

GUIDELINES FOR MANAGEMENT OF COMMON DISEASES IN YOUNG CHILDREN IN EMERGENCIES

(Working Document)



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1. INTRODUCTION

Acute respiratory infections, diarrhea and fever are very common in children below the age of five years. All children suffer from these illnesses several times each year. However, during natural disasters like floods children are even more vulnerable to these diseases and death. Pneumonia, diarrhea, measles and malaria, and associated malnutrition, are responsible for over 60% deaths in children under five. During an emergency the proportion of children dying of the above mentioned diseases may be higher.

It is possible for health workers to treat most sick children at health camps or in the community and save them from dying. These guidelines describe the steps to be followed by a health worker when managing a sick child in emergency situations. These guidelines can be used by trained health volunteers to provide first aid treatment.

Due to technical reasons management of illness in young infants below 2 months of age is somewhat different from management of children 2 months to 5 years of age. Guidelines for both groups are presented in the following pages.

2. DRUGS/SUPPLIES

HEALTH WORKERS NEED TO HAVE THE FOLLOWING DRUGS/SUPPLIES FOR COMBATING COMMON HEALTH PROBLEMS IN CHILDREN.

Oral drugs:

- Amoxicillin tablets
- Chloroquine tablets
- Ciprofloxacin tablets
- Oral rehydration salt (ORS)
- Paediatric cotrimoxazole tablets
- Paracetamol
- Vitamin-A

Injectable drugs/vaccines: (availability of these drugs and syringes and needles is critical to manage children in situations where referral is not possible).

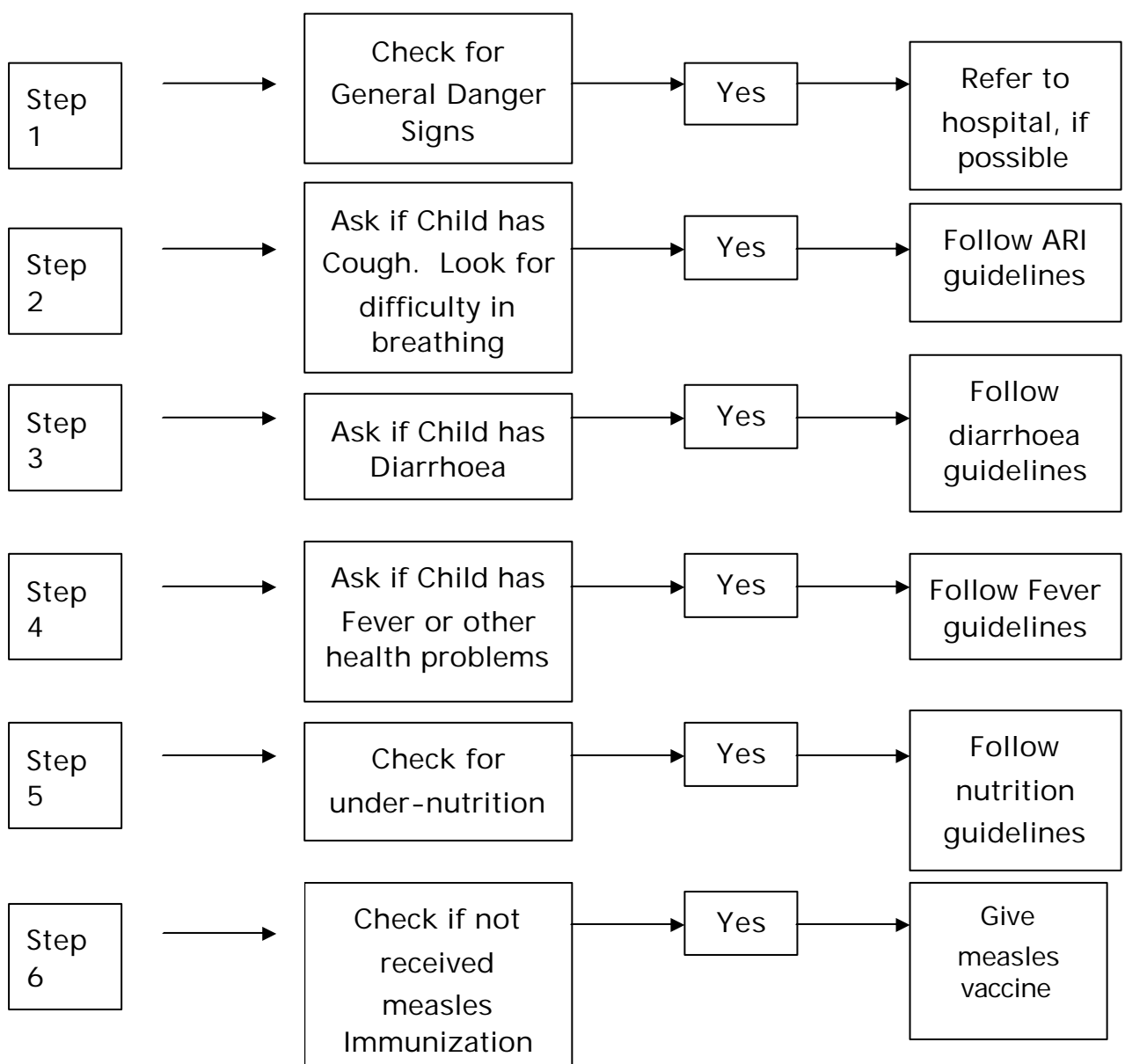
- Injection chloramphenicol
- Injection gentamicin
- Measles vaccine
- Syringes/needles. Auto-disable preferable.

