

## **Training Modules**

**Community Hunger Fighter Programme (CHF)**

**M S Swaminathan Research Foundation**

**Mahila Kisan Sashaktikaran Pariyojana (MKSP)**

**Year 2012**



### Training Schedule

Sr. No.	Type of training	Number of days	Schedule break up	Resource Persons
<b>General Awareness &amp; Communication Skill Development</b>				
1.	Training on awareness of Entitlement Schemes	1	<ul style="list-style-type: none"> <li>• Pre lunch for ICDS schemes</li> <li>• Post lunch for District health department schemes</li> </ul>	Department persons
2.	Training on development of communication skills	1	-	Experienced Social Workers
<b>Nutrition</b>				
3.	Balanced diet and Anemia	2	<ul style="list-style-type: none"> <li>• First day Pre lunch for theory sessions Post lunch for Activities including demo. of nutritive recepies</li> <li>• Second day Anaemia and Kitchen gardening</li> </ul>	1. Nutritionist 2. Government official 3. Kitchen garden expert
4.	Night blindness	1	Pre lunch for theory sessions Post lunch for activities	1. Medical practioner 2. Social worker
5.	Women health care	1	<ul style="list-style-type: none"> <li>• Pre lunch for theory session</li> <li>• Post lunch for activities</li> </ul>	1. Medical practionar 2. Social worker
<b>Health</b>				
6.	Malaria	1	<ul style="list-style-type: none"> <li>• Pre lunch for theory session</li> <li>• Post lunch for activities including construction of soak pits</li> </ul>	1. Government official 2. Social worker 3. Expert for soak pit construction
7.	Diarrhea	1.5	<ul style="list-style-type: none"> <li>• First day Pre lunch for theory sessions Post lunch for activities including tap fitting to the earthen pots</li> <li>• Second day Pre lunch for preparation of home medicines</li> </ul>	1. Social Worker 2. Govt. medical officer 3. Expert on preparation of home medicine 4. Expert for fitting tap to earthen pots
8.	Worms	1	<ul style="list-style-type: none"> <li>• Pre lunch for theory sessions</li> <li>• Post lunch for activities including preparation of home medicines</li> </ul>	1. Medical practionar 2. Social worker 3. Expert on latrine construction 4. Expert on preparation of home medicine
9.	Scabies and Boils	1	<ul style="list-style-type: none"> <li>• Pre lunch for theory sessions</li> <li>• Post lunch for activities including preparation of home</li> </ul>	1. Medical practionar 2. Social worker 3. Expert on preparation of home

			medicines	medicine
10	Immunization	1	<ul style="list-style-type: none"> <li>• Pre lunch for theory sessions</li> <li>• Post lunch for activities</li> </ul>	<ol style="list-style-type: none"> <li>1. Person from</li> <li>2. Social worker</li> </ol>
<b>Safe Drinking Water &amp; Cleanliness</b>				
11	Water Purification	1	<ul style="list-style-type: none"> <li>• Pre lunch for theory sessions</li> <li>• Post lunch for activities</li> </ul>	<ol style="list-style-type: none"> <li>1. Government official</li> <li>2. Social Worker</li> </ol>
12	Garbage management	1	<ul style="list-style-type: none"> <li>• Pre lunch for theory sessions</li> <li>• Post lunch for activities</li> </ul>	<ol style="list-style-type: none"> <li>1. Subject expert</li> <li>2. Social Worker</li> </ol>

## General Awareness on Entitlement Schemes

A Separate Entitlement Passbook has been prepared for this.



## Nutrition

### MODULE ONE: BALANCED DIET

#### Lesson Plan

Food is essential to satisfy hunger, to grow healthy and fight diseases. For survival, every living organism needs food. We need adequate food for the growth and development of the body, to repair body tissues and protect ourselves from diseases. Food also provides heat and energy to the body for carrying out various daily functions and activities.

#### *Nutrients and food groups*

We eat many different types of food every day, such as chapattis, rice, pulses, vegetables, fruits, milk, etc. The nutrients present in these foods, such as carbohydrates, vitamins, proteins and fats serve a special function. Foods are divided into three main food groups based on the prominent nutrients present in them and their functions.

#### **1. Energy giving foods**

Carbohydrates rich foods such as wheat, rice, barley, maize, jiggery, sugar, root vegetables like potato, sweet potato and fatty foods such as oil, butter, ghee and margarine, are all energy giving foods. They provide the energy required by the body to carry out body functions and daily activities.

#### **2. Body building foods**

Protein rich foods such as milk, milk products, pulses, legumes, groundnuts, eggs, meat, fish, etc. contain nutrients for body growth and development. They also help in the repair and building of body tissues.

#### **3. Protective foods**

Vitamins and mineral rich foods provide protection against various diseases and help the body to remain healthy. All types of green leafy vegetables like spinach, fenugreek, radish leaves, coriander, cabbage, citrus and fruits like orange, amla, tomato, mango and papaya. Protective nutrients are also found in animal food like eggs, meat, fish and milk.

#### *Why a balanced diet ?*

A balanced diet is an appropriate mix of food items, in the right quantity and proportion for normal growth and development. It must provide sufficient energy for daily activities as well as for protecting the body from diseases. It is necessary to include items from each food group in our daily diet. For example, chapattis, rice, pulse, green leafy vegetables, fruit, jiggery, oil, etc. Thus a diet which includes at least one food item from each food group is a balanced diet.

If a diet is lacking in foods from one of these groups, it may affect the growth and development of the individual. The body may lose weight and be more prone to infections and diseases. Thus a balanced diet is necessary for maintaining good health.

### ***Tips for balanced diet***

1. Make chapattis mixing 2 to 3 different types of flours, for example, chana flour, bajara and wheat flour.
2. Cook 2 or 3 pulses together or a pulse and cereal so as to improve the protein quality. Any one type of pulse and vegetable can also be cooked together, for example, chana dal and gourd.
3. Seasonal and locally available vegetables and fruits should be consumed as much as possible.
4. Sprouted pulses should be consumed regularly as they are rich in vitamins and proteins.
5. Make recipes from fermented foods, like idli, dhokla, etc., as they are high in proteins and vitamin. Also it is easily digestible.
6. Use more jiggery in place of sugar as it is a good source of energy and iron.
7. Vegetarians should consume more groundnuts, sesame seeds and soybeans as they are rich in protein.
8. Eat more fresh vegetables and fruits. These can be prepared in the form of salads.
9. Milk and curds should be taken in adequate amounts. Buttermilk can be used in place of curds.

### **REMEMBER**

1. Wash hands before cooking and eating
2. Keep food covered at all times
3. Wash fruits and vegetables before use
4. Drink enough water and other liquids
5. Maintain variety in daily diet

### **Educational Games**

#### **1. Activity I**

***Objective*** – To get familiarize with the functions of different foods

#### ***Activity***

Draw 3 large circles on the ground / floor. Each circle will represent one major function of food i.e. energy giving foods, body building foods and protective foods. Make a sign to identify each circle according to the function of food it represents.

Have all the participants stand in between the three circles.

The trainer calls out the name of one food item from any of the functions of foods. The participants are expected to run to the appropriate food function circle to which the food item belongs.

Those participants who fail to reach the appropriate circle in time as well as those who run to the wrong circle are disqualified. Those participants who run to the appropriate circle continue playing, until there is only one winner.

## **2. Activity II**

*Objective* – To help participants understand the classification of food groups

### *Activity*

Four persons can play this game at a time, others can cheer them up.

Prepare a pack of 52 cards by cutting cardboard into pieces approximately 6' x 4'. Draw or write different food items on every card e.g., carrots, chapattis, milk, chana, etc. See that all food groups are represented equally in the drawings.

Four players are given ten cards each. The remaining cards are spread out face down on the table. The players look at their cards and attempt to make a balanced meal with them. The player who completes a balanced meal first is the winner.

## **3. Activity III**

*Objective* – To show how to plan a low cost balanced diet, and to increase their awareness about food prices

### *Activity*

Divide the participants into three groups. Each group becomes a different food group. Ask each group to visit their nearest market or shop to learn the price of various food items. The groups discuss and write menus or recipe for balanced meals including low cost items while not compromising on the nutritional aspect.

Ask the participants to share the menus with their family and to include their family members in the activities. Ask them to prepare one such recipe

## **4. Activity IV**

*Objective* – To practically show a balanced meal from the day to day food items

### *Activity*

Divide the participants into three sub-groups. Assign each group a food group. Decide a date and ask them to bring different food items in their lunch box from the food group assigned to them. Collect all the lunch boxes together. Prepare different combinations of balanced diet,



clustering food items of different groups. Make an exhaustive list of combinations from the available food items.

Discuss the nutritive value of different meals and have a meal together.

Also ask participants to share the menus with the family and friends. Encourage them to get feedback from the family in terms of suggesting different combinations.

### **AT THE END PARTICIPANTS SHOULD KNOW.....**

1. The function of food
2. The classification of food
3. Importance of a balanced diet
4. How to prepare one or two low cost balanced meals

### **Supporting Training**

1. Preparation of soybean products
2. Importance of honey in the diet
3. Other nutritional recipes

### **Follow up**

The effectiveness of the activities and lessons imparted will be determined by its effect on the participants' behavior as well as that of their family after a period of one month or so. To analyze behavioral change ask the participants questions. For example:

1. What did you eat last night, this morning.....?
2. If you get a rupee or two to spend, what foods would you buy?
3. Participants could maintain a general health chart to record the number of times they eat during the day, what food items they eat and what food groups they belong to.

