

# CHW TRAINING MANUAL

*For  
Community Health Workers*



National Basic Health Services Cell  
Ministry of Health  
Government of Pakistan

# ACKNOWLEDGEMENTS

The Ministry of Health gratefully acknowledges the help, advice and constructive criticism of dozens of people who have contributed to the development of this CHW Training Manual.

Dr. Iqbal Lodhi, (Medical Superintendent of the District Headquarters Hospital, Mansehra) and Dr. Zor Talib Khan (District Health Officer in Mansehra), their staff, and Mrs. Barbara Alling, (PRICOR Technical Representative, Mansehra Project), have worked as a team in an exemplary way, initiating a Community Health Worker training programme. They have faced many problems, but have worked together to solve them. They have continuously provided feedback to the Federal Basic Health Services Cell regarding their experiences in implementing the draft text - which has now been finalized. The Community Health Worker trainers in Mansehra should be recognised for implementing the draft text. They have patiently faced many uncertainties.

Mrs. Nasim Akhtar Wahab and Mrs. Mahmooda Tariq should be congratulated for developing the first draft of the training text in a very short time. This was done under the guidance and supervision of the Federal Training Advisor, Dr. Tara S. Upreti.

Ms. Sonia S. James deserves special recognition for translating the English Version into Urdu, also within a very short time. She translated the text while continuing her regular job responsibilities. Ms. James also did all the illustrations, for which she deserves extra appreciation.

We are indebted to the technical and financial assistance provided by the United States Agency for International Development, without which the development of this valuable manual could not have been completed.

Our sincere thanks to Mrs. Rosalind Andersen, editor of this text, and to Mr. Riaz Hussain Shah who untiringly worked on draft after draft until the final product was ready for publication.

To one and all who contributed to the development of this Community Health Workers' Training Manual, we again express our appreciation. This is a good example of the team work which needs to be developed more fully in delivering health services in Pakistan.

Dated, Islamabad  
14th February, 1989.

  
Prof. Dr. A.J. Khan  
Director General (Health).

# PREFACE

Pakistan has given high priority to providing Primary Health Care coverage to the maximum number of people in the shortest possible time. To achieve this, a Basic Health Unit/Rural Health Centre will be established in each Union Council by the year 1990. In order to staff these centres with adequately trained personnel, the Government of Pakistan has developed and revised a curriculum for the Health Technicians who train the Community Health Workers. The Government of Pakistan has opted to utilize, and is continuously trying to improve, a three tier system consisting of Community Health Workers, Health Technicians and MBBS Doctors.

The Community Health Worker (CHW), male or female, is selected by the village community. As a member of the health team, the Community Health Worker assists famines in self care and in the utilization of existing health services at the Basic Health Units and Rural Health Centres. Community Health Workers work under the supervision of a mid level health worker (Health Technician, LHV or Dispenser) who in turn works under the supervision of a Medical Officer. The Medical Officer-in-charge is considered the team leader and manager within each health centre.

Training materials for the basic training of Community Health Workers and Health Technicians have been developed under the Primary Health Care Project, in order to facilitate the delivery of essential primary health care services. This text consists of 14 units and is limited to the Community Health Worker's role and responsibilities. It was prepared by two Primary Health Care Project Training Specialists, Mrs. Nasim Akhtar Wahab and Mrs. Mahmooda Tariq, under the supervision of the Federal Training Advisor, Dr. Tara S. Upreti.

This text has been reviewed by the Director General of Health, Dr. A. J. Khan, and by Dr. M. Zafar Ahmed, Deputy Director General of Health. They have each taken a personal interest and given much time to assuring that all relevant and appropriate information, relating to the role of Community Health Worker, is included.

It is hoped that utilization of this text in the training of Community Health Workers will clarify their role and strengthen our health services delivery.

Dated, Islamabad  
14th February, 1989.

  
Dr. M. Zafar Ahmed  
Deputy Director General Health  
Basic Health Services Cell  
Islamabad.

# CONTENTS

## UNIT ONE

### THE ROLE OF THE CHW

#### Introduction 14

- 1: Job Description 14
- 2: Tasks 15
- 3: Training 17
- 4: Principles of Behaviour 18
- 5: Communication 19
- 6: Making a Map 21
- 7: Knowing the People 22
- 8: Your Attitude 24
- 9: Teaching Methods 26
- 10: Home Visit 33
- 11: The Basic Health Unit 38
- 12: Your Kit 46

#### Summary 49

## UNIT TWO

### GETTING TO KNOW THE COMMUNITY

#### Introduction 53

Form 1 55

Form 2 57

Form 3 59

Form 4 64

#### Summary 68

## UNIT THREE

### CARE OF THE SICK

#### Introduction 70

- 1: Hand washing 71
- 2: Fever 72
- 3: Pain 77
- 4: Paracetamol 78
- 5: Giving medicine 79
- 6: Referral 80
- 7: Verbal autopsy 82

#### Summary 84

## UNIT FOUR

### FIRST AID

#### Introduction 86

- 1: Artificial Respiration 87
- 2: Bleeding 89
- 3: Care of Wounds 90
- 4: Shock 91
- 5: Burns 92
- 6: Fractures and Sprains 94
- 7: Poisoning 96
- 8: Snake Bites 97
- 9: Animal Bites 99
- 10: Extreme Heat 101
- 11: Extreme Cold 102

#### Summary 104

## **UNIT FIVE**

### **HEALTH EDUCATION**

#### **Introduction 106**

- 1: Nutrition 107
- 2: Personal Cleanliness 112
- 3: Head Lice 114
- 4: Round Worms 115

#### **Summary 118**

## **UNIT SIX**

### **SANITATION**

#### **Introduction 120**

- 1: Safe Drinking Water 121
- 2: Latrines 126
- 3: Waste Disposal 130

#### **Summary 132**

## **UNIT SEVEN**

### **NUTRITION**

#### **Introduction 134**

- 1: Breastfeeding 135
- 2: Weaning 137
- 3: Introducing Solids 138
- 4: Recipes 141
- 5: Malnutrition 143
- 6: Measuring the Arm 144
- 7: Growth Monitoring 145

#### **Summary 148**

## **UNIT EIGHT**

### **MATERNAL CARE**

#### **Introduction 150**

- 1: Planning 151
- 2: The Normal Pregnancy 152
- 3: The High Risk Pregnancy 154
- 4: The High Risk Delivery 156
- 5: Referral 158
- 6: Preparing for the Birth 159
- 7: Hand Washing 161
- 8: The Birth 162
- 9: Neonatal Tetanus 164
- 10: After the Birth 165

#### **Summary 166**

## **UNIT NINE**

### **CHILD SPACING**

#### **Introduction 168**

- 1: The Goal 169
- 2: Conception 172
- 3: Temporary Methods 174
- 4: Permanent Methods 182
- 5: Your Role 185

#### **Summary 187**

## **UNIT TEN**

### **IMMUNIZATIONS**

#### **Introduction 190**

- 1: Six Childhood Diseases **191**
- 2: Immunization Schedules **196**
- 3: Before the Clinic **198**
- 4: At the Clinic **199**
- 5: After the Clinic **201**

#### **Summary 201**

## **UNIT ELEVEN**

### **ORAL REHYDRATION THERAPY**

#### **Introduction 204**

- 1: Normal Liquid Requirement **205**
- 2: Dehydration **206**
- 3: Oral Rehydration Therapy **208**

#### **Summary 210**

## **UNIT TWELVE**

### **ACUTE RESPIRATORY INFECTION**

#### **Introduction 212**

- 1: What is ARI? **213**
- 2: Classifications **213**
- 3: Case Finding **215**
- 4: Treatment Protocol **216**
- 5: Referral **218**
- 6: Follow Up **219**

#### **Summary 219**

## **UNIT THIRTEEN**

### **MALARIA**

#### **Introduction 222**

- 1: Symptoms **223**
- 2: Prevention **224**
- 3: Treatment **226**

#### **Summary 228**

## **UNIT FOURTEEN**

### **TUBERCULOSIS**

#### **Introduction 230**

- 1: The Disease **231**
- 2: Your Role **234**

#### **Summary 236**

**UNIT ONE**  
**ROLE OF CHW**

# INTRODUCTION

This is the first unit of your training and covers the following:

- The CHW's role (what you are supposed to do).
- Description of your training programme.
- Suggestions on how CHWs are to behave, act, dress and talk.
- Suggestions on ways to communicate with people.
- Suggestions on increasing your knowledge about your assigned villages by making a map.
- Suggestions on learning about different kinds of people, including the leaders of your community.
- Specific suggestions on communicating with people, by using various teaching methods.

- Home visits.
- Procedure for home visits.
- Procedure for using a CHW Kit.
- Description of a Basic Health Unit team and your specific responsibilities as a team member.

It is very important that you understand this chapter well, because it describes what a CHW is and how (s)he is expected to work.

**NB** This manual is for both male and female CHW's. Therefore, "he" and "she" are used interchangeably.

## 1.1

### JOB DESCRIPTION

#### STATEMENT OF WORK

The CHW, as a member of the health team, assists families in self care and in the utilization of existing health services (at the village, tehsil, district and provincial levels). He

works under the guidance and supervision of the HTs and LHVs. He is the first contact for the community in the utilization of health services.