Others:

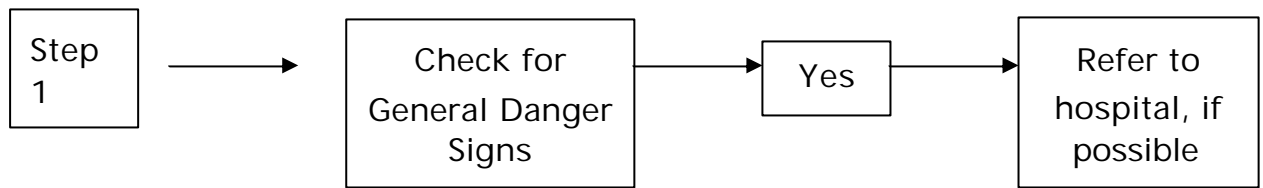
- Infant weighing scales

3. MAJOR STEPS IN TREATMENT OF COMMON ILLNESS IN CHILDREN AGED 2 MONTHS TO 5 YEARS

It is important to follow ALL steps given below in assessing every child that is brought to the health worker. This allows a systematic assessment of the child and ensures that no common cause of disease or death in children is missed.



4. CHECK FOR GENERAL DANGER SIGNS



Before assessing any illness check for the following general danger signs. This is important as a child with any danger sign has *very severe disease* and is in danger of dying.

a). *The child is not able to drink or breast feed*

“Not able to drink” means either that:

- the child can not drink at all
or
- the child is too weak to drink
or
- whenever the child does drink something, he or she vomits everything that's taken.

b). *The child is lethargic or unconscious*

The lethargic child is sleepy when the child should be awake. A child who stares blankly and does not appear to notice what is happening around is also lethargic.

The unconscious child does not wake up at all. The child does not respond to touch, loud noise or pain.

c) *The child has had convulsions*

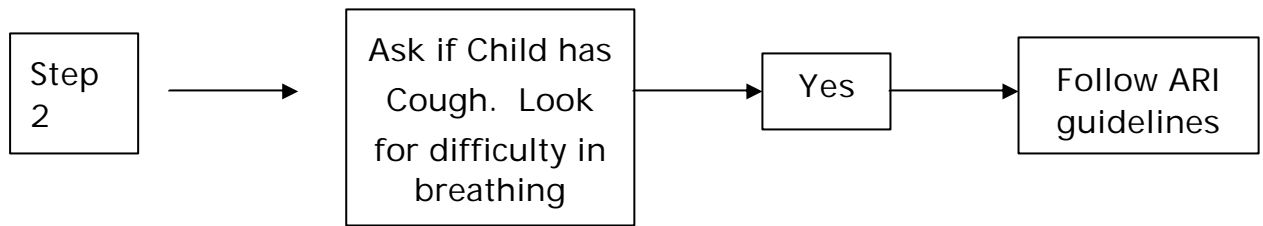
Convulsion(s) in the current illness episode is significant