### **Available Entitlements in Maharashtra**

1. Mid day meal scheme for children
2. Supplementary nutrition through Integrated child Development Schemes (ICDS)

## **MODULE TWO: ANAEMIA**

### **Lesson plan**

Anemia is a condition which develops in people as a result of a substantial decrease in the hemoglobin concentration of the blood, which is caused by a deficiency of iron. The symptoms of anemia are quite disguised and often people take them lightly. However, they can lead to severe complications. Regular intake of iron rich food can prevent anemia and its ill effects.

Our blood is made of 2 types of cells; red blood cells and white blood cells, it is the hemoglobin pigment in red blood cells which gives the red color to our blood. These red cells possess a compound called hemoglobin which transports oxygen from lungs to different parts of our body. This hemoglobin is composed of protein and iron. If we do not eat enough protein and iron in our diet hemoglobin will not be produced in sufficient amounts. This results in anemia. Anemia reduces the body's capacity for work as well as its resistance level, which makes an anemic person much more susceptible to other illnesses.

### **Causes**

#### ***1. Deficiency of iron – rich foods***

If green leafy vegetables, jiggery, meat, fish, liver, eggs, etc., are not included in sufficient amounts in our daily diet, it can lead to iron deficiency and anemia.

#### ***2. Deficiency of vitamin B-12 and folic acid***

Vitamin B-12 and folic acid are required for the multiplication and maturation of red cells. When there is deficiency of vitamin B-12 or folic acid in the diet, hemoglobin is not synthesized in the blood. This leads to anemia.

#### ***3. Malaria and hookworm infestation***

Malaria parasites get their nutrition from our blood cells. In the process, they destroy some of the blood cells present in the body and reduce the level of hemoglobin in the blood. Likewise, hookworms suck the blood from the body. Repeated attacks of malaria and recurrence of hookworm infestation can therefore result in anemia.

#### ***4. Severe blood loss***

Severe blood loss due to injury or menstruation, etc can also lead to anemia.

### ***5. Deficiency of protein-rich foods and vitamin C***

If we do not get sufficient protein from our diet, hemoglobin is not synthesized in sufficient amounts. The rich sources of protein are milk and milk products, pulses, legumes, peanuts, roasted chana, eggs, fish meat, etc. Vitamin C rich foods (such as lemon, lime, amla) then iron absorption is hindered, ultimately leading to anemia.

#### **Symptoms**

1. Easily exhausted
2. Paleness of nails, tongue and the inner walls of eyelids
3. Dizziness and breathlessness
4. In severe cases of anemia, spoon-shaped, flat and very pale
5. In children, anemia leads to a loss of concentration or disinterest in studying and playing
6. It reduces the body's resistance level, leading to higher possibilities of acquiring illnesses

#### **Treatment**

Normally, a course of 100 tablets of iron and folic acid should be taken after consulting the doctor, which is available free of charge at Public Health Centers.

If anemia is due to malaria or hookworm infestation, then the causative diseases should be treated first, and only after this treatment should the course of iron and folic acid tablet be completed.

#### **Prevention**

A simple method of preventing anemia is to include plenty of iron, protein and vitamin C rich foods in daily diet, such as green leafy vegetables like fenugreek and spinach, jiggery, cereals, sprouted pulses, legumes, milk, groundnuts, guava, gooseberry, citrus fruits, egg yolk, liver, meat and fermented foods. Children from the age of 6 months onwards should be given supplementary foods like cow's milk, soup, juices, dal water, rice water, etc. Adolescent girls and women of all ages need more iron rich foods.

#### **Educational Games**

##### **1. Activity I**

**Objective** – To make participants aware about the importance of iron rich foods to prevent anemia

### *Activity*

The popular story of “The hare and the tortoise” can be adapted to reflect the symptoms of anemia. The story can be presented before the class or the community in the form of a puppet show or a role play. One person wears the mask of “mother hare” the second person wears the mask of “baby hare”, and the third person wears the mask of “baby tortoise”.

#### **Scene one**

Mother hare is very worried about her son, who is fussy about food. He does not eat any leafy vegetables or fruits, but likes potatoes and non-nutritious food. He is also very proud and quarrelsome, picking up fights with playmates at school and usually ends up crying.

#### **Scene two**

One day, the school organizes a race where baby hare and a baby tortoise participate. Baby hare on seeing the tortoise laughs and thinks it is rather silly of him because he cannot run fast and still is he contesting. The race begins, but just after doing a short distance, baby hare feels breathless and sits down to rest. He is very tired. Soon, he dozes off. Meanwhile, baby tortoise is very active and eventually crossed the sleeping hare on its way to the final destination. After some time the hare wakes up and looks behind. He cannot find the tortoise. He runs very fast and is surprised to see baby tortoise already there. Baby tortoise had won the race. Everyone is very happy but the hare stands in shame because he has lost the race, even though at first he had laughed at the tortoise. He cannot control himself and asks the tortoise what his secret was for winning the race.

#### **Scene three**

The tortoise explained to the hare that since he eats all the vegetables and fruits, he does not feel tired and breathless, so he runs steadily and does not need to sit down to rest. Now the hare understood why he has lost. He made up his mind, that from now onwards he too would not fuss over his food and would eat a lot of leafy vegetables and fruits to keep healthy and active

## **2. Activity II**

*Objective* – To teach participants about the foods necessary for preventing anemia

### *Activity*

Prepare some questions and clues for different key words relating to anemia prevention. The participants can be divided into two groups. Give two clues to each group and ask them to guess the word which relates to those two clues. Set a time limit for each guess. Give two additional sets of clues to each team and again ask them to guess the word. Once they have guessed the three words, ask them to put them together to form a healthy phrase about food

or anemia. If the team to which the question is addressed cannot answer, then the question is passed on to the other team.

Example of clues and words

1. Color of envy / color of the national flag = Green
2. Foliage / grass = leafy
3. Carrots / potatoes = Vegetables  
Complete phrase = Green leafy vegetables

### **3. Activity III**

**Objective** – To teach about growing iron rich foods in kitchen garden

*Activity*

Ask participants to clear a plot of land, preferably where the waste water from house normally collected. Ask them to level the patch and to prepare it for planting vegetables, especially green leafy vegetables. Sow vegetable seeds like fenugreek, radish, coriander, etc from the masala box at home. Make small burrows or channels from the area where the water collects to the plot of land. The channel can also be lined with old plastic sheets mad from plastic bags.

**AT THE END PARTICIPANTS SHOULD KNOW.....**

1. The cause of anemia
2. The symptoms of anemia
3. How to prevent anemia
4. How to identify anemic patients

#### **Follow up**

To ensure that the children remember and put into practice the lessons learned, it would be useful to follow up on them.

For example:

- ✓ Follow up on the implementation of the kitchen garden.
- ✓ Ask them questions regarding their diet.
- ✓ Check their meals or lunch boxes occasionally.
- ✓ Quiz them on some of the lessons learned.
- ✓ Organize presentations using slides and educational material for children on anemia.

### **Available Entitlements in Maharashtra**

1. Adequate quantities of micro-nutrients like Iron, Folic Acid and Vitamin-A through Mid Day Meal Scheme.
2. Shaleya arogya free check up scheme of health department
3. Scheme for malnourished child of health department
4. Scheme for integrated management of new born and child disease of health department
5. Scheme for sickle cell patients of health department
6. Manav Vikas Mission (Only For Yawatmal District)
7. Treatment to malnourished children through Integrated Child Development Scheme (ICDS)

## **MODULE THREE: NIGHT BLINDNESS**

### **Lesson plan**

Eyesight is an important gift to humankind. Eyes must be protected adequately by eating sufficient amounts of vitamin A rich foods. If proper care of eyes is not taken, one can become blind.

Vitamin A is necessary for the maintenance of various body tissues, especially for eyes and skin. Dark green vegetables and yellow fruits in particular are rich in vitamin A along with milk, cream and milk products. For those who eat non-vegetarian food, liver and fish are a good source of vitamin A. Adequate intake of these foods helps to keep eyes healthy and bright. On the other hand, deficiency of vitamin A in the body can lead to night blindness and if the condition persists, it may even cause total blindness.

### **Symptoms**

Difficulties seeing in the dark. Vision is unclear in dim light. Eyes become dry and tend to lose their luster. A white spot called “Bitot” forms on the white of the eyeball. The cornea of the eye becomes soft.

### **Treatment**

Consult doctor as soon as the night-blindness is suspected. A dose of Vitamin A should be given as per the instructions of a doctor or health worker. Yellow fruits and dark green leafy vegetables should become part of the daily diet.

### **Prevention**

Regular intake of foods containing vitamin A, for example, fish, liver, cod-liver oil, eggs, cream, milk products, butter, green and yellow vegetables like fenugreek leaves, spinach, amaranth, coriander leaves, radish leaves, pumpkins, carrots and yellow fruits like ripe mangoes, papayas and bananas.

In India vitamin A supplement is also available free of cost in health centres and anganwadis for children between 6 months and 6 years of age. It should be given twice every year at six months intervals.