## 1.2 TASKS

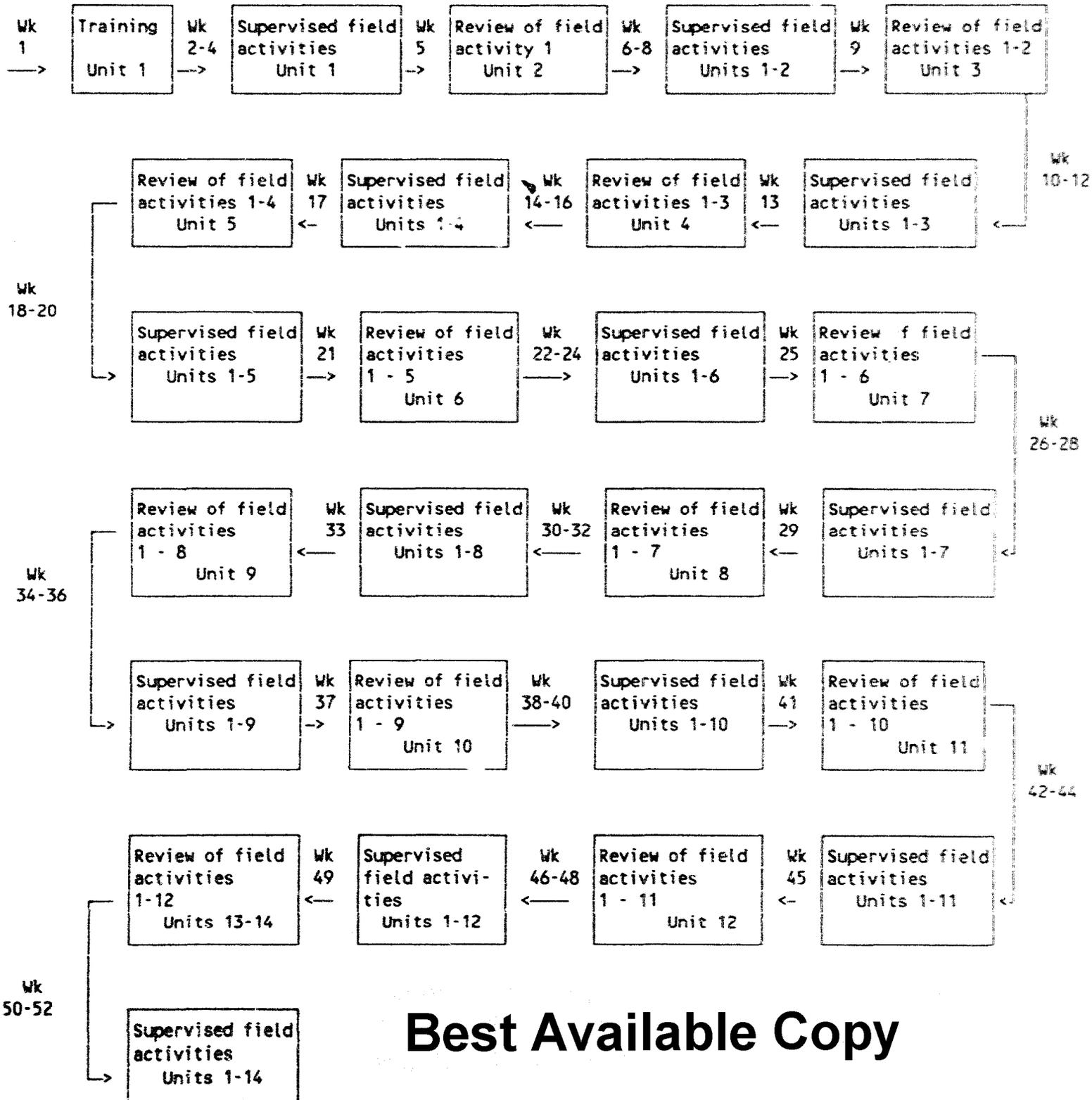
- 1 To provide information to the community about services available from the BHU and RHC, and to assist the HTs in providing these services.
- 2 Data collection on births, deaths, and status of health.
- 3 To provide care for people with fever or pain, and to refer sick or injured people to the hospital, RHC or BHU.
- 4 To provide First Aid.
- 5 To assist the HT, LHV or vaccinators, by providing health education to families.
- 6 To give information about safe drinking water and basic sanitation.
- 7 To counsel on nutrition and growth monitoring.
- 8 To provide information on available maternal care.
- 9 To provide information about child spacing methods.
- 10 To give out information on the importance of immunizations and to encourage families to participate fully in this programme.
- 11 To teach O.R.S. preparation and utilization.
- 12 To give information and guidance on the proper care of Acute Respiratory Infections.
- 13 To give information and guidelines on malaria case management and control.
- 14 To assist in the control of TB.



THE CHW AS A MEMBER OF THE COMMUNITY AND OF THE BHU TEAM.

UNIT ONE: ROLE OF CHW

52 WEEK SEQUENTIAL TRAINING PROGRAMME

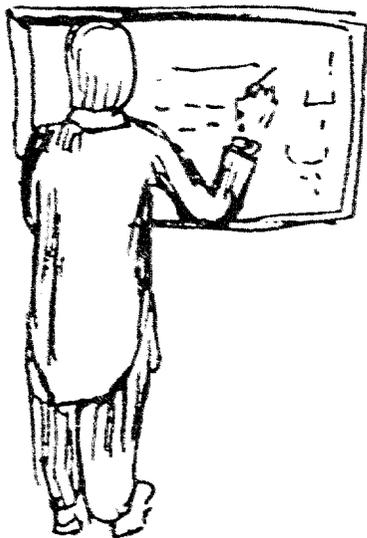


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## 1.3 TRAINING

One male and one female is to be trained for each Union Council. The minimum educational requirement for males is matric, but this may be relaxed for female candidates.

Classroom training will be for a total of 13 weeks. These 13 weeks will be spread over a one year period. Classroom training.



ONE WEEK IN THE CLASSROOM

will be limited to one week per month. The remainder of each month will be devoted to practical work in the village, on the unit completed, under the supervision of the HTs at the BHU. After their three weeks in the field, the trainees will come back each month for a further week of classroom training.



THREE WEEKS IN THE VILLAGE.

## 1.4 PRINCIPLES OF BEHAVIOUR

The community health worker (male or female) is a member of a BHU team, living and working in the community, helping to meet the health needs of the people. Therefore, as a BHU team member, you are expected to follow certain principles of behaviour in carrying out your responsibilities. These principles are:

- Know your job responsibilities and limitations. Offer only those services for which you are trained.
- Establish and maintain a good relationship with the other members of your team, and cooperate with them.
- Follow the rules and regulations of the health facility in which you are posted.
- Have respect for the rights and dignity of all people. Serve them without regard for sex, age or social status.
- Respect other people's customs and beliefs, and be polite and sympathetic.
- Practise what you teach about health. Be a good example for the community.
- Help people, within the limits of your training, and show interest and concern for their general welfare.
- Be fair and honest.
- Do not criticize, make judgments or gossip about people you are serving.
- Act with confidence. Be cheerful and enthusiastic. Maintain a neat and clean appearance.
- Remain open to community responses to health programmes. Do not take offence if the community refuses to accept a new service or if people have many questions.
- Evaluate the community's response to your activities and consider alternative approaches.
- Be loyal to the organization employing you, and perform your duties accordingly.
- Meet regularly with your supervisor to report and discuss your activities and to request help where needed.

## 1.5 COMMUNICATION

How does the Community Health Worker get to know the community better, in order to be more effective?

The CHW needs to be familiar with the structure and function of the community, so that he can better involve the people in the utilization of services available through the BHU and RHC.

No one can live alone, because man is a social being. This means that an individual needs others to interact with. This is why groups and families are formed. A community is made up of one or more groups of people. Groups are classified as informal or formal.

An informal group is one with a small and long lasting membership which interacts frequently. Examples of these groups are families, close friends and play groups. Each person in an informal group has a feeling of belonging and the group is bound together with strong ties of affection and loyalty. Children learn about the world through these informal groups. This is where they develop lifetime behaviours and habits.

A formal group is a collection of individuals with a common goal.

Membership in these groups is voluntary. The formal group functions according to its regulations. Where the membership is large, there is less direct contact between members. With society becoming increasingly modernized, formal groups (such as schools) are taking over many of the activities of informal groups, such as the education and discipline of children.

Each individual in a group is expected to behave in a certain way, or to play a "role." Certain responsibilities go with each role. A person usually belongs to a number of different groups and will have a different role in each group. For example, a man may be the head of his household and, as a citizen of the community, he may also have a special role in the mosque or in other village groups.

Groups usually have rules and regulations for behaviour. In rural areas, there may not be written rules, as in urban groups, but the rules still exist. Therefore, it is important to find out what these rules are in your particular area.

## UNIT ONE: ROLE OF CHW

### MAKING CONTACT WITH THE COMMUNITY

Since outreach work has not yet been started in all communities, your supervisor may first need to contact the community authorities to explain the CHW Programme and to arrange a time and place for you to meet them.

These authorities should also be told about the CHW's role in home visiting and be asked to identify families who would benefit from this service. These families should be visited first.

Even though you are a member of the BHU team, you will spend very little time actually at the BHU. Most of your time will be spent in the community. Home visiting is the medium through which CHW services are delivered. Making a home visit

meaningful is difficult and requires experience. For this reason, you will

be helped by your supervisor in making home visits, until you feel comfortable.

Since the CHW is new to the government system you need to identify yourself to the village leaders so that they may facilitate your activities. You need to interact with them frequently and maintain a visible role in the community. In this way you will become more acceptable to the group. In other words, you need to make the community aware of your official role.

As the resident CHW for your community, be sure you know the following information:

The location, size and resources of the community.

- Who lives in it.
- Who the leaders are.



IDENTIFY YOURSELF TO THE VILLAGE LEADERS

## 1.6 MAKING A MAP

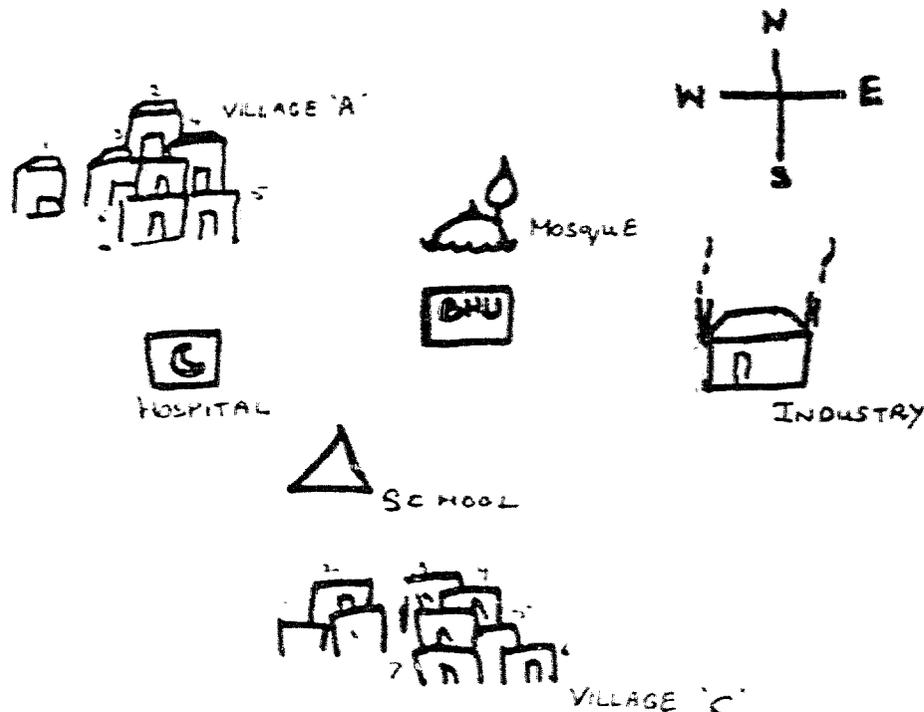
In order to be an effective CHW you will need a map of each village in the community you serve. The Union Council or the Rural Health Centre may be able to provide you with these. Obtain copies of any available maps and orient yourself to them. Then begin to make maps of the remaining villages in your assigned area. These will be valuable resources.