REFER THE CHILD TO HOSPITAL URGENTLY IF ANY DANGER SIGN IS PRESENT. IF AVAILABLE, GIVE ONE DOSE OF IM CHLORAMPHENICOL BEFORE REFERRAL

If referral is not possible and injectable antibiotics are available:

- **CONTINUE TO GIVE IM CHLORAMPHENICOL (40mg/Kg) FOR 5 DAYS EVERY 12 HOURS**
- **GIVE ORAL AMOXYCILLIN FOR ANOTHER 5 DAYS**

5. COUGH AND DIFFICULT BREATHING



ARI Guidelines

After checking the child for general danger signs, ask the mother if the child has cough or difficult breathing. If she says YES, proceed further to count the child's breathing rate and check for the presence of chest indrawing.

a). Count the Breathing Rate

The breathing rate must be counted for one full minute. Count the breathing rate only when child is calm and quiet. It will be difficult to count the breathing rate correctly if the child is crying or upset. The breathing rate may be falsely increased if the child is crying.

| | |
|--------------------------|--|
| If the child 's age is | The child has fast breathing If she has: |
| 2 months up to 12 months | 50 breaths or more per minute. |
| 2 months up to 5 years | 40 breaths or more per minute. |

A child with fast breathing has *pneumonia*

b). Look for Chest Indrawing

Look for chest indrawing at the lower chest wall. Make sure that the child's lower chest is fully exposed and you can see it clearly while checking for chest indrawing. **Chest Indrawing is present when lower chest wall goes IN as child breaths IN.** Normally the lower chest wall comes OUT when the child breaths IN.

A child with chest indrawing has *severe pneumonia*

Treatment Instructions

Cough or Difficult breathing

| Chest indrawing (severe pneumonia) | Fast breathing, no chest indrawing (pneumonia) | No fast breathing No chest indrawing (no pneumonia, only cough and cold) |
|---|---|--|
| <ul style="list-style-type: none">- Refer urgently to hospital, if possible- Give first dose of cotrimoxazole or amoxicillin before referral- If referral is not possible: Give oral amoxicillin for 7 days | <ul style="list-style-type: none">- Give cotrimoxazole for 5 days- Provide home care- Ask mother to return after 2 days or earlier if child become sicker | <ul style="list-style-type: none">- Provide home care- Cough of more than 30 days, refer for assessment if possible (non urgent referral) |

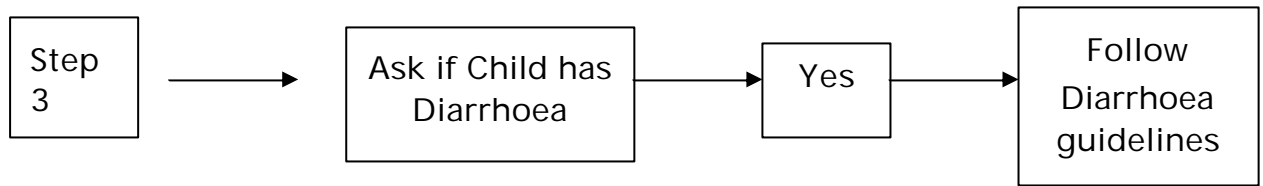
| Age (weight) of child | COTRIMOXAZOLE DOSES | AMOXICILLIN DOSES |
|---------------------------------------|---|--------------------------------------|
| | Paediatric tablet (20 mg trimethoprim and 100 mg sulphamethoxazole) | Tablet (250 mg) |
| 2 months upto 12 months (4 - < 10 Kg) | 2 tablets | ½ tablet |
| 2 months upto 5 years (10-19 Kg) | 3 tablets | 1 tablet |
| | Give 2 times daily for 5 days | Give 3 times daily for 7 days |

HOME CARE

- Continue exclusive breastfeeding for children up to 6 months
- Give extra fluids to older children
- If possible, give cough soothing remedies like warm tea.

