles, as well as their interactions with each



Traditional Expectations for men:

- They are expected to be the economic providers for the family.
- They are allowed to make major decisions in the name of the family.
- They are valued for their rational and unemotional approach to problem solving.



Traditional Expectations For Women

- They are expected to be the caretakers for the family.
- They are allowed to make day to day household administrative decisions.
- They are valued for their role as nurturers of their family's emotional well-being.



Gender Roles & Division of Labor

- Across the life cycle, gender norms dictate how each society divides work among men, women, boys and girls in other words gender norms dictates the gender roles or what is considered suitable and valuable role for each sex. This phenomenon is called the gender division of labor



Gender Inequality

- The differences in the traditional roles assigned to men and women is not the source of inequality. The inequality existing between genders comes rather from the unequal social and monetary value assigned by cultural and social norms to men and women, kinds of work, attitudes and abilities usually performed by women.



Cont....

- Men and boys are valued in society. As such, the roles, attitudes and abilities traditionally assigned and associated to them are more valued, respected and even remunerated. Women and girls are considered to have a lesser value to men and boys in society.



Cont....

- The hierarchical unequal power relations between men and women/boys and girls. Unequal power relations limit women and girls.
 - Choices and autonomy,
 - Access and control over resources and earnings,
 - Decision making and participation

Gender and Malnutrition

- Malnutrition currently impacts 1 in 3 people globally and disproportionately affects women and girls.
- Nutrition and Gender are intimately interconnected.
- Gender inequalities limit livelihood, education and growth for women and girls.
- Limiting access to nutrition food and nutrition education have debilitating impact on women and girls nutrition status and contribute to poor health.

GBV and Nutrition Outcomes

- GBV increase the risk of stunting,
- GBV effects fetal growth and development,
- Women who experienced any form of intimate partner violence (IPV) were more likely to birth a child ear stunted, underweight low birth weight.
- GBV increases the risk of early cessation of exclusive breastfeeding or early initiation of mixed feeding.
- GBVs Implications: poor health outcomes, morbidity and mortality for women, girls and boys.

Pathways of Association

Fetal growth and Development:

- Violence before/during pregnancy increased likelihood of low birth weight or children who were smaller than average for their gestational age.

Infant and Young Child Feeding:

- Exposure to violence's decreases the likelihood of both immediate breastfeeding and exclusive breastfeeding.