In making a new map, the RHC or BHU should be the focal point of reference. For example,

Village A is 2 miles northwest of the BHU and Village C is 5 miles south of it.

- Date the maps and locate all the houses in each village or hamlet.
- Include the location of mosques, business areas and government offices.
- Locate schools.
- Locate sources of water.
- Locate industries and other employment sources.

Locate roads, rivers, ponds, canals, etc.



YOU WILL NEED A MAP OF EACH VILLAGE YOU SERVE

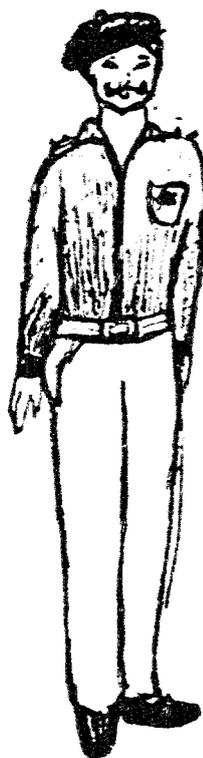
## 1.7 KNOWING THE PEOPLE

It is important to know not only the physical characteristics of a village in terms of what types of facilities exist, but also the characteristics of its population. General information on population may be obtained from the National Census which is taken every 10 years. However, you will want to gather your own up to date information periodically. Complete the family based household surveys to obtain information on the population of your village.

It is important to know the leaders in each community and to know how to identify them. In any community three types of leaders can be identified a) formal, b) informal and c) opinion leaders.

- There are two kinds of formal leaders. These are the official leaders and the elected leaders.

The official leaders are the persons employed by the government like the Union Council Chairman, school teachers, policemen and army officers. (The leadership role of these people goes with the post and may be temporary, because the individual may be transferred). Some leaders in this category are respected by the community and some are not. The elected leaders are appointed to non-governmental or religious organizations. These include leaders among landlords (Chaudhry, Sardar), youth clubs, women's organizations etc.



## UNIT ONE: ROLE OF CHW

- The second type of leader is the informal or natural leader. These individuals were born with leadership characteristics. They have great influence on the villagers. These leaders could include housewives, dais and shopkeepers. In addition to the natural leaders, there is an informal category called "status leaders." Status means a special respected place for an individual in the group. Status may be given to a person because of age, occupation, marriage, achievement, family history or education.

- In the third category are the opinion leaders. These individuals may also come from the first two categories. The community regards their opinions very highly and seeks their input in making decisions about individuals, families or the community. These leaders are very influential in persuading others to adopt or reject new ideas and programmes.



## 1.8 YOUR ATTITUDE

Now that you have collected information on the community's population, leaders and resources, you need to communicate with its people. How you talk and behave will greatly influence your success or failure as a CHW. Your success will also greatly depend on your attitude. What do we mean by attitude? Attitude means a way of thinking or behaving towards a person or thing. Feelings are the internal experiences a person has and these show in his manner and moods. Our feelings may not be obvious from what we say but from how we say it. For example, "I do not have time now" can be said in a variety of ways. Below are some of these ways:

- "Can't you see I am busy?"
- "Go away and stop bothering me."
- "I am busy now, could you come

back tomorrow?"

"Please forgive me for not seeing you, but I cannot leave what I am doing now. Could you come back later this evening?"

The third and fourth statements are made to someone having equal or higher status than the speaker. The first two statements indicate an angry or frustrated mood and may be directed to those who seem inferior in the community. They indicate disrespect and ignore the feelings of others. Unfortunately this attitude is common among Health Workers. This kind of approach is not only unkind, but also harmful to health programmes. If people are not made to feel good they will not welcome you and they will tell their friends and relatives to stay away as well.



"GO AWAY AND STOP BOTHERING ME!"

## UNIT ONE: ROLE OF CHW

If you are not liked in the community where you work, you may not be allowed to come back. If this happens, how can you justify your work?

As a Community Health Worker, you need to keep in mind that you are trained to serve people and to meet their health needs. Therefore, you need to make them feel good. Your attitude has to be the same towards all people regardless of their education, wealth, status or age. Treat everyone with respect and courtesy. Make them feel that you are there to help them.

Talk to them nicely, and make them feel comfortable, so that they will be convinced that you care about their welfare and are truly interested in them.

Until you convince the people by your attitude and behaviour, that you are there to help them, they will not have any time for you. So from your first contact be polite, speak with respect, listen and try to understand their needs before giving them advice. Treat each person as you would like to be treated. In this way you will gain the respect and confidence of the community, so necessary for a successful CHW.



TALK TO THEM NICELY AND MAKE THEM FEEL COMFORTABLE

# 1.9 TEACHING METHODS

Developing the attitude of treating people equally, with dignity and concern, is a blessing. You also need to learn to utilize different methods of communication. Each has its own strength and weakness in accomplishing objectives. There is no one method that is effective for all situations. Different situations call

for different methods. The criteria for selecting the most appropriate method are: the size of the group, the type of message to be conveyed and the teaching materials available. The following is a list of various teaching methods, as well as the criteria for when to use them:

TEACHING METHOD	CRITERIA USING THE METHOD
Lecture	<ul style="list-style-type: none"> <li>- For a large group (50-100 people).</li> <li>- For providing knowledge</li> <li>- To find out how much knowledge they already have.</li> </ul>
Discussion	<ul style="list-style-type: none"> <li>- For a small group of 2 to 10 people.</li> <li>- To explore feelings and attitudes.</li> </ul>
Demonstration and practice	<ul style="list-style-type: none"> <li>- For a small or large group.</li> <li>- For teaching procedures.</li> <li>- For when a teacher feels it is appropriate and when materials are available.</li> </ul>
Role playing	<ul style="list-style-type: none"> <li>- For a small or large group.</li> <li>- For interpersonal communication.</li> </ul>
Storytelling	<ul style="list-style-type: none"> <li>- For a small group.</li> <li>- For communicating new ideas and relating them to local conditions.</li> </ul>
Counselling	<ul style="list-style-type: none"> <li>- For one to one.</li> <li>- For a small group.</li> </ul>
Games	<ul style="list-style-type: none"> <li>- For a small or large group depending on the game.</li> </ul>

## LECTURE

This is the most commonly used method of teaching. In this method, the teacher usually speaks while the students listen. A lecture is a one way communication method, because only the teacher is talking. It is also the least effective teaching method, because there is little or no opportunity for the audience to participate in the learning process. The audience easily loses interest. When combined with discussion however, this method becomes more effective.

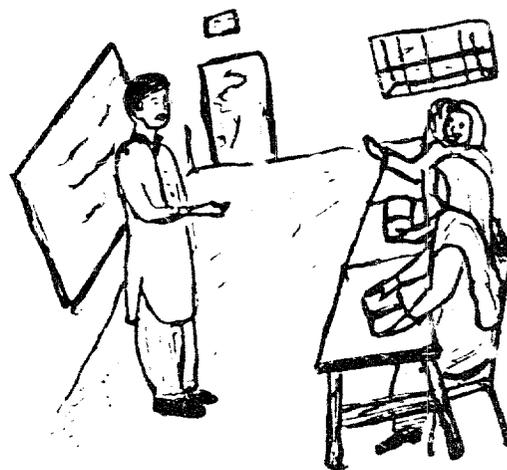


## DISCUSSION

To discuss means to talk over. Here the participants and teacher talk over the topic and each one may express an opinion. In a discussion, questioning is accepted and answers are given by the teacher or the group. By involving the group in the process of learning, the participants remain alert and interested.

## DISCUSSION COMBINED WITH LECTURE

This is very effective. The teacher presents the main ideas, one at a time, and initiates a discussion by asking questions of the group, as well as asking them to share their experiences on the subject.



## DEMONSTRATION AND PRACTICE

Demonstration is a method of showing how something is done. For example, to demonstrate the preparation of a supplementary diet for a baby, parents must be shown the procedure step by step. After showing them, ask them to repeat the procedure. This is practice. In order to give a good demonstration, the following principles must be followed:

- Prepare a plan for the demonstration.
- List the steps to be demonstrated.
- Practise the steps by yourself.

- Use available audio-visual aids.
- Use locally available and appropriate material.
- Involve the viewers in the preparation and presentation of the demonstration.
- Compare the similarities and differences in your ways and their ways.
- Allow time for discussion after the demonstration is over.

### PREPARING FOR THE DEMONSTRATION

- Make sure that everybody will be able to see well.



DEMONSTRATION SHOWS HOW SOMETHING IS DONE

- Be sure that you have collected all the things which you will need during the demonstration.

- Gather the necessary utensils for preparing ORT or weaning food etc. Peel, cut and wash vegetables.

- If possible, use a table for your demonstration. If a table is unavailable, use a cloth spread on the ground.

TELL YOUR VIEWERS:

- What you are going to demonstrate.

- Why it is important.

- How your methods compares with theirs.

START YOUR DEMONSTRATION:

- Explain each step.

- Go slowly.

- Use simple words.

- Speak loudly and clearly.

- Be friendly and polite.

ANSWER QUESTIONS:

- Invite questions after you finish each step of your demonstration.

- Ask viewers to repeat the step which you have just finished.

- Review the step if it is not understood.

SUMMARIZE WHAT YOU HAVE DEMONSTRATED:

- At the end, when you have finished the demonstration and the discussion has taken place, please do not forget to summarize each step.

- Tell your viewers where they can get the materials and items you used.

FIND OUT WHETHER YOUR DEMONSTRATION WAS SUCCESSFUL BY ASKING YOURSELF:

- Did my viewers learn how to prepare supplementary baby food?