Cotrimoxazole and amoxicillin tablets should be crushed and mixed with food or fluid before giving to young children who can not swallow. Syrups are not recommended for use in disaster situations because they are expensive and are more difficult to transport and store than tablets.

6. DIARRHOEA



Diarrhoea guidelines

- Ask the mother if the child has diarrhoea. Diarrhoea is frequent passage of watery stool. Mothers generally know that their children are suffering from diarrhoea.
- If the child has diarrhoea, ask for how long the child has had diarrhoea. If diarrhoea is of more than 2 weeks duration, the child has *Persistent Diarrhoea*.
- Ask if there is blood in stool. The child who has blood in the stools has *Dysentery*.

Check all children with diarrhoea for 4 signs of dehydration:

- **General condition:** Is the child is lethargic or unconscious? Restless and irritable?

When you checked for general danger signs, you checked to see if the child was ***lethargic or unconscious***.

A child has the sign ***restless and irritable*** if the child is restless and irritable all the time or every time he is touched and handled. If an infant or child is calm when breastfeeding but again restless and irritable when he stops breastfeeding, he has the sign "restless and irritable". Many children can be consoled and calmed. They do not have the sign "restless and irritable".

- **Sunken eyes:**

Decide if you think the eyes are sunken. Then ask the mother if she thinks her child's eyes look unusual. Her opinion helps you confirm that the child's eyes are sunken.

- **Check the child's ability to drink.**

- Offer the child plain clean water to drink. If the child does not take any water at all or vomits it out completely or is not able to keep any water down, the child is not able to drink.
- If the child reaches out for the cup or glass or if child opens the mouth when water is offered or begins to cry when the water is taken away, the child is drinking eagerly.
- The child drinks normally if water is taken after some encouragement by the mother.

- **Check for skin pinch**

Pinch the skin on the abdomen (between the naval and side of the abdomen) with thumb and the first finger by lifting it for one second and releasing it. After leaving the skin, see how soon the skin returns to normal.

- If the skin comes back very slowly that is it takes more than 2 seconds the skin pinch is very slow.
- If the skin does not return to normal immediately, the skin pinch is slow
- If the skin pinch returns to normal immediately, it is normal.

Diarrhoea treatment instructions

| | | |
|---|--|--------------------------|
| <p>If the child has two or more of the following signs she has SEVERE DEHYDRATION:</p> <ul style="list-style-type: none"> •Lethargic or unconscious •Sunken eyes •Not able to drink or drinking poorly •Skin pinch goes back very slowly. | <p>If the child has two or more of the following signs she has SOME DEHYDRATION:</p> <ul style="list-style-type: none"> •Restless, irritable •Sunken eyes •Drinks eagerly, thirsty •Skin pinch goes back slowly. | <p>No dehydration</p> |
| <p>Refer urgently to a hospital for treatment of severe dehydration. If the child is able to drink, give frequent sips of ORS on the way.</p> | <p>Treat some dehydration with ORS Provide home care</p> | <p>Provide home care</p> |