If vitamin A deficiency is detected during the early stages, it can prevent night-blindness. For example, once dryness in the eyes is detected, it can be prevented from causing further damage by taking the necessary precautions in terms of an adequate diet.

### **Educational Games**

#### **1. Activity I**

**Objective** – To help participants understand the importance of eyesight

**Activity**

Ask the participants to sit in a circle. Ask one participant to sit blind-folded in the centre of the circle. Ask him to hold the palms open. Let the participants in the circle get up one by one to clap on the hand of the blind-folded participant. Ask the blind-folded participant to identify the participant who clapped. If the blind-folded participant can identify the participant who clapped, then the blind-fold will be removed and the identified participant will be blind-folded in turn.

At the end of the activity, the facilitator can discuss how difficult life would be without eyesight. Also emphasize the importance of eating proper foods.

**2. Activity II**

**Objective** – To help participant understand the importance of eating foods that are rich in vitamin A

**Activity**

This exercise can be play-acted by the participants

Mother : Kaushalya, oh Kaushalya, why can't you just come and eat ? Why do I always have to shout at you ?

Kaushalya : Here mother, I have come.

Kaushalya : Oh mother, you know I don't like these vegetables. The green leaves taste like grass. Give me only potatoes and chapattis, otherwise I will not eat.

Mother : Kaushalya, you must eat everything. It is necessary for your health. (Kaushalya refuses to eat. Later that evening she goes out to play hid and seek with her friend, Priti)

Kaushalya : Reshma, Priti where are you ? I can't see clearly, please come back.

Priti : Kaushalya, what's wrong ? Everyday you say this. Today I am not going to listen to you. I will go and tell your mother. (Priti runs inside the house. Kaushalya tries to run after him, but trips over a chair she could not see)



Mother : What it is Kaushalya, why do you keep bumping into things ?

Priti : Aunty, Kaushalya can't see in the dark.

Mother : Kaushalya, is this true ? Why didn't you tell me ? Let's go to the doctor.

Kaushalya : No mother, I can see clearly during the day. I find it difficult only in the dark. ( Mother takes Kamala to the doctor. Kamala is dignosed as having nightblindness. She is given treatment.)

Doctor : Kaushalya, you could have lost your eyesight completely had your mother not brought you here.

Kaushalya : Oh ! no doctor, I want to see this wonderful world. I don't want to be blind.

Doctor : Tell me Kaushalya, do you consume milk, green vegetables, and yellow fruits ?

Kaushalya : No uncle, I don't like them. After all its just grass and fruits. Yuck !

Doctor : Kaushalya, this is why you have this problem. Green leafy vegetables and yellow coloured fruits provide you with vitamin A, which is necessary to keep your eyes healthy, shinning and bright.

Kaushalya : Oh ! Uncle I didn't know that. Thank you for telling me. I will eat more mangoes, papayas, spinach, coriander leaves, lettuce and all those foods that are good for my eyes. I will also tell my friends because they don't realize how important they are.

The trainer can then initiate a discussion about Kamala's case with all the participants in the class, relating to the real life situation.

### 3. Activity III

**Objective** – to familiarize with nutritional recipes that contain vitamin A

Activity for example

Ingredients :

Wheat flour – 20 gm

Bajara flour – 20 gm

Maize flour – 20 gm

Spinach – 20 gm

## Preparation

Mix wheat, bajara and maize flour along with spinach leaves and add water to make the dough. Add salt, chillies, coriander , turmeric etc to taste. Any other green leafy vegetable can be used. Make small balls, roll them and fry them in oil. Chapatis can also be made and roasted from the dough.

This recipe contains approximately 1173 micrograms of vitamin A.

## **At THE END PARTICIPANTS SHOULD KNOW.....**

- ✓ The importance of eyesight
- ✓ The causes, symptoms, treatment and prevention of night-blindness
- ✓ The importance of vitamin A
- ✓ How to prepare simple recipes

## **Follow Up**

To ensure proper follow up, check with participants after a month or two and ask

- ✓ Whether they have played the game “Recognise me ” with the villagers
- ✓ If they have prepared the above recipe at village meeting
- ✓ Whether they and targeted population are eating food rich in vitamin A
- ✓ If any of villagers have had nightblindness
- ✓ Whether any participant have collected more information on the topic

A positive response to any of these questions is a good indication of material well learned.

## **REMEMBER**

- ✓ Wash eyes with clean water regularly
- ✓ If the person cannot see properly in the dim light contact a doctor immediately
- ✓ Eat foods rich in vitamin A on a daily basis
- ✓ Once the cornea is damaged, it cannot be cured

## **Available Entitlements in Maharashtra**

1. National blindness control scheme of health department

## Health and Hygiene

### MODULE FOUR: MALARIA

#### **Lesson plan**

Types of mosquitoes and types of malaria. Malaria is a parasitic disease which is spread by anopheles mosquitoes. The mosquitoes breed only in stagnant water. While sucking the blood of a malaria infected person, the malaria germs enter into the mosquito's body. On biting another person, the mosquitoes pass on the malaria germs. Malaria causes fever with chills, headache and body ache. In some cases it also produces vomiting and diarrhea and can be fatal to young children.

#### ***Life Cycle and Spread***

Whenever the female anopheles mosquito bites a person suffering from malaria, the malaria parasite enters the mosquito's body through the blood. It takes about 10 to 20 days for the malarial parasites to develop inside the body of the mosquito. After this period, the mosquito can pass on the parasite to a healthy person by simply biting them. This is how malaria spreads from one person to another.

#### ***Symptoms***

Recurring and periodic fever. Severe chills, and headache, followed by fever. Fever drops with perspiration. Weakness and skin flushes. Sweating develops, which leads to body water and minerals. Fever may cause fits and the patient may become unconscious. Could lead to serious complications such as cerebral malaria and may cause death.

#### ***Treatment***

Consult a doctor. Follow the recommended doses of chloroquine or other medicines as advised by doctor. Fever may be controlled by sponging body with a cool, wet cloth. Patient should be given plenty of fluids to replace the loss of body water and minerals. After malarial attack, patient should be given plenty of green leafy vegetables, milk, pulses and legumes.

#### ***Prevention***

- ✓ Take preventive doses of anti-malarial medication (chloroquine) during monsoon seasons (mosquito breeding time) or if malaria epidemic is spreading in your area.
- ✓ Keep water in storage tanks, drums and earthen pots covered and clean as mosquitoes lay eggs on open and stagnant water.
- ✓ Use mosquito nets over beds and screen doors and windows with nets to keep mosquitoes out.
- ✓ Keep away all mosquitoes with repellent, mosquito coils and smoke from neem leaves.

- ✓ Destroy all mosquito breeding places by filling puddles with sand or oil and disposing off containers where rain water accumulates.
- ✓ Stagnant water from public sources should be diverted to fields
- ✓ Use Gambuchi fish in ponds and pools since these eat away the larvae of mosquitoes.
- ✓ Spray houses regularly with insecticides (Caution : Keep all food and water covered while spraying). Do not wipe off the spray.
- ✓ Cover exhaust pipe of latrine with fine net to stop breed of mosquito in sewage tank.

## **Educational Games**

### **1. Activity I**

*Objective – To familiarize participants with terms related to symptoms and prevention of malaria*

#### **Activity**

Words related to malarial symptoms and prevention are listed below in jumbled form. Ask participants to rearrange the letters to form the correct words.

#### **JUMBLED**

1. ALMIARA
2. QSOMIUTSOE
3. EOMSK
4. LILSHC
5. OCINQLROEHU
6. KSENASEW
7. VREFE
8. PHAHELSON
9. SCTEIDIENIC
10. TESWA

#### **ANSWERS**

1. MALARIA
2. MOSQUITOES
3. SMOKE
4. CHILLS
5. CHLOROQUINE
6. WEAKNESS
7. FEVER
8. ANOPHELES
9. INSECTICIDE
10. SWEAT

During the monsoon season, participants could be taken around the school to observe puddles and mosquito breeding places. Then they could learn to fill it up with sand or stones to prevent mosquitoes from breeding.

### **2. Activity II**

*Objective – Multiple choice questions can help participant review the causes, symptoms, cure and prevention of malaria*

#### **Activity**

Ask the participants to complete every sentence by selecting the appropriate ending from the four possibilities listed.

1. Malaria is spread by
  - a. Lack of personal hygiene
  - b. Anopheles mosquitoes
  - c. All mosquitoes
  - d. Drinking dirty water
2. When I get malaria, I feel
  - a. Severe itching
  - b. Shivering and fever
  - c. Diarrhea
  - d. Difficulty in seeing at night
3. Malaria can be treated with
  - a. Benzyl benzoate
  - b. Oral rehydration solution
  - c. Chloroquine
  - d. BCG vaccine
4. Malaria can be prevented by
  - a. Filling up puddles with sand or stones
  - b. Cutting nails
  - c. Washing hands before eating
  - d. Using latrines for defecation

### 3. Activity III

*Objective – To encourage participants to spread health message on malaria*

#### *Activity*

Ask participants to prepare posters. These posters can show;

- ✓ How malaria spread
- ✓ How it can be controlled
- ✓ Why patients need to take the full course of medicine

The posters can have drawings or written matter on it. These posters can be prepared in small groups or individually.