- Can they do the same in their own homes?

- What were my weak points?

- How can I improve in my next demonstration?

FOLLOW-UP:

- Go into the homes and see whether the parents are practising the newly learned techniques for preparing baby food.

- Give further advice as needed.

## ROLE PLAYING



Role playing means that a person takes the role of someone else and tries to act as that person would. In the health field, we work with people to try to develop new health habits, or to change old ones. In doing so it is important to understand the people we work with, and their beliefs and customs. In addition to understanding people, it is also important to anticipate their probable reactions to your suggestions. To help students face a real situation, role playing demonstrates how people react and how to handle the situation.

Role playing helps to develop skills in working with people. It is like a drama, but it requires no written script or memorization. You act or play the part of another person, acting out how you think the other person would behave in a particular situation. The other actors then respond. Role playing is closer to

real life than a drama, which is fixed and cannot be changed. In role playing the actors learn how scenes or situations develop and where the situation is heading. In role playing it is important to identify the goal for each session, in other words, what this specific role play is designed to teach.

This method can also be used with the villagers to help them understand each other and their ways.

Role play is used for:

- Developing practical skills.
- Developing social skills.
- Developing observation skills.
- Developing alternative solutions to problems.
- Starting a discussion on topics people find difficult to talk about.

## STORY TELLING

Telling stories is the oldest method of teaching children about their culture. This has been used in settings where people cannot read. Storytelling can make a topic simple and lively. However, to be effective, a story should be interesting and relate well to the audience.



## COUNSELLING

This means to give advice or instruction to an individual or very small group (e.g., a family) and to help them to discuss their concerns and to arrive at a decision on what to do and how to do it. As a CHW you will be spending most of your time counselling. To be effective you have to establish a good working relationship, be a good communicator and demonstrate an interest in the welfare of those you counsel.



## GAMES

Games are played by adults as well as children. Because people of all ages like to play games, they are becoming more popular as a method of teaching. With this method, people become thoroughly involved and learning takes place easily. You, as Community Health Worker, may know of games that you can use in conveying your message to the people. Games like "Ludo" or "Snakes and Ladders" have been used in various countries to convey the messages of good nutrition and family planning. You may want to ask the family planning workers to teach these to you.

**WHAT IS THE BEST METHOD OF TEACHING?**

There is no single method of teaching that is effective for all situations. Each method has its own advantages and disadvantages and these have to be considered when choosing which one to use.

Experience shows that combining more than one method in each teaching session gives better results than using a single method. In one study, the effectiveness of various teaching methods was evaluated and the following results show how many families were influenced to adopt new advice:

No. of methods used in teaching	Families adopting Advice
One	35%
Combination of three	64%
Combination of four	86%
Combination of more than four	98%

From this study we learn that we can be most effective by using a combina-

tion of at least five methods of teaching.

## 1. 10 HOME VISITS

Now that you have some basic information on your community's characteristics and have some knowledge of various ways to communicate, you must begin to make contact with the people. One way for you to meet people is through home visits.

The principle aim of health care services in the home is to help people use their own resources to meet their needs. This will result in a healthier family.

Before a home visit you should look at your map of the community and locate the Basic Health Unit.

You can then:

- Determine where the houses are located and how far away they are.
- know the names, titles and addresses of other Health Workers (TBAs, CHWs, etc.).



## UNIT ONE: ROLE OF CHW

Home visits should start at the homes closest to the BHU, or to your own home. The distance for visiting other homes can be increased as you develop skills and as the community sees the benefit of your visits. Once you are confident, and the requests for home visits increase, you should make your first visit of the day or week at the home furthest away and work your way back to the centre.

### REASONS FOR HOME VISITS:

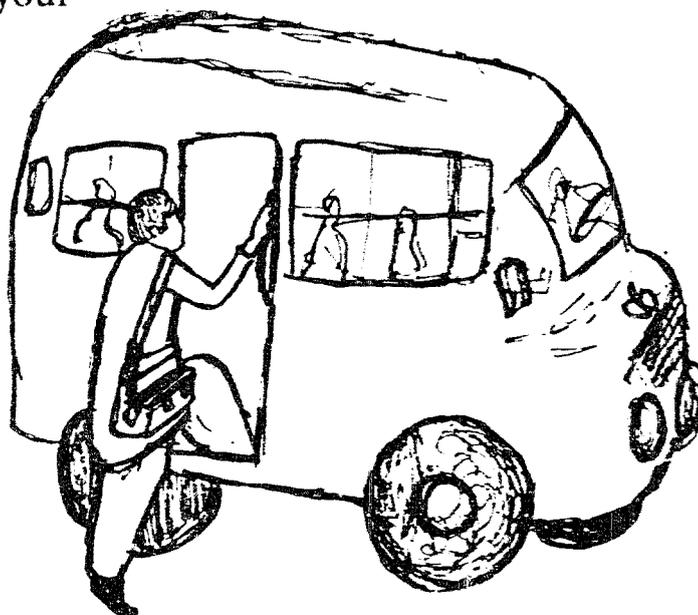
As a CHW you are in the community to help people attain better health. You will be responsible for explaining the services available from CHWs, HTs, the BHU and RHC and for giving necessary help.

### PLANNING FOR HOME VISITS:

You will need to plan the number of home visits you can make in a day, week or month in order to be most effective in serving your

villages. You will need to divide the area and make plans for visiting within the time limits of your working hours. Make your home visits on a priority basis. For example, if you need to make ten visits and you only have 3 to 4 hours in which to make them:

- Determine which visits can be postponed. (A new antepartum case may be visited later, but a child with diarrhoea should be visited immediately.)
- Visit those you have promised to visit.
- Visit those families who have come to you requesting you to assess their needs.
- Visit those who have not returned to the clinic for follow-up. (Remember to keep an accurate record of all visits in your diary).



## UNIT ONE: ROLE OF CHW

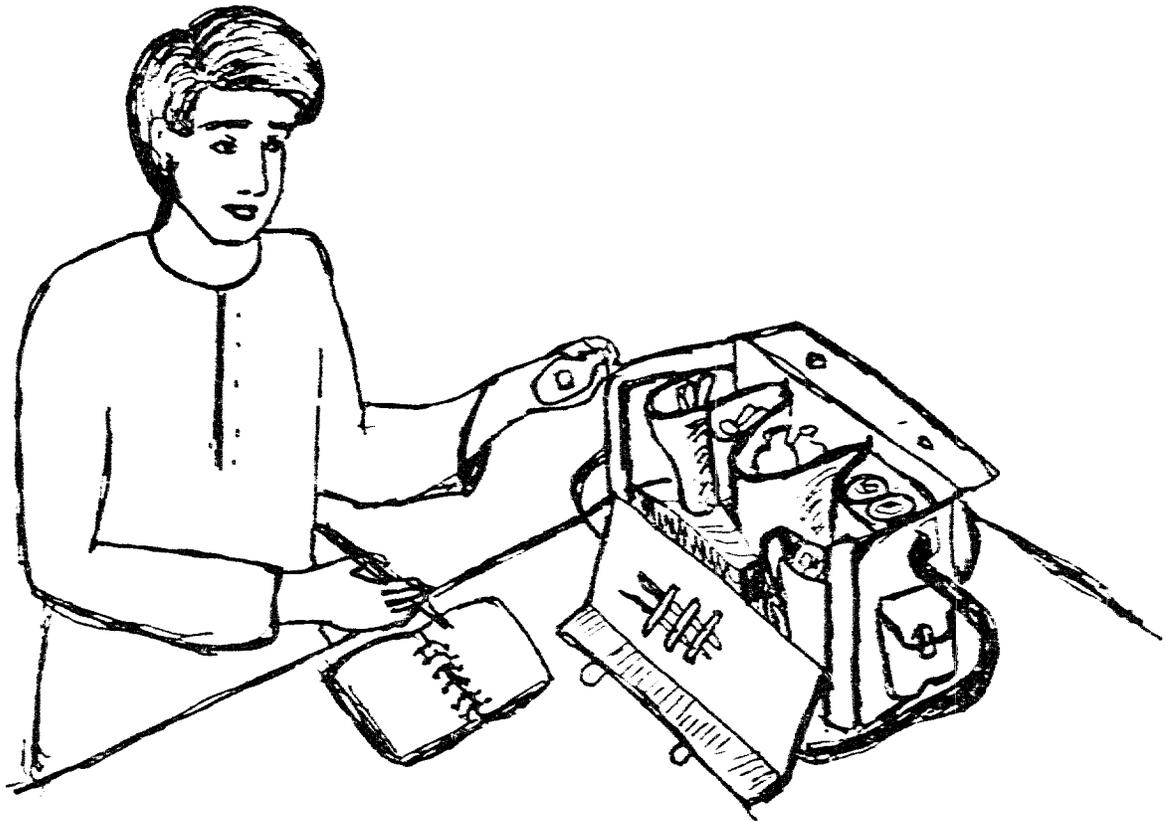
### PREPARING FOR HOME

**VISITS:** Before you make home visits, know what you are going to do and what you will need.

- Review your records of the families to be visited.
- Review the procedures you will use and make sure you have the necessary materials with you.
- Make sure you have information with you about other valuable services which may be requested

during your visit. For example, information on the World Food Programme for malnourished children. Have with you the names and addresses of other resources, such as the HTs, LHVs, TBAs, etc.

- Make sure your kit contains the necessary equipment and supplies, including teaching aids and your diary.



## UNIT ONE: ROLE OF CHW

### PROCEDURE FOR HOME VISITS

**FIRST VISIT:** Start your visit with greetings.

- Introduce yourself. "I am (Name) from the BHU located in (Name)." Give one of the following explanations:
  - "I am here because your husband said you were not feeling well; I stopped by to see if I could be of any help."
  - "Do you know our BHU is now in service? I came to explain our services."



- "I am new to the BHU and came to introduce myself."
- Ask if you can spend a few minutes with the people in the house.
- If you are not asked to sit down, suggest "May I sit here and talk for a while?"
- Explain the purpose of this visit, for example "The BHU is conducting a baseline survey to identify the health needs of this community. May I ask you to respond to a few questions?" Complete the forms.
- Thank the family for co-operating with you in completing the forms and explain the roles of the CHW and the BHU, and ask if they might be interested in utilizing them. Ask them to think about it and to contact you at the BHU, or inform them you may stop by again soon.
- End each visit with a discussion of what was done during the visit and enquire if they have any questions.
- Record your visit in your diary.