| DETERMINE THE AMOUNT OF ORS FOR TREATMENT OF DEHYDRATION HOW MUCH ORS TO GIVE DURING THE FIRST 4 HOURS | | | | | HOME CARE | | | | |
|---|----------------|--------------------------|-------------------------|-----------------------|--|--|--|--|--|
| ORS | | | | | TELL THE MOTHER | | | | |
| AGE OF CHILD | | | | | 1. Give extra fluid (as much as the child will take) | | | | |
| | Up to 4 months | 4 months up to 12 months | 12 months up to 2 years | 2 years up to 5 years | Such as: ORS, milk, yoghurt drink, vegetable soup, fruit juice, plain clean water (or other locally available fluids. For exclusively breastfed infants 6 months or less use ORS only. _____) | | | | |
| In ml | 200-400 | 400-700 | 700-900 | 900-1400 | 2. Breast feeding frequently | | | | |
| | 2 cups | 3-4 cups | 5-6 cups | 6-8 cups | 3. Show the mother how much fluid to give after each stool in addition to the usual fluid intake: | | | | |
| <p>Advise the mother</p> <ul style="list-style-type: none"> • If the child wants more ORS than shown in the table. Give more. • For infants under 6 months age who are not breast fed, also give them 200 ml plain clean water in addition to ORS during the first 4 hours. <p>➤ SHOW THE MOTHER HOW TO GIVE ORS SOLUTION</p> <ul style="list-style-type: none"> • Give frequently small sips from a cup. For small infant, tell the mother to give one teaspoon every minute. • If the child vomits, wait for 10 minutes. Then continue giving ORS but more slowly. • Continue breast feeding whenever the child wants. <p>➤ AFTER 4 HOURS</p> <ul style="list-style-type: none"> • Reassess the child • Begin feeding the child | | | | | <p>-- Up to 2 years: half cup. Give more if the child wants more.</p> <p>-- 2 years or more: full cup. Give more if the child wants more.</p> <p>4. Continue feeding</p> <p>5. When to return. Tell the mother to return to the health worker if:</p> <ul style="list-style-type: none"> - The child is not able to drink or breastfeeding; - The child becomes sicker; - There is blood in stool; - The child is drinking poorly. | | | | |

* If zinc supplements are available, give 20 mg of zinc/day (10 mg to infants below 6 months of age) for 10-14 days to all children with diarrhoea (including bloody diarrhoea).

Treatment of Dysentery

The first line treatment of dysentery is Ciprofloxacin 15 mg/kg given 2 times per day for 3 days.

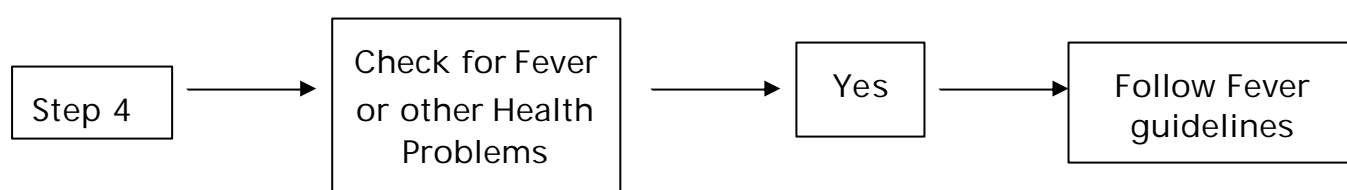
Treatment of Persistent Diarrhea

A child who has Persistent Diarrhea should be seen by a doctor as soon as possible. However, you can help this child by giving appropriate feeding advise:

Feeding recommendations for a child who has Persistent Diarrhoea

- If still breastfeeding, give more frequent, longer breastfeeds, day and night.
- If taking other milk:
 - replace with increased breastfeeding OR
 - replace with fermented milk products, such as yoghurt OR
 - replace half the milk with nutrient-rich semisolid food.
- For other foods, follow feeding recommendations for the child's age.

7. FEVER AND OTHER HEALTH PROBLEMS



Fever guidelines

Fever is very common problem in young children. First ask the mother if the child has fever. See if child feels hot to touch. If you have thermometer and you know how to check the temperature, measure fever by putting the thermometer in the armpit.

Fever is present if the mother is sure that her child feels hot to touch or if you have determined that the child feels hot to touch or if the temperature measured by a thermometer is more than 37.5 degree C. Fever is high if temperature is more than 38.5 degree C.