**AT THE END PARTICIPANTS SHOULD KNOW.....**

The causes, symptoms, treatment and prevention of malaria

#### **Supportive training**

1. Covering latrine exhaust pipes of latrines with fine net
2. Preparation of home medicine

### **Follow Up**

To ensure outreach at the community level participants could be assigned the task of filling up all the puddles in the village with sand or stones. They can also be asked to locate possible mosquito breeding places in the village and what they can do about it.

### **Available Entitlements in Maharashtra**

1. National scheme for malarial and elephantitis patients of health department

## MODULE FIVE: DIARRHOEA

### Lesson plan

Diarrhea refers to the passing of watery stools. It is a common but serious illness especially in young children. It is caused by germs which thrive in dirty water and human stools. These germs can pass from one person to another through hands, foods, drinks and files. Diarrhoea leads to a loss of essential water and minerals from the body and as a result causes dehydration. If the community is made aware of the primary symptoms of dehydration, its prevention and treatment, millions of young children can be saved from dying

### *Spread*

The major cause of diarrhea is contaminated water and food. If hands are not washed properly after defaecating, germs can stick to the nails. Such germs are then passed to food and water while eating, cooking or removing water from the pot and then enter the body when these are consumed. The germs then cause diarrhea and sometimes dehydration.

Flies also spread the germs which cause diarrhea. They tend to sit on stools which are passed in the open. The germs from the stool stick to their legs and are later passed on to uncovered food or water, thus leaving the germs behind on the food and water that is later consumed by people.

Children often defecate near the house where dogs, hens and other stray animals roam about. These animals touch the stool and may later come into contact also with uncovered food or water, then passing on the germs from the stool to the food. When consumed by people, the germs in the water and food will enter the body and cause diarrhea.

### *Symptoms of diarrhea*

- Watery stools, sometimes accompanied by vomit and / or fever
- Watery stools with pus, mucus and / or blood.
- In some cases frothy and foul odoured stools.

### *Symptoms of dehydration*

- The child's mouth, lips and tongue dry up and he/she becomes excessively thirsty
- The child becomes weak and irritable
- Skin loses its elasticity. If pinched, the skin does not retract to normal position immediately.
- Eyes are tearless/ waterless and sunken
- In infants, the fontanelle (top part of head above forehead) sinks in
- Frequency of urination diminishes and is dark yellow in colour
- Pulse is fast but weak

## ***Treatment***

- Drink plenty of water
- Drink also other liquids in generous quantities such as buttermilk, rice water, fruit juices, soups and other home made drinks. Lemon sherbet with salt can also be helpful.
- Eat plenty of easily digestible and nutritious food
- Drink oral rehydration solution after each watery stool

## **Preparation of ORS at home**

Take two glasses of drinking water (500 ml). Add a three finger pinch of salt to the water and mix it, then taste it. It should not be saltier than tears. Add scoop of sugar or jiggery, equal to matchbox full. If available add a few drops of lemon juice for taste. Consumption of one glass of this solution is recommended after every stool. Frequent sips as much as the person can take would help.

## **Preparing rice-kanji at home**

Take a scoop full of rice and soak it in water until the rice softens. Grind the rice and make into a paste. Add 2 to 2.5 glasses of water (600 ml) to the rice paste and stir vigorously. Boil this paste and remove from fire after boiling. Add salt to taste and serve. The rice-kanji should be consumed within 6 hrs of preparation.

## **Prevention**

Wash hands with ash or soap after every stool. Cut nails regularly to avoid getting germs in them. Wash hands before cooking, eating and feeding children. Cover all food and drinking water. Do not eat stale food or rotten fruits and vegetables. Wash fruits and vegetables with clean water before eating. Use a ladle to take water from the pot. Avoid eating from vendors on the road especially moist / wet foods, like aloo sag, chaat etc. See that food is served with a clean spoon or ladle and not by hands unless they are washed properly.

## **REMEMBER**

- ✓ Wash your hands after every stool and before eating.
- ✓ If you pass watery stools make sure to drink the ORS solution after every stool.
- ✓ Do not stop eating food during diarrhea.
- ✓ The prepared ORS solution should not be kept more than 12 hours. Keep the solution covered.
- ✓ Serve rice-kanji to the patient with diarrhea. It will make them stronger and healthier.
- ✓ Seek medical help if, diarrhea persists more than two days.
- ✓ Seek medical help if diarrhea is accompanied by vomiting, stool has blood or mucus, stool is yellow, foul smelling and has bubbles or froth and if stool looks like rice water.



## **Educational Games**

### **1. Activity I**

*Objective* – To help participants learn the method for preparing ORS

#### *Activity*

Keep salt, sugar / jaggery and pure drinking water available, depending on the number of participants. Round participants and have them observe the preparation of ORS. Take two glasses of drinking water (500 ml). Add a pinch of salt and taste it. It should not be saltier than tears. Add a scoop or matchbox full of sugar. If available, add a few drops of lemon juice for taste. Make the participants taste it. Review the preparation and ask the participants to prepare it themselves. Discuss (again) the treatment.

### **2. Activity II**

*Objective* – To familiarize participants with the ORS solution

#### *Activity*

Samir is a clever boy who is studying in the 7th grade. He has a younger sister named Minu. Every morning, Samir's parents go to work and his mother returns at noon just in time to see Samir and his friends off to school. She does not worry about Minu because Samir takes good care of her.

One day while his mother was at work, Minu started crying. Samir rushed to her and saw that she had passed a watery stool again. "Oh !", said Samir, " You have done it again. Mummy just cleaned you up half an hour ago", Samir washed Minu, changed the sheet and put her back on the bed. Then he heard Minu crying again. The poor child had again passed a watery stool. Samir got worried and after cleaning Minu, he quickly ran to call Kavita – their neighbor and mother's friend. Kavita came along to see Minu who was quiet and weak. Samir asked Kavita whether or not it was serious. Kavita said, "Diarrhea makes us loose a lot of water, sugar and salt from our body. If we do not replace these important elements, we become weak and dehydrated. Our body can shrivel up because of loss of moisture from our body.". Then Kavita added, "Samir, go fetch some salt, sugar and a glass of drinking water ". Kavita then prepared the ORS solution, mixing the glass of water with a two finger pinch of salt and spoon of sugar. Minu drank a glass of the solution, and Kavita advised Samir to keep on giving the drink to Minu after every stool. After the kind neighbor left, Samir made some rice for Minu remembering that the teacher had said that sick children must eat nourishing food to fight the sickness. As the rice coked, Samir sat with his little sister giving her small sips of special drink.

Samir's mother returned home and Minu was fast asleep. Samir then told his mother about Minu's diarrhea and of the ORS solution he and his neighbor had prepared. Samir's mother

was very relieved and happy to know that Minu had been taken good care of. Samir's mother proudly gave him a hug and asked him to relate his experience to his teacher and classmates.

After the story, the participants can discuss its content and importance.

### **3. Activity III**

**Objective** – To make participants understand the importance of ORS in preventing dehydration

#### **Activity**

First demonstrate this activity to the participants and then ask them to do it themselves.

Take a plastic bag and draw a child on it. Fill the bag with water and explain that the full bag represents a healthy child. Prick a hole in the bag. This represents a child with diarrhea. Let the water drain through the bag. As the water flows out, the child drawn on the bag shrivel up, thus explaining the process of dehydration. Now ask one of the students to fill the bag from the neck with some more water. As the bag is filled the child on the bag begins to appear healthy again. The water keeps flowing out from the pricked hole, but as long as the bag (child) receives water (ORS), it will remain healthy.

### **4. Activity IV**

**Objective** – This survey will help to familiarize participants with the causes and treatment to diarrhea. It will also give them an idea of the incidence in their community.

#### **Activity**

Prepare a questionnaire for the survey with the help of the participants. Divide the participants into groups. To each group assign 5 houses in the village or neighbourhood. Ask the groups to survey the houses assigned and to return to school with the information asked in the questionnaires. Allow one hour for the survey to be completed.

Help the participants analyse the information collected. Discuss the causes, occurrence and treatment trends of diarrhea in the community.

Participants can be encouraged to follow up on the assigned houses to monitor the incidence of diarrhea.

#### **A SAMPLE QUESTIONS**

1. Name of the family head
2. Number of family members
3. Age of children in the family
4. Occurrence of diarrhea in the family in the past 3 months
5. What were the symptoms ?

6. What was the treatment taken ?
7. Water handling practices in the family, food storage and availability of latrine
8. Observation of the level of cleanliness in the house, flies, etc.

At the end of survey, participants can demonstrate the preparation of ORS in every house visited.

**At THE END PARTICIPANTS SHOULD KNOW.....**

- ✓ The causes, symptoms, treatment and prevention of diarrhea.
- ✓ How to prepare the oral rehydration solution
- ✓ How to prepare the rice-kanji

**Supportive trainings**

1. Putting a tap to the earthen pots
2. Preparation of home medicine

**Follow up**

Participants could be motivated to maintain a healthy level of hygiene by monitoring cleaning habits of 5 families daily. Here are some suggestions for a checklist :

- 1) Short and clean nails
- 2) Clean hands
- 3) Washing hands after defecating
- 4) Washing hands before eating
- 5) Washing fruits and vegetables before eating
- 6) Keep all the water and food covered

**Available Entitlements in Maharashtra**

1. Disinfection of water sources by chlorination through Gram Panchayat
2. Supply of water through taps

## **MODULE SIX: WORMS**

### **Lesson plan**

Worms are parasites that live in our body. They are dangerous because they can multiply rapidly. One worm can lay thousands of tiny eggs. Once in our body, these eggs grow into worms and then travel through the body until they find a good place to grow and reproduce. They survive by eating the food we consume or by sucking our blood. By depriving our body of important food and blood, worms can cause malnutrition, anaemia and nightblindness. Worms can also be deadly if not treated properly. Lack of personal hygiene and poor environmental sanitation can lead to worm infestation.