## UNIT ONE: ROLE OF CHW

**FOLLOW UP VISIT:** Start the visit with a greeting and explain the purpose of this visit. For example:

"Today I am here to see your sister-in-law, as you suggested during our last visit."

"Today I am here to see how your child with diarrhoea is doing."

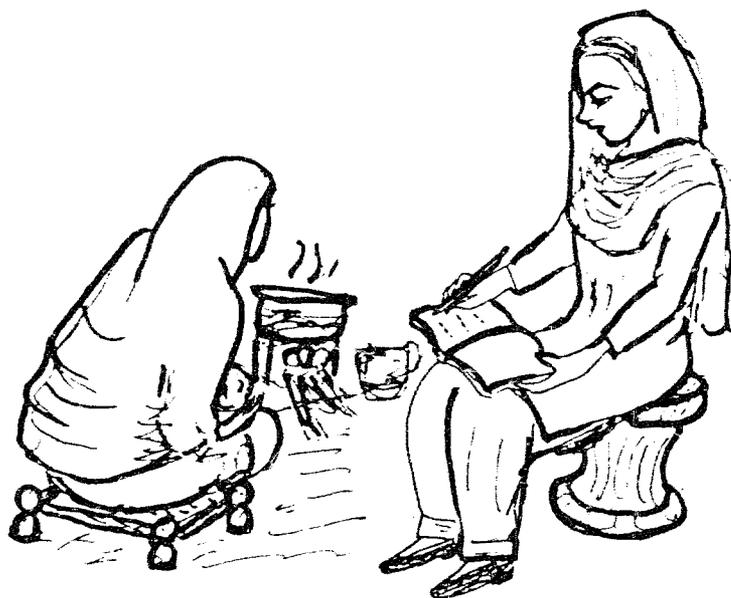
"I came to find out how you are doing with your treatment of Malaria" (or worms, etc.)

● Conduct the visit by:

Interviewing the sister-in-law for ante-partum care, or assessing the condition of the child.

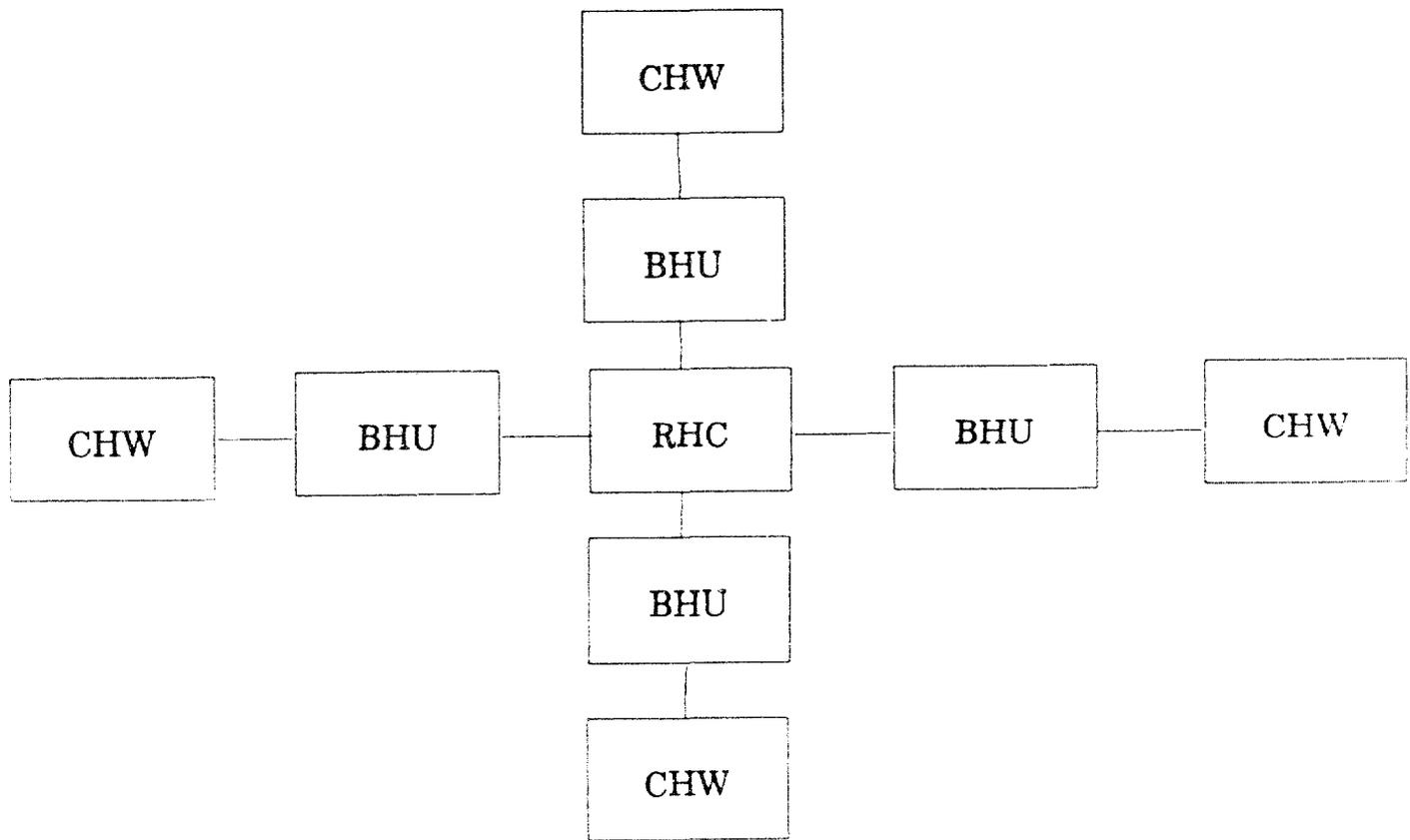
Review with the woman the treatment requirements, how she feels, her observations and yours.

- Discuss your findings with her.
- Make plans for future follow-up visits or end the visits with a concluding remark such as:
  - "It looks as if your sister-in-law is pregnant. I will refer her to....(Name of TBA in the area)... who will be in touch with you to make plans for home delivery."
  - Or "You need to come to the BHU to be examined by our Medical Officer."
  - Conclude by reviewing the visit and saying, "I can be found at... (Place)... If you need me, let me know."
  - Record your plan in her record and yours.



# 1.11 THE BASIC HEALTH UNIT

## ORGANIZATION OF A TYPICAL RURAL HEALTH CENTRE AND ITS BHUs AND CHWs



A Basic Health Unit (BHU) is the government's first level of institution for health services. The next level is a Rural Health Centre, and then the Tehsil and District Hospitals. Finally the Teaching Hospital. A BHU is very simple, has only 8-11 staff and provides minimal level treatment. A RHC has a staff of 21-24 persons and provides a greater variety of services. The hospitals have an even greater variety of services. Thus the structure and functions of a BHU

are simple, whereas those of the Teaching and District Hospitals are complex. As a guide for referral, people requiring simple treatment for common conditions should be treated at a BHU, while those requiring a moderate amount of service should be referred to a RHC or tehsil hospital. Those requiring specialized or complicated services should be referred to the District or Teaching Hospital.

## UNIT ONE: ROLE OF CHW

### THE BASIC HEALTH UNIT TEAM

DESIGNATION	POSITIONS
Medical Officer	1
Health Technician (Male)	1
Health Technician (Female) or Lady Health Visitor	1
Midwife	1
Chowkidar	1
Bahishti/Sweeper	1
Dispenser	1
CHW	1-3

### THE RURAL HEALTH CENTRE TEAM

DESIGNATION	POSITIONS
Medical Officer In Charge	1
Medical Officer II	1
Woman Medical Officer	1
Health Technician (Male)	1
Health Technician (Female)	1
Lady Health Visitor	1
Store Keeper	1
Dispenser	1-3
Laboratory Assistant	1
Clerk	1
Midwife	1
Ward Orderly	1
Bahishti	1
Driver	1
Cook	1
Mali	1
Peon	1
Chowkidar	1
Sweeper	1

## UNIT ONE: ROLE OF CHW

A BHU team is small in comparison to a RHC team. The functions of the teams vary in type and degree. Since the CHW will be working out of a BHU, further discussion will be limited to the BHU team. The CHW will be provided with an opportunity to tour a RHC and a DHQ hospital to gain an understanding of the type and amount of services available from these facilities.



A BHU team is small and the members must work together to make it successful.

Its function is to meet the health needs of up to three Union Councils. As a team member of a BHU, you alone will not be able to meet all the

health needs of the people in your jurisdiction. Your main responsibility is to be available, either at the centre or in the community, during working hours.

Each BHU team member should provide only those services for which he is trained and equipped. Therefore, if a person comes to the BHU needing a complicated medical procedure, the Medical Officer should refer him to a RHC after the initial examination and treatment.

The BHU staff is small and it may not be possible for them all to be there all the time. Therefore, everyone must share in everyone else's work.

While Medical Officers or HTs should ideally see all the serious cases at the BHU, there will be times when they are not available. The CHW should then see the patient and determine the condition based on the training and skill he possesses. He should explain frankly to the family that the Medical Officer or Health Technicians are not available, that he is a qualified CHW, and that he would like to make the following suggestions, based on his findings.

The Basic Health Unit should be an example of a

## UNIT ONE: ROLE OF CHW

healthy environment. Therefore, it is every one's responsibility to make sure that the BHU compound is neat, clean and in order. Everyone, should work together to make the BHU functional, with all staff present and allocated resources available for the welfare of the people in the community.

The Medical Officer is the team leader of the centre. He delegates responsibility to each of the staff, according to their job descriptions. Because the staff is small it may sometimes be necessary to "fill in" for an absent team member. Each member of the team needs to be concerned about the others and to provide necessary help when and where needed.

The specific duties of each member are briefly described as follows:

- The Medical Officer is responsible for diagnosing, prescribing treatments and making referrals.
- The Health Technician's main responsibility is to screen all persons coming to the BHU. He treats common conditions if the Medical Officer is not available. Health Technicians also provide health

education, do outreach work and supervise the midwife, dispenser, CHW and sweeper.