If the child has ARI, dysentery or another cause of fever, give only supportive treatment for fever:

| | |
|--|--|
| High fever - temperature more than 38.5 Degree C | Fever present (temperature more than 37.5 degree C) but not high |
| <ul style="list-style-type: none"> • Give paracetamol | <ul style="list-style-type: none"> • Give extra fluid • Continue feeding |

Dose of Paracetamol

Give paracetamol every 6 hours until high fever is gone

| Age (weight) | 100 mg tablet | 500 mg tablet |
|---------------------------------|---------------|---------------|
| 2 months – 3 yrs (4 – 14 kg) | 1 | ¼ |
| 3-5 years (14-19 kg) | 1 ½ | ½ |

If the child has no apparent cause of fever, and there is malaria in the area, treat the child for malaria with chloroquine (or other antimalarial recommended by the national health authorities)

➤ **If giving chloroquine:**

Explain to the mother that she should watch her child carefully for 30 minutes after giving a dose of chloroquine. If the child vomits within 30 minutes, she should repeat the dose and return to the clinic for additional tablets.

Explain that itching is a possible side effect of the drug, but is not dangerous.

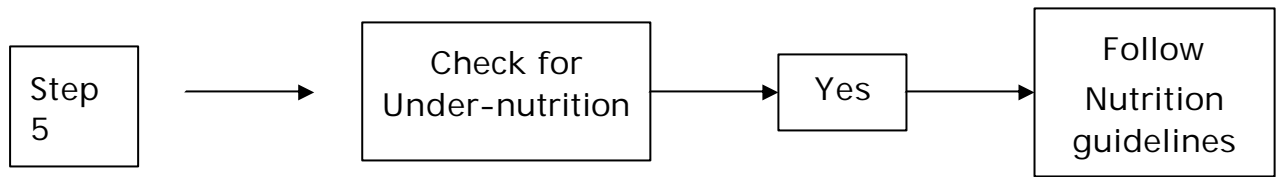
➤ **If giving Sulfadoxine + Pyrimethamine:**

Give single dose in clinic.

| CHLOROQUINE | | | | | | | SULFADOXINE + PYRIMETHAMINE |
|---------------------------------------|-----------------------------|--------------|--------------|-----------------------------|--------------|--------------|---|
| ➤ Give for 3 days | | | | | | | ➤ Give single dose in clinic |
| AGE or WEIGHT | TABLET (150 mg base) | | | TABLET (100 mg base) | | | TABLET (500 mg sulfadoxine +25 mg pyrimethamine) |
| | DAY 1 | DAY 2 | DAY 3 | DAY 1 | DAY 2 | DAY 3 | |
| 2 months up to 12 months (4 - <10 kg) | 1/2 | 1/2 | 1/2 | 1 | 1 | 1/2 | 1/2 |
| 12 months up to 3 years (10 - <14 kg) | 1 | 1 | 1/2 | 1 1/2 | 1 1/2 | 1/2 | 1 |
| 3 years up to 5 years (14 - 19 kg) | 1 1/2 | 1 1/2 | 1/2 | 2 | 2 | 1 | 1 |

If you can treat any other problem like skin infections, ear infections, worm infestation, do as per national policy; otherwise send to a doctor (non-urgent referral)

8. NUTRITION



Nutrition guidelines

Every child should be checked for under-nutrition since this is a very common problem.

Check for visible severe wasting

A child has visible severe wasting if the child looks all skin and bones. Remove all the child's clothes to check for wasting. The arms and legs of a severely wasted child look like sticks. The shoulder and buttocks are wasted and there are wrinkles on the buttocks and thighs. Visible wasting is a sign of *severe under-nutrition*.

Check for swelling (Oedema) of both feet

With your thumb, press gently for a few seconds. Swelling is present if there is depression left in the place where you pressed. This should be checked on the other foot also. The presence of swelling of both feet is a sign of *severe under-nutrition*.

Any child with visible severe wasting or oedema both feet is severely malnourished and has high risk of dying. Such children should be referred urgently to an appropriate centre as soon as possible.