There are many types of worms, such as round, hook, thread, guinea etc. Out of these round worms, hook worms and thread worms are particularly common among children.

### ***1. Round worms (Ascarus)***

Round worms are 10-15 cm long and pink or white in colour. Roundworm infestation can cause malnutrition, especially in children.

### **Spread**

When a worm-infested person defecates in the open, the round worm's tiny eggs get mixed in the surrounding soil. When children play in this area, the eggs on the soil may stick to their feet, hands and nails and if the child eats with the infested and unwashed hands, the eggs can enter the body through the mouth.

Washing hands and utensils with mud that is infested with these eggs is another way through which the worms are spread. Lack of personal hygiene can also spread worms, e.g. if hands are not washed properly after defecation, the eggs sticks under the nails and enter the body while eating.

### **Symptoms**

Round worms can cause bouts of abdominal pain, indigestion, vomit or diarrhea. It may also make children feel like eating mud. In severe cases, it causes the stomach to swell.

### **Treatment**

Deworming tablets should be taken as per the advice of a doctor or health worker and the course should be completed.

### **Prevention**

Use latrine or pit latrine for passing stools. Always wash hands with soap or ash after defaecating and before eating or cooking. Keep nails short and clean. Always keep water

covered. Always use a ladle to take water from pot. Wash vegetables well before eating them. Prevent children from eating mud.

## **REMEMBER**

- ✓ Keep hands clean, especially before eating and after defaecating
- ✓ Cover drinking water and food
- ✓ Wear shoes, especially in areas where others defecate.

## **2. Hookworm**

Hookworms are 1 cm long and red in colour. They cannot usually be seen in the faeces. Once they enter the body, they travel through the blood stream until they travel intestine, where they attach themselves and suck blood. Hook worm infestation can lead to serious complications. Among children, it may cause anemia. Any child who is anemic, very pale or eats mud may have hookworms.

### **Spread**

The eggs of the hookworms come out in the stools of infested persons and hatch on moist soil. From here, the baby hookworms can enter a person's body through bare feet.

### **Symptoms**

When the hookworms enter the body through the feet, they may cause itching. Within a few days after entering the body, the hookworms reach the lungs through the blood stream, and may cause a dry cough. The person coughs up the young worms and swallows them again. A few days later the person may have diarrhea or stomach ache. Hookworms suck blood and often produce weakness and in severe cases anaemia.

### **Treatment**

Complete the course of deworming tablets as per the advice of a doctor or health worker. A complete course of iron tablets is also advisable.

### **Prevention**

- ✓ Always use latrine or dry pit latrine for defaecation
- ✓ Use footwear outside the house

## **3. Threadworm**

These worms are very thin, thread like and white in colour They lay thousands of tiny eggs just outside the anus or near the vaginal opening among girls.

### **Spread**

When a person scratches the infected area, the eggs of the threadworm stick to the nails and spread when the same unwashed hands are used to eat, cook food or serve water that will later be consumed by others. Thus, the cycle of infection continues.

## **Symptoms**

Itching and scratching around the anus, or near vaginal opening among girls particularly at night which disturbs sleep, causes irritation and weakness.

## **Treatment**

- Complete course of deworming medicine as per the advice of a doctor or health worker
- Children who have thread worms should wear pants while sleeping to keep them from scratching
- Wash child's hand and buttocks with soap and water

## **Prevention**

- Wash hands well with soap or ash and water after defaecating and before eating or serving food
- Keep nails clean and short

## **Educational Games**

### **1. Activity I**

*Objective* – To teach participants about worms, its causes, treatment and prevention

#### *Activity*

The educator can use this script for story telling as well as role playing.

Once some children were playing in a garden. Suddenly they heard strange and unfamiliar voices. They quietly looked around to see who was talking. Some unusual figures caught their sight. They saw three strange figures, all three had long tails but their shapes were different one was fat and plump, another crooked and the third was very thin. The children were puzzled, so they hid behind a tree to hear them talk. From their conversation the children found that the funny looking creatures were none other than the nasty worms.

First of all the Roundworm said “My eggs are so small that people cannot see them. I lay my eggs and when they come out in stools they can remain for a long time in the soil. I stick to the nails of people and enter their body if they don't wash their hands. Also, some children eat mud and some women clean their utensils with mud. This makes it easier to enter their body. As soon as I enter, I eat up everything the person eats, so their body becomes weak from lack

of food. Then I lay thousands of eggs and come out through their faeces. This way I continue my cycle. Ha! Ha! What a life !!"

Upon hearing this, the Hookworm boasted, "Huh, what a life ? You don't know me ! I am very dangerous. I stick to the intestines of the person and suck their blood, but I cannot be seen. People then become anaemic from lack of blood. I leave my eggs on the moist soil through faeces and when another person walks barefoot over it, I enter their body. This is how I spread. So, you see my might ? You only live on a person's food but I am a super hero because I feast on precious blood !"

The Threadworm, who had so quietly listened to the two said, "I am thin and thread like and lay my eggs outside the anus, which leads to itching at night. I also travel from the faeces to mouth. I too like persons who are dirty, those who do not wash their hands properly, especially after defaecating. But I can trouble a person the most because I cause itching, irritation and weakness and give sleepless nights. Wow, what fun !"

All the three worms were happy with their victory and quickly started to dance and sing "We shall overcome.....".

The children were struck with disbelief on hearing all these stories. Chotu, the youngest of all started crying because he had been eating mud even though everyone had told him not to. Now he knew the consequences. The children did not know how to prevent worm infestations, so they all ran to Lata, an elderly friend of the children. They told her all they had heard and seen. They also told her that since Chotu was eating mud, he may have a lot of worms in his body. Lata said, "Oh no, that is not good. You must see a doctor and take deworming tablets. Also ask your parents to give the same medicine to everyone in the family. Aside from the tablets, you have to take other precautions to prevent another worm infestation because repeated infestations can cause serious complications".

The children were relieved to get help and asked Lata about preventive measures. Lata told them about personal hygiene, regularly cutting nails, using latrines, washing hands before eating and using footwear.

Chotu listened carefully, then asked, "But Lata, what about that proud hookworm? He said that he was causing paleness and weakness in us by sucking our blood". Lata explained that hookworms can cause anaemia, but can be removed by first completing the course of deworming tablets and eating iron rich food such as green leafy vegetables. She also warned that deworming tablets are not enough. Personal and environmental hygiene are just as important for the whole family. The children were now happy and making fun of the worms. They started dancing and singing – "We shall overcome.....".

The story could be followed with discussions and review of the lesson plan.

## **2. Activity II**

**Objective** – To familiarize participants with the treatment and preventive measures against worm infestations

**Activity**

Mix words in a jumble of letters and ask the participants to find them. The words should relate to the lesson plan just learned. For example :

LKJASDG**HOOKWORM**MLKAJFGLJKSGLK

ASLKJ**FOOTWEAR**SDLKKFJKLJKFJLL

AL**HYGIENE**FLJAGJSGLKJSLGLGLKK

GFLKJAGSJGLKJGL**CLEANLINESS**P

SDLGKJ**DEWORMING**SGFLKJGLJLGJG

SD**MEDICINE**SLAKJDFDKJFLSDKJGG

LKJGLSFJGLKJGHLKJL**ATRINE**SPQ

SFJLDF**THREADWORM**MDROIPERIIERE

**3. Activity III**

**Objective** – To revise the learned material on worms, emphasizing prevention

**Activity**

Sit in a circle with participants. Get a handkerchief and tie a knot at one end of it. Ask one participant to stand up and go around the circle where participants are sitting facing in. The participants in the circle should not look behind themselves to see if the handkerchief had been left behind them by the person moving around. Quietly, the child moving around puts the handkerchief behind another person's back. The participant to whom the handkerchief is given then gets up. That child is then asked a question on the prevention of worms like Raju scratches his bottoms and does not wash his hands, what happens when he serves food to Meena with those hands and helps her to eat too. The participant has to answer the question and then go round the circle.

Similarly, questions have to be designed for all participants.

**REMEMBER**

- ✓ Do not defaecate in open areas
- ✓ Always use latrines
- ✓ If latrine is not available dig a pit and use it for defaecation, then cover it with soil



- ✓ Wash hands with soap or ash and water before eating or serving food and after defaecation
- ✓ Complete the deworming course

**AFTER ALL THESE ACTIVITIES THE PARTICIPANTS SHOULD KNOW.....**

- ✓ The type of worms
- ✓ The causes and spread of worm infestations
- ✓ How to recognize the symptoms
- ✓ The treatment and preventive measures

**Supportive training**

Construction of low cost latrines  
Preparation of home medicine

**Follow up**

Over a period of two or three months, it should be possible to observe some behavioral changes in the community. For example :

- ✓ Improvement in general level of hygiene
- ✓ Regularity in the practice of cutting nails, using footwear and washing hands
- ✓ Use of latrines instead of open areas

**Available Entitlements in Maharashtra**

1. Distribution of deworming tablets through health department

## **MODULE SEVEN: SCABIES AND BOILS**

### **Lesson plan**

Scabies and boils are bacterial skin diseases which spread by contact. They develop from a lack of personal hygiene and are most common among children.