- Female Health Technicians see all women and provide services for normal pregnancies, labour and delivery. They refer high risk cases to a RHC.
- The Midwife helps the Health Technician manage all normal pregnancy cases through the ante-natal period, labour, delivery and the post-natal period. She also provides services to the newborn to make sure that the baby's nutritional needs are met and that he is developing and growing normally.
- The dispenser dispenses only those medicines that are in stock at the BHU. He may not prescribe or dispense any other medicines. He also is responsible for health education.
- The CHW's main activity is outreach work in the community. He reports to the Health Technicians monthly.
- All BHU staff should meet at least once a

1. Name \_\_\_\_\_

2. ID No. \_\_\_\_\_

CIW DAILY ACTIVITY SHEET

3. Date \_\_\_\_\_

4. BHU/RHC \_\_\_\_\_

5. Village Name (s) \_\_\_\_\_

No	Activity	site of Activity	Type of Activity	Topic/Health Problems/Service	People receiving service					SEX NO	
					AGE						
	Home visits										
	BHU/RHC										
	Other										
	Health promotion										
	Sick visit: New										
	Sick visit: previously known person										
	Reporting/in-service training										
	Nutrition										
	Immunizations										
	Disease Control: Malaria										
	Disease Control: T.B.										
	Disease Control: ARI										
	Disease Control: Diarrhoea										
	Disease Control: Other										
	MCH: Family Planning										
	Ante-natal Mother										
	Post-natal Mother										
	Newborn										
	Environmental Health										
	Other (accidents etc.)										
	Referral										
	< 1										
	1 - 4										
	5 - 14										
	15 - 44										
	45 +										
	Male										
	Female										
	No. (if more than 1)										

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month. They should report their activities, discuss any problems they have and jointly decide on how to go about solving the problems faced.

In addition to the above, each member is responsible for keeping accurate records on his activities.

Example follows:

### INSTRUCTIONS FOR FILLING OUT THE CHW'S DAILY ACTIVITY REPORT:

You are to fill out one form for each day you work, whether or not you served anyone. This is a record showing where you worked, what you did and for whom. After completing the forms you are to send them once a month to the DHO's Office so that information from the forms can be summarized. This will let your supervisors know about your work.

If you are on leave do not fill out a form.

- Write down your name as it appears in official documents.

- Write down your I.D. number.

- Write down the date for which you are reporting.

- Write down the name and number of your BHU.

- Write down the name of the village you are reporting on.

- **ACTIVITY NUMBER** - The form provides space for 10 activities each day. Start with the first activity and end with the last activity of each day.

- **SITE OF ACTIVITY** - Put a tick under the location of your activity. There are three possible sites for you to be in during a working day.

Home visits - means officially visiting homes, to deal with health or hygiene matters.

BHU/RHC - Tick here if you are present in a BHU or RHC for a specific work-related purpose.

Other - includes all other locations such as schools, DHQ Hospital, DHO Office etc.

- **TYPE OF ACTIVITY** - You can make four types of visits:

## UNIT ONE: ROLE OF CHW

**Health Promotion** - Includes all interactions that have to do with helping individuals or groups in self care, such as health education talks, giving information on the utilization of health services, growth monitoring, and EPI clinics etc.

**Sick Visit - New** - This means seeing any sick person for the first time.

**Sick Visit-Previously Known Person** - This means seeing a sick person for the second or consequent visit. This could also include a person who has recovered from a previous illness and may be here for the first time with a new disease.

**Reporting/Inservice Training** - Check this section if you spend time reporting or filling out forms or participating in training.

**TOXIC/HEALTH PROBLEMS/SERVICE** - Check the box which best describes the focus of your activity.

**Nutrition** - Anything to do with eating or eating habits.

**Immunization** - This refers to any activity directly or indirectly related to

the immunization programme you are helping. (The person you are talking to).

**Disease control** - malaria, TB, ARI, diarrhoea, other - Check the appropriate box if you were involved with the prevention, diagnosis, treatment, referral or follow-up of one of these diseases.

**MCH: Family Planning** - Tick if you counselled or referred anyone for Family Planning.

**Ante-natal and Post-natal Mothers** - Any service relating to pregnancy and child birth.

**Newborn infants** - Anything about the newborn.

**Environmental Health** - Any activity associated with water, sanitation or personal hygiene.

**Other (accident etc.) First Aid and Emergency Situations.**

**Referral** - When a person is directed to another health facility, person, government or non-government organization.

## UNIT ONE: ROLE OF CHW

### PEOPLE RECEIVING SERVICE

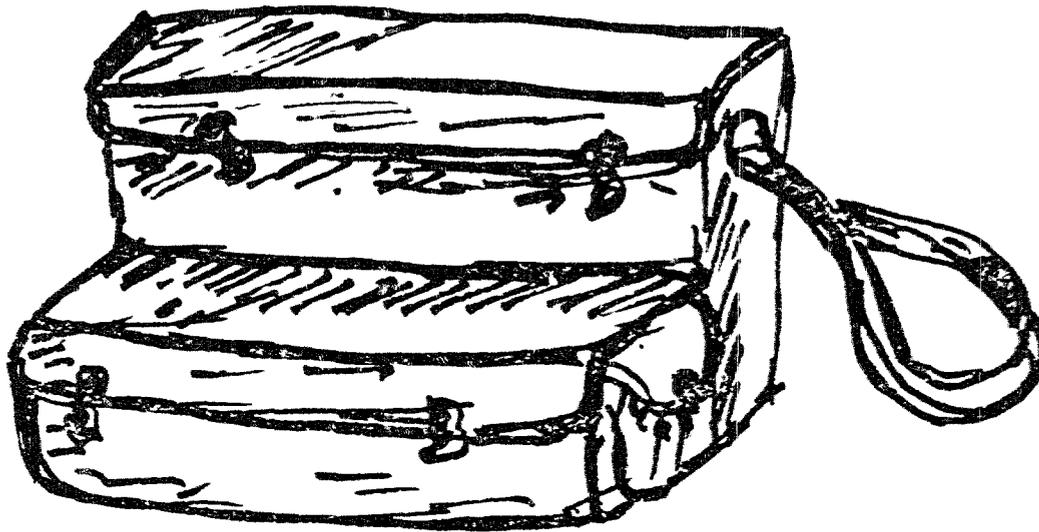
Age - Tick appropriate box of individual you are helping. You may tick more than one box if you were serving more than one age group.

Sex - Check male or female, depending on whom you were helping or advising (If it was a mixed group of people tick both.)

Number - For group activities, enter the number of participants.

If you reported to the BHU, first tick BHU under activity No. 1. If you attended inservice training for the whole day, you would only have one activity to report (01). You would put a tick under "other" for "Site of Activity" and "Reporting/Inservice Training" for "Type of Activity" and you would tick the Topic which was covered. The rest of the columns would be blank.

## 1.12 YOUR KIT



A canvas bag or a "kit" is given to each of you. The purpose in providing CHWs with a kit is to make sure they have a place to keep their supplies and paper safely.

This kit has four sections, two large ones in front and two small ones on the side. The back section is narrow

and deep and is meant to hold your papers. The lower front section is for holding your supplies such as bandages, a litre jug, ORS packets, antiseptic solution, a measuring tape, an arm band etc. Inside the cover of the lower section is a place for scissors, tweezers and a thermometer.

How the items are arranged in the bag is up to you as long as you pay particular attention to the following points:

- All liquids should be placed upright and within smaller pockets.
- Infrequently used items should be placed on the bottom.
- Frequently used items should be on top.

How do you use the bag properly to ensure cleanliness? In carrying out community and outreach activities, the bag must be taken to many dirty and dusty places. It is not possible to keep a kit that is used in outreach activities as clean as a kit that is used for classroom demonstration only. However, by following certain guidelines the kit and its contents will remain clean enough to use safely. These guidelines are:

- Items that do not touch the body can be kept in the outside compartments/pockets.
- Do not touch the contents on the inner compartment without first washing your hands.

- Loosen the snaps before washing your hands. Afterwards put your finger inside the flap and open the kit.
- Take out only those items that are necessary and lay them on a clean working surface.
- After using the items, clean and replace them.
- Look for a clean, easy to reach space on which to place the bag.
- Always keep your eyes on the bag when you are carrying out a procedure so that children and animals do not get to the inside compartment.
- Always wash your hands before entering the inner compartment.
- Place the kit on your lap while travelling by bus or car.
- Never put the kit near your feet because the dirt and micro-organisms carried on your shoes may be transferred to the kit.
- Wash the bag with soap and water and sun dry it as it gets dirty or at least once every six months.

## UNIT ONE: ROLE OF CHW

You will initially be provided with supplies and forms. It is your responsibility to replace used items so that you always have with you what you need to carry out your tasks. When you visit a BHU, let your supervisor know what you need. She will either

supply you herself, if sufficient quantity is available at the BHU, or direct you to where the items can be obtained.

The contents of the kit and their suggested uses are listed below:

Contents	Suggested use
Soap in a dish	- For washing hands before and after giving first aid, attending deliveries and washing wounds and animal bites.
Scissors	- For cutting bandages, cords, adhesive plasters etc.
Tweezers	- For pulling out thorns and picking up boiled items.
Thermometer	- For taking body temperatures.
Cotton	- For cleaning wounds and cuts.
Gauze squares	- For packing and dressing wounds.
Gauze roll	- For bandaging and splinting.
1 Litre measuring jug	- For measuring 1 litre when preparing ORS.
ORS packets	- For distributing to families who needs them.
Arm circumference band	- For measuring arm circumfrences of 1 to 5 year old children in order to determine their nutritional status.
Antiseptic solutions	- For cleaning wounds and injection sites. (Use externally only.)
Note book	- For keeping your daily notes.
Forms	- For collection information.

# SUMMARY

In the first chapter several important topics were briefly discussed. It is hoped that you understood them well. If you did not understand all of

them, or if you have any questions, you should ask your teachers to explain them to you.

**UNIT TWO**

**GETTING TO KNOW THE**

**COMMUNITY**

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## **INTRODUCTION:**

You are already a member of the community and have certain information about it. In addition, it would be helpful to document descriptions of the people you serve in terms of age, health status and needs. For example: How many children under 5 years of age live in your area? How many suffer from diarrhoea or coughs? This information would give you and your supervisor an estimate of the number of children under 5 suffering from certain diseases and what is needed to help them. This is the advantage of gathering information about the community. The information can be collected by completing forms (described below) on each family. The information on these forms will be collected and summarized at the central level. A copy of the summarized report will then be sent to the BHU for your use, as well as for the use of the other BHU staff members.