Give Vitamin A

- Give vitamin A if a child has severe malnutrition. Give one dose in your presence and give one dose to the mother to give it to the child at home the next day.

| Age | Dose |
|-------------|-------------|
| 6-12 months | 100,000 I.U |
| 1-5 Years | 200,000 I.U |

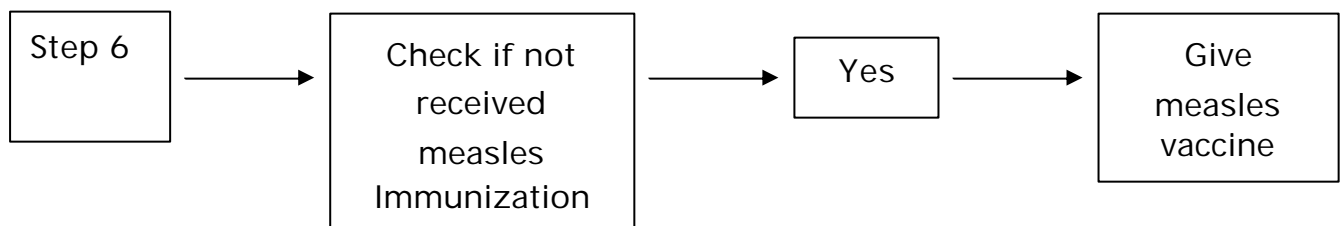
*Adapt dose if capsule/syrup is available

(Note: Also give vitamin A to all children with measles)

Feeding Recommendations:

- Upto 6 months of age: Encourage mothers to exclusively breastfeed as often as the child wants, day and night, at least 8 times in 24 hours. Do not give any other fluid or food.
- 6 months to 12 months: Breastfeed as often as the child wants. In addition give adequate servings of locally available complementary foods at least 3 times a day.
- 12 months to 2 years: Breastfeed as often as the child wants. Give adequate serving of locally available complimentary food at least 5 times a day.
- 2 years and older: Give three meals of family food per day. Also, give nutritious snacks, twice daily.

9. MEASLES IMMUNISATION



- Immunization of all children who are seen by you should be provided as under normal circumstances. However this may be difficult during emergencies. You should try to give the measles vaccine at least to all children above nine months age since during such circumstances, measles outbreak is common and one of the important killers of children.
- Measles vaccine can be given even to sick children. The disease will not get worse as a result of vaccination. The only time you do not give the vaccine is when you are urgently referring the child to a hospital.
- Very often, in disaster situations, the national authorities may decide to immunize all children 6 months to 14 years with measles vaccine. Ensure that all children receive the vaccine as per guidelines.

10. MANAGEMENT OF YOUNG INFANT (<2 MONTHS AGE)

All young infants should be checked for

- (i) signs of serious illness and
- (ii) Feeding problems

STEP 1: Check for signs of serious illness

Young infants are highly vulnerable to disease and death. They contribute about 40% of childhood deaths. They can become sick and die very quickly from serious bacterial infections. They have only general signs which can indicate serious disease. Therefore, it is very important to recognize these signs and promptly refer the patient to a hospital for parenteral antibiotic therapy.

The signs of serious illness requiring referral include the following:

- **Convulsions:** ask the mother if young infant has convulsions.
- **Severe chest indrawing:** Mild chest indrawing is normal in young infant because the chest wall is soft. Severe chest indrawing is very deep and easy to see.
- **Fast breathing:** the breathing rate of 60 or more breaths per minute is the cut off point to identify fast breathing in a young infant. If the first count is 60 or more, repeat the count because the breathing rate of infant is often irregular. If the second time also the breathing rate is 60 breaths or more, the young infant has fast breathing.
- **Nasal flaring:** Nasal flaring is widening of the nostrils when the young infant breathes in.
- **Grunting:** Grunting is the soft, short sounds a young infant makes when breathing out. Grunting occurs when an infant is having trouble breathing
- **Bulging fontanelle:** The fontanelle is the soft spot on the top of the young infant's head, where the bones of the head have not formed completely. Hold the young infant in an upright position. The infant must not be crying. Then look at and feel the fontanelle. If the fontanelle is bulging rather than flat, this indicates serious illness.
- **Umbilical redness extending to the skin:** If the redness extends to the skin of the abdominal wall it is a serious infection.
- **Fever or low body temperature:** fever (axillary temperature 38 degree C or more is uncommon in first two months of life. If a young infant has fever, this may mean the infant has a serious bacterial infection. Fever may be the only sign of serious bacterial infection. Young infants can also respond to infection by dropping their body temperature to below 35.5 degree C. if you do not have the thermometer, feel the 'infant' stomach or axilla (underarm) and determine if it feels hot or unusually cold.
- **Severe skin Pustules:** Large skin pustules (>0.5 cm) and pustules with areas of surrounding redness indicate a serious infection.
- **Drowsy or unconscious:** A drowsy young infant is not awake and alert when she should be. An unconscious infant cannot be wakened at all.