#### ***1. Scabies***

Scabies are caused by a mite (*sarcoptes scabies*), similar to tiny ticks which make tunnels (burrows) under the skin. There, they cause a persistent itch. Scratching can cause infections which produce boils or sores with pus and sometimes swollen lymph nodes / glands or fever.

#### **Spread**

Scabies can spread from one person to another in crowded areas, by sharing clothing and bedding and by keeping poor hygiene. It is prevalent in residential and school areas where children come into close contact with one another. The spread of scabies is greater during winter season because it is when children tend together more often.

#### **Symptoms**

Common sites of infection are around finger webs, inner surfaces of elbows, wrists, beltline, thighs, external genitalia, nipples, abdomen and lower portion of buttocks. In children it is common to find scabies around the neck, head, palms and soles of the feet.

Itching is intense particularly at night. Scratch marks can produce boils and eczema.

#### **Treatment**

Obtain benzyl benzoate from nearest primary health centre, free of charge. Clean body and affected areas with soap and water. Rub well with clean towel. Apply benzyl benzoate solution on the whole body except the face. Let it dry on the body. Continue application for three days. Treat all members of the family at the same time, even if they are not infected. Wear clean clothes after treatment. Wash all cloths, bed sheets, pillow covers, etc. with water and soap and dry them under the sun.

#### **Home remedies**

Boil some neem leaves and grind them with some turmeric and salt to make a thick paste. Wash body vigorously with soap and water. Smear this paste on the whole body and expose to the sun for some time. It is advisable to apply the paste thrice a day for three days.

Boil all the clothes, towels and bedding used during these three days and dry them under sun. On the fourth day, bath well (with water boiled with neem leaves) and wear freshly dried clothes.

## **Prevention**

- ✓ Maintain personal hygiene by bathing daily and always keeping nails and hands clean.
- ✓ Avoid using common towels, napkins and bedding
- ✓ Avoid sleeping close to infected persons and using their cloths, towels, etc.

## *2. Boils*

Boils are bacterial infections that form a sac of pus under the skin. Incidence is high during the summer and monsoon months when heat and humidity is high.

## **Spread**

Boils are transmitted through contact with person already infected. There is a higher incidence in crowded areas and in areas with poor environmental hygiene and dirty surroundings.

## **Symptoms**

- A sac of pus is formed under the skin
- A boil is painful. It swells and skin around it becomes red and hot
- Headache may develop along with fever
- It can cause swelling of lymph nodes or glands

## **Treatment**

If the head of the boil does not burst easily, place hot compresses over it several times every day. Allow the boil to burst open by itself, and then continue applying the hot compresses. Allow the pus to drain but never squeeze the boil because it may cause the infection to spread. If the boil causes swollen nodes or fever see a doctor or visit a health centre. After the boil opens, keep the wound covered with a clean gauze or cotton.

## **Prevention**

- Maintain personal hygiene by bathing daily and keeping hands clean
- Avoid the use of common towels, napkins and bedding
- Avoid sleeping with affected persons or using their clothes, towels, etc.
- Affected children should not be sent to school or allowed to play with other children, unless the wound is properly covered.

## **Educational Games**

### **1. Activity I**

*Objective* – This role play will help participants to understand the spread of scabies and boils and its treatment

### *Activity*

Raju and Ramesh are good friends. Both are studying in the same class. They are always together while studying, playing, sharing each other's toys, etc.

One day.....

Raju : Ramesh, what happened? Why are you scratching your hands all the time?

Ramesh : I don't know. I can't even sleep properly because this itching persists throughout the night.

Raju : Show me your hands (Looking at the hands), Oh! I think you are infected with scabies. Last year my sister Manju also had scabies and at that time my mother was using a white liquid to treat it. But first, you must cut your nails and stop scratching or it will be more painful. Let's go to Meena Aunty, the health worker. She will guide you properly. (They both go to the health worker)

Meena : Welcome children. Is there any problem?

Raju : Yes, my friend Ramesh is itchy around hands and elbows. I think he is infected with scabies. (Examining Ramesh's finger webs and elbows)

Meena : You are right Raju. Ramesh has scabies. But he will soon be alright. I will give him the medicine. Ramesh, here it is. First take a bath with soap and hot water scrubbing well. Then apply this on your entire body except your face and keep it on until the next bath. Apply it for 3 days, but be careful not to apply it on your face. Also tell your mother to boil your clothes, towels and bed sheets and to dry them under the sun. Tell me, who is sleeping very near you at night ?

Ramesh : My brother, Suresh.

Meena : Since scabies is an infectious disease, it spreads through close contact. It would be better, if all your family members undergo this treatment. Remember not to go to school or play with other children until you are better.

Raju : Meena aunty, please give me also the medicine. Most of the time I am with Ramesh, so I may be infected also.

Meena : Very good, you have understood the idea. (Both go home happy)

Encourage discussion on spread, symptoms, treatment and prevention of scabies.

### **2. Activity II**

**Objective** – This activity will help participants to identify the causes, symptoms, treatment and prevention of scabies and boils

### *Activity*

Distribute one slip of paper to each child on which scabies related information is written. Write one cause, symptom, treatment or prevention practice.

Divide the participants into small groups. Call out one participant at a time from one group and ask for an enactment of the information on his / her slip of paper. The rest of the group has to identify what the information is, and whether it falls under cause, prevention, etc.

For example, the slip of paper could contain the following information; touching, sharing clothes of the patient, scratching, pain and fever, bathing, benzyl benzoate, neem leaves, etc.

The enactment of the information can add an element of excitement to learning. Each group can be given points according to their correct answers.

At the end of the activity, the teacher can facilitate discussion on cleanliness.

### **3. Activity III**

*Objective* – To enable participants to recall messages on scabies and boils

### *Activity*

Keep list of quizzes on scabies and boils ready. Divide the participants into two teams. The quiz master asks each team in turn a question on scabies or boils. Each correct answer get 2 points. The team able to answer the most questions correctly and gain the most points wins the game.

Example

1. Name one of the causes of scabies / boils ?
2. Name one way in which boils / scabies is spread ?
3. Name a common site of scabies / boils ?
4. What is the treatment for scabies / boils ?
5. How do you prevent boil s/ scabies ?

Supportive training

Preparation of home medicine

**At THE END PARTICIPANTS SHOUL KNOW.....**

- ✓ The causes and spread of boils and scabies
- ✓ The symptoms and treatment of scabies and boils
- ✓ The preventive measures

**Follow up**

The outreach effect of the lesson can be gauged by noting the level of personal hygiene in the community. For example, checking nails, hair, hands, cloths. Impromptu quizzes on scabies and boils can be organized in the village. This will indicate how well villagers have retained information. The results can also serve as a guide for future lesson plans.

Parents behavior when children are infected can also be monitored, looking at whether or not the children are being sent to school when infected., whether their clothe are being disinfected, etc. This will reflect the outreach effect of the lesson plan.

## MODULE EIGHT: IMMUNIZATION

### Lesson plan

Millions of children under five years of age die or become handicapped due to the childhood diseases which can easily be prevented through immunization.

Immunization can be defined as a protective measure against germs that causes diseases. It takes the form of a vaccine that is injected into the body or given orally to build resistance against such diseases as measles, tuberculosis, tetanus, poliomyelitis, diphtheria and pertussis (whooping cough).

These six are killer diseases, particularly among children under 5 years of age. The universal immunization programme in India is aimed at protecting all children against these six killer diseases. Sometimes, small and almost invisible germs enter our body and make us ill. Normally, our body produces antibodies to fight against these germs, but in some cases the body cannot make the sufficient amount necessary to protect against diseases. If the disease is very serious it may be fatal, especially in malnourished children.

Immunization encourages the body to produce the right amount of antibodies in advance of the disease. Already protected with the right vaccine, our body becomes capable of fighting disease.

### THE SIX KILLER DISEASES

#### *1. Tuberculosis*

Tuberculosis (TB) is an air borne communicable, bacterial disease that can affect any part of the body – bones, brain, kidneys, etc., but most commonly the lungs and the lymph glands. It spreads easily through air and dust.

Tuberculosis produces a chronic cough, mild fever, loss of appetite, weakness, continuous weight loss and pain in the chest. In serious cases, the patient may cough out blood. In children, there is difficulty in breathing and the formation of nodes on the sides and back of the neck.

In India the national programme for the control of TB provides free diagnosis and treatment. If one person has TB then the entire family must also be checked. For prevention BCG vaccine must be given to infants preferably within a month after birth.

#### *2. Diphtheria*

Diphtheria is a bacterial disease which commonly affects the respiratory passage (nose and throat). It can be deadly, particularly among children.

This bacterial disease produces a grayish / white membrane around the tonsils and pharynx and causes high fever, sore throat, swelling of the neck, difficulty in breathing and a hoarse sound breathing. It may spread to the windpipe, In which case it may prevent breathing all together. Medical help should be sought immediately.