When information is collected on a large scale it is called a survey. When basic information is gathered for the first time, it is called a "baseline survey." Subsequent surveys are called "follow-up surveys." These survey forms gather information on demography, housing, morbidity, health services utilization, knowledge, attitudes and practices. The survey forms are grouped as follows:

### **FORM ONE "FAMILY ROSTER"**

This Roster gives a complete picture of the family, the number of members, their sex, age, marital status, education, occupation, whether they have migrated or not and whether or not anybody has been ill in the last 30 days.

### **FORM TWO "ILLNESS DURING LAST 30 DAYS"**

This form gives information about ill people, what types of diseases they are suffering from, the duration of the diseases, whether they have been treated, where they were treated, who treated them, what kind of treatment they have received and-in cases of diarrhoea - whether or not they have taken extra fluids or ORS.

## **UNIT TWO: GETTING TO KNOW THE COMMUNITY**

### **FORM THREE "MARRIED WOMEN 15-44 YEARS OF AGE AND BIRTHS"**

This form collects information about married women, aged 15-44 years, and any children born to them in the last 12 months, including their knowledge of child spacing, ARI, ORT and growth monitoring. This information will demonstrate how much women already know and what they still need to be taught in order to keep themselves and their families healthy.

### **FORM FOUR "CHILDREN UNDER 5, DEATHS, CHRONIC HEALTH PROBLEMS AND HOUSING"**

This form is divided into four sections.

Section 1 is about children and their immunization and nutritional status. Good nutrition, and immunization against the six most common childhood diseases, are paramount for the survival of children. This information will help in the planning and provision of better health care facilities.

Section 2 is about any deaths in the family occurring in the last year, and the causes. This shows us for which age group and sex deaths are most common, and what causes them. This information again helps health care facilities in their planning.

Section 3 records common chronic health problems such as disabilities, mental retardation, TB and Goiter. If any of these conditions are shown to be very widespread, the health facilities will take certain measures to provide for them.

Section 4 is about housing characteristics (such as sanitation, safe drinking water and over-crowding) affecting the health of the family and community.

## COMMUNITY HEALTH WORKER PROJECT

FORM ONE

FAMILY ROSTER

Date Of Survey \_\_\_\_\_

Village \_\_\_\_\_

Family Id Number \_\_\_\_\_

Family Head \_\_\_\_\_

(Circle appropriate answer)

	Name	Relationship to Head of Family	Age	Sex	Marital status	Illness in last 30 days	Education	Occupation	Migration
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Children <5	1. _____			M F	S M O	Yes No			Yes No
	2. _____			M F	S M O	Yes No			Yes No
	3. _____			M F	S M O	Yes No			Yes No
	4. _____			M F	S M O	Yes No			Yes No
	5. _____			M F	S M O	Yes No			Yes No
	6. _____			M F	S M O	Yes No			Yes No

Women 15-44 (years)	1. _____			M F	S M O	Yes No			Yes No
	2. _____			M F	S M O	Yes No			Yes No
	3. _____			M F	S M O	Yes No			Yes No
	4. _____			M F	S M O	Yes No			Yes No
	5. _____			M F	S M O	Yes No			Yes No
	6. _____			M F	S M O	Yes No			Yes No
	7. _____			M F	S M O	Yes No			Yes No
B. _____				M F	S M O	Yes No			Yes No

Other family members (years)	1. _____			M F	S M O	Yes No			Yes No
	2. _____			M F	S M O	Yes No			Yes No
	3. _____			M F	S M O	Yes No			Yes No
	4. _____			M F	S M O	Yes No			Yes No
	5. _____			M F	S M O	Yes No			Yes No
	6. _____			M F	S M O	Yes No			Yes No
	7. _____			M F	S M O	Yes No			Yes No
	8. _____			M F	S M O	Yes No			Yes No

FAMILY COMPOSITION (complete later from the above information 'Family Roster')

	<1 (12)	1 - 4 (13)	5-14 (14)	15-44 (15)	>45 (16)	Total
10. Male						
11. Female						
Total:						

## UNIT TWO: GETTING TO KNOW THE COMMUNITY

### FORM ONE: FAMILY ROSTER

#### SECTION 1 CHILDREN UNDER 5 (COLUMNS 1-6).

List the names of any children under five living in the household. Then, for each child, ask his/her relationship to the head of the family (Child, step-child, niece, etc.) the age in months, sex and whether he has been ill during the last 30 days. The columns on Marital Status, Education, Occupation and Migration are not applicable and should be left blank.

#### SECTION 2 WOMEN 15-44 (COLUMNS 1-9).

List the names of any women living in the household who are between the ages of 15 and 44, whether or not they are married. Then ask each woman's relationship to the head of the family, her age and marital status. If she has been married, but is a widow or divorced, tick "O" for "Other". Ask whether she has been ill in the last 30 days, and ask about her education, occupation and whether she has migrated. Circle or write in the answers as appropriate.

#### SECTION 3 OTHER FAMILY MEMBERS (COLUMN 1-9)

List the names of all others living in the household, beginning with the head of the family. Then for each family member, obtain their relationship to the head of the family, their age, sex, marital status, illnesses during the last 30 days, education, occupation and migration information.

#### FAMILY COMPOSITION

This table is to be completed later from the information recorded on the family roster above.

Note: This table will also serve as the basis for the Family Health Card that you will prepare for each family in your village.

COMMUNITY HEALTH WORKER PROJECT

FORM TWO

ILLNESS DURING LAST  
30 DAYS

Date Of Survey \_\_\_\_\_

Village \_\_\_\_\_

Family Id Number \_\_\_\_\_

Family Head \_\_\_\_\_

(Circle the appropriate answer)

	Name of ill person (17)	Age (18)	Sex (19)	type of illness (20)	Duration (days) (21)	Taken for TX (22)	Where (place) (23)	To whom (Person) (24)	Tx received (25)	If Diarrhoea	
										Extra fluids (26)	O R S (27)
Children <5 years	1. _____		M F			Yes No			Yes No	Yes No	Yes No
	2. _____		M F			Yes No			Yes No	Yes No	Yes No
	3. _____		M F			Yes No			Yes No	Yes No	Yes No
	4. _____		M F			Yes No			Yes No	Yes No	Yes No
	5. _____		M F			Yes No			Yes No	Yes No	Yes No
	6. _____		M F			Yes No			Yes No	Yes No	Yes No
	7. _____		M F			Yes No			Yes No	Yes No	Yes No
Women 15-44 (years)	1. _____		M F			Yes No			Yes No	Yes No	Yes No
	2. _____		M F			Yes No			Yes No	Yes No	Yes No
	3. _____		M F			Yes No			Yes No	Yes No	Yes No
	4. _____		M F			Yes No			Yes No	Yes No	Yes No
	5. _____		M F			Yes No			Yes No	Yes No	Yes No
	6. _____		M F			Yes No			Yes No	Yes No	Yes No
	7. _____		M F			Yes No			Yes No	Yes No	Yes No
Other family members (years)	1. _____		M F			Yes No			Yes No	Yes No	Yes No
	2. _____		M F			Yes No			Yes No	Yes No	Yes No
	3. _____		M F			Yes No			Yes No	Yes No	Yes No
	4. _____		M F			Yes No			Yes No	Yes No	Yes No
	5. _____		M F			Yes No			Yes No	Yes No	Yes No
	6. _____		M F			Yes No			Yes No	Yes No	Yes No
	7. _____		M F			Yes No			Yes No	Yes No	Yes No
	8. _____		M F			Yes No			Yes No	Yes No	Yes No
	9. _____		M F			Yes No			Yes No	Yes No	Yes No

**FORM TWO: ILLNESS DURING LAST 30 DAYS**

In this section, detailed information is obtained about the ill person, the type of illness, its duration, its treatment and information about extra fluids and ORS if the illness was diarrhoea.

There is space for 7 children , 7 women 15-44, and 9 other family members who have been ill during the last 30 days. If space is needed in any section, use extra paper. **BE SURE TO ENTER THE IDENTIFYING INFORMATION IN THE UPPER RIGHT CORNER OF ALL SUPPLEMENTAL SHEETS OF PAPER.**

- Q. 17-19 Write down the name, age and sex of each ill person from Form One. Then ask questions 20-27 before going to the next ill person.
- Q. 20 Write out the respondent's word for the illness.
- Q. 21 Write down the number of days the person was sick.
- Q. 22 Ask whether the ill person was taken for treatment and circle the response. If the answer is "Yes":
- Q. 23 Ask where the ill person was taken and write in the answer.
- Q. 24 Ask who treated the ill person and write in the answer.
- Q. 25 Ask what treatment was given and write a brief answer.
- Q. 26-27 If the illness was diarrhoea (Q.20):
- Q. 26. ask whether the ill person was given extra fluids and circle the answer.
- Q.27. ask whether the ill person was given ORS and circle the answer.

**COMMUNITY HEALTH WORKER PROJECT**

**FORM THREE**

Date Of Survey \_\_\_\_\_

Village \_\_\_\_\_

**MARRIED WOMEN 15 -44**

Family Id Number \_\_\_\_\_

Family Head \_\_\_\_\_

(Circle appropriate answer)

Name	Age (Years)	Children		Currently pregnant		If pregnant, TT injections		Knows about child spacing		Using method		What method	Where obtained	Knowledge				
		Living	Dead	Yes	No	1	2	Yes	No	Yes	No			ORT use	ORT prep	ARI management	growth chart	Adv. of growth chart
(28)	(29)	(30)	(31)	(32)	(32)	(33)	(33)	(34)	(34)	(35)	(35)	(36)	(37)	(38)	(39)	(40)	(41)	(42)
1.				Yes	No	1	2	Yes	No	Yes	No			Yes	Yes	Yes	Yes	Yes
2.				Yes	No	1	2	Yes	No	Yes	No			No	No	No	No	No
3.				Yes	No	1	2	Yes	No	Yes	No			Yes	Yes	Yes	Yes	Yes
4.				Yes	No	1	2	Yes	No	Yes	No			No	No	No	No	No
5.				Yes	No	1	2	Yes	No	Yes	No			Yes	Yes	Yes	Yes	Yes
6.				Yes	No	1	2	Yes	No	Yes	No			No	No	No	No	No
7.				Yes	No	1	2	Yes	No	Yes	No			Yes	Yes	Yes	Yes	Yes

**BIRTHS**

43. Total number of babies born in the family in last 12 months \_\_\_\_\_
44. Total number of babies born dead in the family in last 12 months \_\_\_\_\_
45. Total number of abortions/miscarriages in the family in last 12 months \_\_\_\_\_

**INFORMATION REGARDING LIVE BIRTHS IN LAST 12 MONTHS**

	1st baby (54)	2nd baby (55)	3rd baby (56)	4th baby (57)	5th baby (58)
46. Date of birth					
47. Sex	M F	M F	M F	M F	M F
48. Where delivered					
49. Trained dai or mid wife present	Yes No				
50. Number of prenatal visits					
51. Currently breast feeding	Yes No				
52. If not, when stopped (in months)					
53. Age supplementary feeding begun (month)					

## UNIT TWO: GETTING TO KNOW THE COMMUNITY

### FORM THREE: MARRIED WOMEN 15-44 AND BIRTHS

Q. 28-29 Write in the names and ages of all married women (15-44) listed on the family roster. There is space on the form for seven women; if there are more than seven married women 15-44 in the family who live in the household, use extra paper. **BE SURE TO ENTER THE IDENTIFYING INFORMATION IN THE UPPER RIGHT HAND CORNER OF ANY SUPPLEMENTAL SHEETS.** For each woman, complete questions 30 through 42 before going on to the next woman.