- **No spontaneous movement:** If the infant who is awake has no spontaneous movement when observed for one minute, this indicates serious illness.
- **Yellow palms and soles**
- **No attachment to the breast or no suckling at all**
- **Very small baby**

If one or more above mentioned signs is present the young infant has a possible serious bacterial infection, and must be REFERRED URGENTLY TO HOSPITAL

**If referral is not possible, and giving IM antibiotics is possible:
Give once daily IM gentamicin (5mg/Kg) and oral amoxicillin for 10 days**

A young infant has LOCAL INFECTION if there is:

- Umbilical redness or umbilicus draining pus (redness not extending to the surrounding skin) OR
- Skin pustules (not severe)

Treatment of local infection:

- **Give oral amoxicillin (or co-trimoxazole) for 5 days**
- Advise mother to give home care for the young infant
- Follow up in 2 days.

Table of Doses:

| AGE or WEIGHT | COTRIMOXAZOLE (trimethoprim + sulphamethoxazole) ? Give two times daily for 5 days | | AMOXYCILLIN ? Give three times daily for 5 days | |
|------------------------------------|---|---|--|-------------------------|
| | Adult Tablet single strength (80 mg trimethoprim + 400 mg sulphamethoxazole) | Pediatric Tablet (20 mg trimethoprim +100 mg sulphamethoxazole) | Tablet 250 mg | Syrup 125 mg in 5 ml |
| Birth up to 1 month (< 3 kg) | | 1/2 | | 1.25 ml |
| 1 month up to 2 months (3-4 kg) | 1/4 | 1 | 1/4 | 2.5 ml |

STEP 2: Check for Feeding Problem

A young infant has a FEEDING PROBLEM if there is:

- Poor positioning or
- Not well attached to breast or
- Not suckling effectively or
- Less than 8 breastfeeds in 24 hours or
- Receives other foods or drinks or
- Low weight for age

Counselling the mother of a young infant with a feeding problem

- Advise the mother to breastfeed as often and for as long as the infant wants, day and night.
 - If not well attached or not suckling effectively, teach correct positioning and attachment.
 - If breastfeeding less than 8 times in 24 hours, advise to increase frequency of feeding.
- If receiving other foods or drinks, counsel mother about breastfeeding more, reducing other foods or drinks, to achieve exclusive breastfeeding over the next few days. Feeding bottles should never be used.
 - If not breastfeeding at all:
 - If possible, refer for breastfeeding counseling and possible re-lactation.
 - Advise about correctly preparing breast milk substitutes and using a cup.
- Advise mother to give home care for the young infant

If the young infant has NO SIGNS OF ILLNESS AND NO FEEDING PROBLEM:

- Praise the mother for feeding the infant well
- Advise mother to give home care for the young infant

Home care for the Young Infant

- Breastfeed frequently, as often and for as long as the infant wants, day or night, during sickness and health. Do not give water, other liquids or foods.
- In cool weather, cover the infant's head and feet and dress the infant with extra clothing. Make sure the young infant stays warm at all times.
- Advise mother to wash hands with soap and water after defecation and after cleaning the bottom of the baby.
- Do not apply anything on the cord and umbilicus dry.

➤ Advise the mother to return immediately if the young infant has any of these danger signs:

- Breastfeeding or drinking poorly
- Becomes sicker
- Develops a fever or feels cold to touch
- Fast breathing
- Difficult breathing
- Blood in stools