A patient with diphtheria should be kept in a separate room and treated by doctor. Such children should not be allowed to play with others unless cured completely. All their friends and close contacts should be observed carefully for symptoms. If they have not been vaccinated before, they should be given a vaccine immediately. To prevent diphtheria, it is necessary to follow a full course of triple vaccine. Three doses of DPT should be given during the first four months after birth at intervals of one month between each dose. A DPT booster dose is also necessary between the ages of 16 to 24 months. DPT is a vaccine which protects the child against diphtheria, pertusis and tetanus.

### ***3. Pertusis (whooping cough)***

Whooping cough is a bacterial infection that produces inflammation of the lining in the nose pharynx, larynx and trachea. Sever consequences of whooping cough lead to malnutrition, pneumonia, TB and sometimes death.

At first, it causes a cold with running nose and fever; then cough develops with a thick mucous. The coughs are rapid, without breathing time in between and are sometimes associated with vomiting. Nails and lips may turn blue from lack of air. When the air finally rushes back into the patient's lungs, it produces a loud whoop.

A doctor should be consulted as soon as the whooping cough is detected. Patient should be given plenty of liquids and food after each vomit to avoid malnutrition. To prevent this disease, it is necessary to take three doses of DPT during the first four months after birth with one month intervals in between. A booster dose should be given between 16 to 24 months.

### ***4. Tetanus***

Tetanus is one of the most dangerous diseases leading to death. The tetanus germs are present in the environment particularly in dirt and excreta. These germs enter the body through open cuts and wounds. It can also occur among children with ear discharge, including wounds and punctures made with unsterilized syringes, needles, scissors and knives.

Tetanus produces stiffening of the jaw and neck muscles, making it difficult for the child to eat. It causes difficulty in breathing and swallowing. Generalised tetanus causes spasms and convulsions of the whole body, making it rigid and arched like a bow. In most cases tetanus leads to death, but it may also be prevented through immediate treatment.

Prevention of tetanus is possible with the three doses of DPT vaccine given during the first four months after birth. Pregnant women should be given tow injections of tetanus at the interval of one month as soon as the pregnancy is confirmed.



## ***5. Poliomyelitis***

Polio is a viral infection most common in children under the age of three. It is the greatest disabling disease among children, as it causes irreversible damage in the body particularly the limbs. The virus is spread through human excreta, water and air (due to coughing, sneezing, etc). Poliomyelitis begins with a cold, fever and restlessness and then leads to severe headache, sore muscles and stiffness of back and neck. An infected part of the body, usually the limbs, weaken and become paralyzed, often causing a permanent handicap.

There is no cure for polio, but early detection and immediate treatment by a doctor may prevent muscles from further deterioration. For prevention it is necessary to give the recommended three doses of polio vaccine during the first four months after birth at the interval of one month each. A booster dose is also required when the child is between the age of 16 to 24 months.

## ***6. Measles***

Measles is a very common communicable disease spread by a virus, it is highly contagious and can lead to serious complications, such as pneumonia or diarrhea leading to death.

The major symptoms of measles are severe cold (red watery eyes and runny nose), high fever, coughing and blotchy rashes on the face and later the rest of the body.

Prevention is possible through immunization, preferably for children between 9 to 12 months of age.

## **Educational Games**

### **1. Activity I**

***Objectives*** – To help participants to understand the importance of immunization

#### ***Activity***

It is a hot day in the middle of the afternoon. The room is dirty with cobwebs and dust. There are six chairs. Mr. Polio walks in, he has an unhappy face. One of his legs is thinner than the other and he limps while walking. One of his arms is also stiff and thin. He looks around the empty room and says, “Where are all my friends? We must meet at 4 p.m. and it is now 4.15 p.m. In 15 minutes I can kill 2 children or make 3 lame”, Mr. TB walks in coughing and spitting. He is ugly and thin. Both MR. Polio and MR. TB greet each other.

MR. Polio asks, “How are you?”, and MR. TB unhappily responds, “Not so well”. Just then Ms. Diphtheria walks in. Her neck looks very big, her eyes are red and she cannot speak too well. Mrs. Pertusis (whooping cough) also comes in coughing with loud whoops. Ms. Diphtheria says, “I see you’re still coughing.” Mrs. Pertusis replies, “Yes, I can go on coughing for six weeks and can make the children so weak and ill that they can even die. I

just spent an hour giving whooping cough to children in one village.” Mr. TB looks around and says. “We are waiting for our chairman Mr. Tetanus and the Secretary Mr. Measles to arrive. Then we can start our meeting”

Just then Mr. Tetanus and Mr. Measles walk in together. Mr. Measles has a cold, fever and rashes all over. His eyes are sore, red and watery. Mr. Tetanus is weird-looking. His jaw is crooked and his body bow-shaped. He has very frightening looks and keeps jerking. There is a lot of noise around, coughing, sneezing, groaning, even shouting.

Mr. Tetanus calls everyone to order and they all sit quietly. He asks each of the disease to give an account of children they have killed.

Mr. TB says, “I am getting old. It seems that no one gets affected by me and the BCG vaccine is my worst enemy. It is trying to defeat me.”

Mr. Polio speaks up saying, “I too have a similar problem. I can’t seem to affect many children these days. My enemy is the polio vaccine.”

Ms. Diphtheria and Mrs. Pertussis have similar stories to tell, saying that the DPT vaccine is a real menace for them. Mrs. Pertussis says, “But we are still better than all the others. Just now I visited a village and harassed so many children, Ha, Ha!”

Ms. Measles then spoke, “Though the measles vaccine is strong. I hope that I can strike anytime, more so if parents have been careless about their children’s health”.

The head of the killer diseases committee spoke, “I am unhappy too. The mothers of the newborn babies are being immunized and so the babies cannot get tetanus”.

Mr. Polio then added, “Never mind, wait for 6 to 8 weeks. Perhaps the parents will forget to immunize their babies with the second booster. You can try to kill again when they are two months old.” Mr. Tetanus agreed that it was a good idea to wait.

Mr. Measles looks at everyone with an angry face and says, “Two years ago, we could each kill more than 100 children. What’s wrong? Are we ill with our own diseases?”

All of them said, “We are weak because of those vaccines. That immunization schedule is a big disadvantage. It is our major enemy. Those clever children go with their mothers to the clinic and even help their mothers carry their newborn babies there.”

All six diseases then decided to work still harder to fight against their biggest enemy, immunization.

**This story can be used in different ways :**

- Select six participants to read the story, assigning each one a specific role.
- The story can also be used for a play. Participants can enact the story using costumes according to the role they play.

- The story could also become a puppet show.

## **2. Activity II**

**Objective** – To help participants understand the symptoms of the six killer diseases

### **Activity**

Describe the symptoms of any one of the six diseases and ask the participants to identify the disease. Some examples of description;

1. Measles : Rita has a high fever, red eyes, a runny nose, cough, noisy breathing and rashes all over the body.
2. Diphtheris : Pradeep has a sore throat, his neck is swollen and his breathing is noisy and difficult.
3. Tuberculosis : Manisha has lost a lot of weight. He coughs all the time and is very weak.
4. Tetanus : Laxmi cut her foot in a dirty field. A week later all her muscles became so tight that she could hardly breathe. They took her to the hospital but do not know if they can save her.
5. Pertusis : Four year old Yusuf was coughing badly. His lips became blue, the coughing was persistent and there was a loud whooping noise.
6. Polio : Radha was first restless and cold with fever. Later she developed a severe headache, sore muscles and her neck became stiff. Eventually her right leg became paralyzed.

## **3. Activity III**

**Objective** – To help participants actively promote immunization

### **Activity**

Ask the participants to count the number of children living in their village or neighbourhood who may be eligible for immunization. Then give them immunization chart and ask them to get it filled for every household with the information about the children living there.

Then after they return back with filled immunization charts, analyze the data for number of children immunized, those not immunized and those awaiting boosters.

### **AT THE END PARTICIPANTS SHOULD KNOW.....**

- ✓ The names and symptoms of the six killer diseases
- ✓ The corresponding vaccines
- ✓ The need for immunization

### **Follow up**

- ✓ To ensure maximum outreach it would be useful to monitor the participant's children own immunization chart, ensuring that they get involved in their own immunization programmes.

- ✓ Also monitor the survey conducted by the participants and ensure that the participants understand the importance of the exercise.
- ✓ Also participants could check regularly with the local health centre for information on the number of children immunized. They could watch carefully for trends in either an increase or decrease in the number of immunizations.

**Available Entitlements in Maharashtra**

1. Immunization through ICDS of age group 0 – 6 yrs
2. Immunization through health department of age group 0 – 16 yrs

## **Safe Drinking Water & Cleanliness**

### **MODULE NINE: Water Purification**

#### **Lesson plan**

To avoid water born diseases like diarrhea, hepatitis, typhoid, etc, the drinking water must be purified. Use water from bore well for drinking. The water from other sources like open well, river or water tunnels should be purified before drinking. Defecation near river and open well should be avoided. Similarly washing of utensils and animals should not be practiced near the drinking water sources. One well should be reserved in the village.

#### ***1. Bore well***

As the bore well lifts the water from dipper, the water is usually safe for drinking. In rainy season also the water is safe for drinking.