Type of GBV

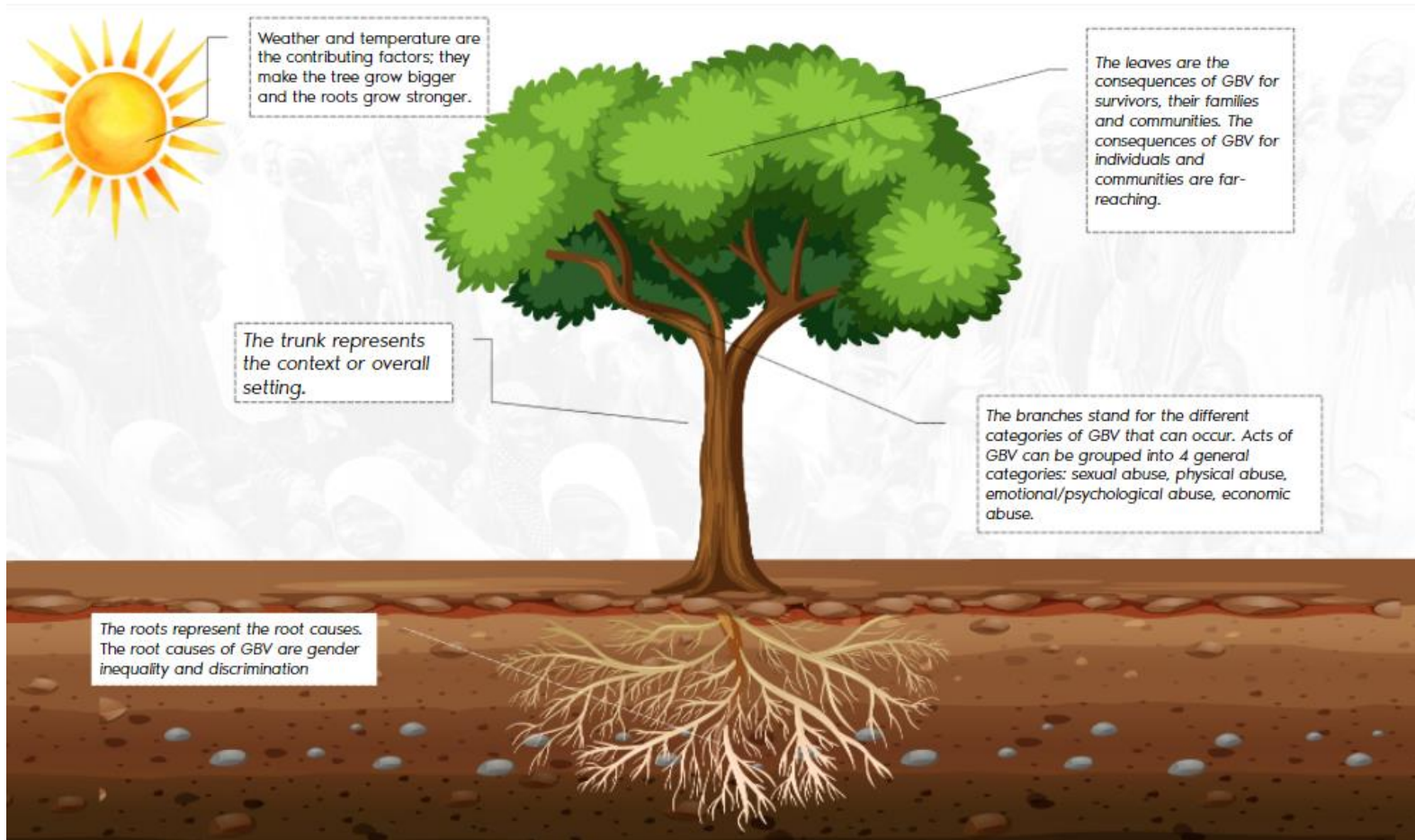


GBV Across Life Cycle

- Women and girls are at high risk of many forms of GBV at all stage of their life's from infancy to old age.
- In Many parts of the Girls face discrimination in the care they receive in terms of access to the nutritious food and health care they receive leading to believe that they deserve to be treated differently than boys.



Causes, Contributing factors, consequences of GBV



Cont...Root Causes of GBV

- The root causes of GBV are **gender inequality** and **discrimination**.
- It is our societies attitude towards of practices of gender decimation. Typically, these place women and men in rigid roles and unequal positions of power with women in a subordinate position in relation to men.
- The accepted gender roles and lack of economic value for women and women's work, strengthen the assumption that men have decision making power and control over women.

Cont...Trunk

- The trunk represents the context or overall setting:
 - Impunity,
 - Poverty,
 - Harmful gender and social/cultural norms,

Cont....Leaves

- The leaves are the consequences of GBV for survivors, their families and communities. The consequences of GBV for individuals and communities are far-reaching.
- Physical consequences like sexually transmitted diseases and unwanted pregnancy, emotional and psychological consequences like:
 - Guilty,
 - Shame,
 - Depression,
 - Low self esteem,
 - Trauma
- This is will eventually lead to malnutrition.

Far Reaching Consequences of GBV

- Transgenerational Trauma,
- Individual trauma,
- Social Trauma,
- Disease,
- Unproductive society,
- High rates of imprisonment,
- High crime rates,
- Underdevelopment,

GBV Disclosure and Psychological First Aid

- Disclosure The process of revealing information about a GBV experience or incident. Disclosure in the context of GBV abuse refers specifically to how a person (e.g., caregiver, health worker, social worker, member of a women's group, friend, teacher) learns about a GBV directly from a survivor.
- Psychological First Aid (PSA): Describes human, supportive response to a fellow human being who is suffering and who may need support.

PFA Action Principles

Prepare	<ul style="list-style-type: none">• Understand the context in which you work (Conflict, vulnerable groups, etc.)• Understand the available services and supports,• Understand safety and security concerns.
Look	<ul style="list-style-type: none">• Check for safety,• Check for people with urgent basic needs,• Check for people with serious distress reactions
Listen	<ul style="list-style-type: none">• Approach people who may need support,• Listen to people and help them to feel calm,• Do not ask details about GBV,• Ask About people's needs and concerns
Link	<ul style="list-style-type: none">• Help people address basic needs and access services,• Help People cope with problems,• Give information,• Connect people with loved ones and social support.

PFA Responsibility Means:

- Respect, safety, dignity and rights.
- Adapt what you do to take account of person's culture,
- Be aware of other emergency response measures,
- Look after yourself.

What is a Referral Pathways

- A flexible mechanism that safely links survivors to supportive and competent services.
- Can include any or all of the following:
 - Health,
 - Psychosocial, security and protection.
 - Legal/Justice and Or Economic Reintegration support.

Why Referrals Needed?

- Survivors typically have multiple and complex needs that require a comprehensive set of services.
- On single organization cannot effectively provide all of these services.
 - Coordinated, multi-sectoral response is necessary.