#### ***2. Open well***

Two or three open well should be reserved for the purpose of drinking water. Swimming, washing utensils, cloths and animals must be banned in these wells. The well must be constructed above the ground level to avoid any contamination. Cut all branches which are above the well so that defecation of birds and leaf fall should not be deposited inside the well. Human defecation in the periphery of 50 m should not be allowed.

#### **Use of TLC (Chlorine) for water purification**

To kill all the disease causing germs use of chlorine is the effective and low cost method. After addition of chlorine within 30 min all the disease causing germs get killed except the eggs of Amoeba. The chances of contamination of drinking water are more in rainy season. It is necessary to add chlorine daily in proper proportion in open dug well in rainy season for keeping water safe for drinking. If the addition of TLC is less than the required amount then all germs may not killed. On the other side if the excess powder is added then water gets a repelling smell and the living creatures will be killed. Many times especially in rainy season the excess TLC powder is added to ensure the disinfection of water. In that case stop use of water for 2 days. During this period the excess of chlorine will get vaporized and water will no more smell.

If water purification care is not taken in the source of water then water must be purified in the house before drinking. Add 4 drops of chlorine or “Jeevan drops” for 10 lit of stored water. If water is mixed with soil and clay then use alum for settling all the soil and clay particles and then supernatant water should separated and added with chlorine before drinking. Water is ready to drink after 30 min after addition of chlorine.

## **REMEMBER**

- Do not defecate near drinking water sources
- Use alum and TLC (chlorine) powder for water purification
- If tap is not fitted to the earthen pot then use long handled utensil to fetch water
- Always cover the pot containing drinking water

## **Educational Games**

### **1. Activity I**

*Objective* – To familiarize the participants with the method of water purification

#### *Activity*

Take water in water storage utensil. Add some soil and mix it well. Also add some straw waste. Show the water to all the participants and facilitate them to purify.

Wash the hands carefully with soap and water before starting the process of water purification. Take a clean cloth and fold it 4 times. Filter the water through the cloth in another container. Take out the cloth and carefully wash it before drying. The filtered water is still with some clay and soil particles. Tie alum with a thread and dip it in the filter water for 2-3 times. Keep the alum in clean box after use. Left the water undisturbed for 8 hrs. After that separate the supernatant clear water in another container and add 4 drops of “Jeevan drops” in 10 lit water. The water is safe to drink after 30 min.

### **2. Activity II**

*Objective* – To familiarize with diseases caused due to contaminated water

#### *Activity*

Provide the survey sheet prepared for analyzing number of incidences of illness caused due to drinking of infected water. Make 2 groups of participants and ask them to survey 5 nearby households and come back with in 1 hr. The chart contains the names of water borne diseases and different age groups. The investigating person should feed the frequency of diseases in the family.

After that the participants should demonstrate the proper method of water purification at home and precautions during storage and handling of purified water.

### **3. Activity III**

*Objective* – To help participants to promote the measures to stop contamination of water resources

#### *Activity*

Ask participants to prepare posters. These posters can show;

- ✓ How water source gets contaminated
- ✓ How contamination can be controlled
- ✓ How to purify water
- ✓ How to keep purified water

The posters can have drawings or written matter on it. These posters can be prepared in small groups or individually

**AT THE END PARTICIPANTS SHOULD KNOW.....**

- ✓ What should be done to stop contamination of water sources
- ✓ Proper method of water purification for common water source and at home
- ✓ How to keep purified water.

**Supportive trainings**

1. Fixing taps to earthen pots
2. Home medicines

**Follow up**

- ✓ To ensure maximum outreach it would be useful that the participant should monitor whether TLC powder is added in the common drinking water source by the health worker in village or not
- ✓ Monitor whether every house should get TLC or “Jeevan drop” solution which is freely available in the health centre.
- ✓ Frequent visit to the each household especially in rainy season for general monitoring and guidance regarding the cleanliness habits for safe drinking water.

Also participants could check regularly with the local health centre for information on the number of cases of water borne diseases. They could watch carefully for trends in either an increase or decrease in the number of patients with water borne diseases.

**Available Entitlements in Maharashtra**

1. Disinfection of water sources by chlorination through Gram Panchayat
2. Supply of water through taps

## MODULE TEN: Garbage management

### Lesson plan

To control over the flies, rats and other insects which are responsible for spread of various diseases, garbage management is one of the major parameter. There should be proper measures for management of garbage in the house itself or at community level.

The segregation of garbage at house hold level is the first step towards the proper management. There should be separate bin for collection of metal waste, plastic waste and compostable biomass. The metal waste and plastic waste can then be collected at village level and sent for recycling. The various methods for proper composting of wet biomass waste should then be implementated.

#### *1. Composting*

The wet biomass collected by each house hold should be collected at one place in village where different methods of composting can be used for proper composting of biomass as well as to enhance the quality of compost. The methods like pit composting (specially for carcass composting), heap composting, tank composting and vermi-composting can be used and the prepared compost is then used for farms as well as kitchen gardens.

#### *2. Soak pits*

The waste water flowing on the road can spread diseases as it is a breeding place of many bacteria and insects. Soak pits or drainage lines can be constructed to absorb excess of water flowing on the road making the village clean and control the spread of diseases.

#### *3. Biogas*

The dung and urine waste from animals can be utilized in biogas plant. This gives three way benefit – safe disposal of animal excreta, generation of gas for kitchen and compost in terms of biogas slurry.

### REMEMBER

- Do not mix compostable and recyclable biomass
- Do not allow the water to collect into the bins

### Educational Games

#### 1. Activity I

*Objective* – To learn a habit of segregation of garbage

#### *Activity*



Take 3 boxes of card board and label them as Metals, Plastics and Compostable biomass. Make 2 or 3 groups of participants. Mix all types of garbage i.e. metal, plastic and compostable biomass, in a separate bin. Ask participants to properly segregate the biomass.

The group which separates the garbage properly in a less time will be winner.

A group discussion can then be initiated listing the importance of segregation at the time of disposal of waste to save time and energy for further separation, importance of segregation in terms of its interference during composting, injury during handling of mixed garbage, etc.

## **2. Activity II**

**Objective** – To learn the proper method of composting

### **Activity**

Demonstrate the heap method of composting to the participants and its conversion to vermicompost. Ask them to do by themselves.

After this activity discussion on importance of composting of biomass for better sanitation, its use in crop productivity, etc can then be facilitated.

## **3. Activity III**

**Objective** – To familiarize with the hazards improper management of garbage

### **Activity**

A survey sheet can be prepared with the help of participants covering the following points

1. Do you separate the house waste ?
2. Way of disposal of house waste
3. Way of disposal of kitchen waste
4. Flies / mosquitoes / rats / other insects / other rodents observed

Ask each group of participants to survey 5 houses and come back in an hour.

After interviewing the family, participants should demonstrate the use of different bins for disposal of different type of house waste and importance of proper way of composting of decomposable biomass.

### **AT THE END PARTICIPANTS SHOULD KNOW.....**

- ✓ Importance of garbage management
- ✓ Proper method of decomposition of biomass available

### **Supportive Training**

1. Construction of soak pits
2. Biogas construction

### **Follow up**

- ✓ Ask the villager to participate in Govt. scheme known as “Santa Gadgebaba Gram Swachata Abhiyan”
- ✓ Each house hold should be visited frequently to monitor whether they are properly utilizing the separation bins or not
- ✓ Monitor whether the proper way of composting is implemented for composting of all compostable biomass collected from each household or not

**Available Entitlements in Maharashtra**

1. Construction of latrines, NADEP tanks, soak pits or drainage lines through MGNREGS and Nirmal Gram Yojana

## **MODULE ELEVEN: Women's Health**

As Women are the pillars of the society their health becomes an important factor. The importance of nutrition throughout their lifecycle cannot be refuted. After all, we must eat to live. The significance of nutrition at specific times of growth, development, and aging is becoming increasingly appreciated.

The effect of proper nutrition since childhood, during adolescence, prior to conception , during pregnancy and lactation and during the menopausal changes would help reduce most of deficiencies (eg: iron and calcium) seen in women.

The change could be achieved by imparting knowledge and making the society aware about the importance of nutrition.

### **Lesson Plan:**

- Nutrition in childhood and adolescence (daily requirement of nutrients, Formulation of nutritious recipes).
- Nutrition prior to pregnancy, during pregnancy (requirements as per trimester) and during lactation.
- Nutrition in post menopause.
- Nutritional changes to made in common gynecological problems ( Poly cystic ovarian syndrome, excessive white discharge, recurrent urinary tract infections, pre menstrual syndrome).

### **Activity Plan:**

- Nutritional Assessment: Height, weight, BMI and fat % medical history and health complaints to be noted of the person who is to be assessed.
- Demonstrations of recipes (Iron, vitamin C and calcium rich recipes.)
- A question sheet will be distributed in the class; it should be answered and submitted before the class begins. Another question with same questions will be provided after the class 10 min will be given to the class to answer it. Both the answer sheet will be assessed. This will help the educator to assess the change in understanding after the session.

### **Available Entitlements in Maharashtra**

1. Janani Surakshya scheme of health department
2. Janani Shishu Suraksha of health department
3. Nutritional supplement through ICDS to pregnant and lactating mothers