Q. 30-3 Together, these questions will indicate the total number of children a woman has had.

Question 30. First, ask how many children the woman has, and enter the answer.

Question 31. Ask whether she has had any children who have died, particularly any who died very soon after they were born. If the answer is "Yes", ask how many children she has had who have died, and enter the answer. You should check these numbers by adding together the answers to questions 30 and 31 and asking, "That means you have had (number) children altogether?" Make any corrections needed.

Q. 32-33 Question 32. Ask whether she is currently pregnant, and circle the answer. If the answer is "Yes":

Question 33. Ask whether she has been immunized against tetanus, and if so, the number of doses she has received. Circle the highest number of doses received.

Q. 34-37 These questions are about child spacing.

Question 34. Ask the woman if she knows about child spacing and circle the answer.

Question 35. Ask whether she uses any method of child spacing and circle the answer. If the answer is "Yes":

## UNIT TWO: GETTING TO KNOW THE COMMUNITY

Question 36. Ask her to tell you what method(s) she uses. (Note: she may mention more than one: if so, write in all her answers).

Question 37. Ask her where, and from whom, she has received the method she uses most commonly. Write in the answer.

Q. 38-42

The answers to these questions will indicate whether the woman knows how to manage or prevent three important childhood health problems: diarrhoea, acute respiratory illness, and malnutrition.

Question 38. Ask if she has ever used ORS, and circle the answer.

Question 39. Find out if she knows how to prepare ORS, and circle the answer.

Question 40. Find out if she knows what to do for colds, coughs, fevers and difficulty in breathing. If she gives any two of the following answers then circle "Yes"; otherwise circle "No".

- a. Take care of the child's nutrition.
- b. Make sure the child is not dehydrated.
- c. For a very high fever, or difficulty in breathing, take the child to a RHC or Hospital.

Q. 41-42

These questions are about knowledge of growth monitoring.

Question 41. Ask the mother whether she has seen this card (show the Growth Chart). If she answers in the affirmative, circle "Yes"; otherwise circle "No". If the answer to Question 41 is "Yes", go on to Question 42.

Question 42. Ask the mother whether she knows the advantages of the growth chart. If she gives any one of the following answers, circle "Yes"; otherwise circle "No".

## UNIT TWO: GETTING TO KNOW THE COMMUNITY

- a. The chart tells us whether the child's height is appropriate for his age.
- b. The chart tells us whether the child's weight is appropriate for his age.
- c. The chart tells us that if the child's growth has become stagnant, something is wrong with either the nutrition or health of the child.
- d. The chart tells us that the child's growth is inappropriate for his age and that the mother should pay attention to his nutrition.

### Births

Q. 43-45

Question 43. Ask the number of babies born in the last 12 months among family members living in the household, and enter the number.

Question 44. Ask the number of babies born dead in the last 12 months, among family members living in the household, and enter the number.

Question 45. Ask the number of abortions and miscarriages in the last 12 months, among family members living in the household, and enter the number.

Q. 46-53

For a live birth (whether still living or now dead), ask questions 46-53. These give detailed information about the antenatal and postnatal care of the infant.

Question 46. Record the date of birth (exact or month and year).

Question 47. Circle the sex of the child.

Question 48. Ask the mother where she delivered, and record.

Question 49. Ask if a trained Dai or midwife attended the delivery, and circle the answer.

UNIT TWO: GETTING TO KNOW THE COMMUNITY

Question 50. Ask if the mother made any antenatal visits to a trained health worker. If the answer is "Yes", ask how many visits were made, and record the number.

Question 51. Ask if she is currently breast-feeding the baby, and circle the answer. If not, go on to Question 52.

Question 52. Ask how old the baby was when the mother stopped breastfeeding, and record the answer in months.

Question 53. Ask how old the baby was when the mother began to wean him. Record the answer in months.

## COMMUNITY HEALTH WORKER PROJECT

FORM FOUR

CHILDREN < 5

Date Of Survey \_\_\_\_\_

Village \_\_\_\_\_

Family Id Number \_\_\_\_\_

(Circle the appropriate answer)

Name	Age	Sex	Vaccination Status				Nutrition					
			B	C	G	DPT	Polio	Measles	Breastfeeding	If Yes Duration	Height (Cm)	Weight (Kg)
(59)	(60)	(61)	(62)	(63)	(64)	(65)	(66)	(67)	(68)	(69)	(70)	(71)
1.		M F	1	1 2 3	1 2 3	1	Yes No					1 2 3 4
2.		M F	1	1 2 3	1 2 3	1	Yes No					1 2 3 4
3.		M F	1	1 2 3	1 2 3	1	Yes No					1 2 3 4
4.		M F	1	1 2 3	1 2 3	1	Yes No					1 2 3 4
5.		M F	1	1 2 3	1 2 3	1	Yes No					1 2 3 4
6.		M F	1	1 2 3	1 2 3	1	Yes No					1 2 3 4
7.		M F	1	1 2 3	1 2 3	1	Yes No					1 2 3 4
8.		M F	1	1 2 3	1 2 3	1	Yes No					1 2 3 4
9.		M F	1	1 2 3	1 2 3	1	Yes No					1 2 3 4
10.		M F	1	1 2 3	1 2 3	1	Yes No					1 2 3 4

DEATH (72) Total number of deaths in last 12 months

Name (73)	Age (74)	Sex (75)	Relation to family head (76)	Cause of death (77)
1.		M F		
2.		M F		
3.		M F		
4.		M F		
5.		M F		
6.		M F		

CHRONIC HEALTH PROBLEMS

	<1 (82)	1-4 (83)	5-14 (84)	15-44 (85)	>45 (86)	Total (87)
78. Goiter						
79. Disabled						
80. Mentally Retarded						
81. T.B.						
Total:						

HOUSING

88. Number of rooms		
89. Water source		
90. Electricity	Yes	No
91. Latrine	Yes	No
92. Sewage disposal	Yes	No

Comments: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

UNIT TWO: GETTING TO KNOW THE COMMUNITY

FORM FOUR: CHILDREN UNDER 5, DEATHS, CHRONIC HEALTH PROBLEMS AND HOUSING

On this form, information is obtained about children , deaths, chronic health problems and housing. **BE SURE TO ENTER THE IDENTIFYING INFORMATION IN THE UPPER RIGHT HAND CORNER OF THE PAGE OR SUPPLEMENTARY SHEET.**

Q. 59-61 Write in the name, age and sex of each child under 5 listed on the family roster. There is space on the form for ten children: if there are more than ten children under the age of 5, use extra sheets. Then, for each child, ask questions 62 through 71, before going on to the next child.

Q. 62-65 Circle the highest number of doses the child has received of the specific vaccine. When completely immunized, each child should normally have received one dose of BCG; three doses of DPT; three doses of Polio vaccine; and one dose of Measles vaccine.

Q. 66-67 Question 66. Ask whether the child was breastfed and circle the answer. If the answer is "Yes", go on to Question 67.

Question 67. Ask how long the child was breastfed, and enter the answer in months. If the child is currently being breastfed, write "currently" as the answer.

Q. 68-71 If your supervisor wants you to obtain information on nutritional status, you will be given instructions on how to complete questions 68-71.

DEATHS DURING THE LAST 12 MONTHS

Q. 72 Ask the number of deaths, during the past 12 months, among family members living in the household, and enter the number. Probe to be sure that the respondent is counting any babies who died shortly after they were born.

## UNIT TWO: GETTING TO KNOW THE COMMUNITY

QUESTIONS 73-77 REFER TO ANY DEATHS IN THE LAST 12 MONTHS. IF THERE WERE MORE THAN 6 DEATHS, USE SUPPLEMENTAL SHEETS. BE SURE TO ENTER YOUR IDENTIFYING INFORMATION IN THE UPPER RIGHT HAND CORNER OF EACH SUPPLEMENTAL SHEET.

Question 73. Write down the names of all those who have died during the last 12 months.

Question 74. Ask how old each person was. Record the age at death (in months for young children and in years for those over 5 years of age).

Question 75. Circle the sex of each person who died.

Question 76. Record how the person who died was related to the head of the families.

Question 77. Ask whether the respondent knows what the cause of death was, and record the cause as given by the respondent.

### CHRONIC HEALTH PROBLEMS

Question 78. Ask whether any family members living in the household have goiter. If "Yes", ask the age of each such member, and put ticks in the appropriate age columns. Add the ticks to get the total number with goiter and enter in the "Total" column. Check by asking, "That means (number) family members altogether have goiter?" Correct if necessary.

Question 79. Ask whether any family members are disabled, in the same way you asked about goiter in question 78 above.

Question 80. Ask whether any family members are mentally retarded, using locally acceptable terminology, in the same way you asked about goiter in question 78.

Question 81. Ask whether any family members are suffering from TB, and enter the answer in the appropriate column.

UNIT TWO: GETTING TO KNOW THE COMMUNITY

Housing

Q. 88-92

Question 88. Record how many rooms the family occupies.

Question 89. Record where they obtain their drinking water.

Question 90. Ask if the family has electricity in the home, and circle the answer.

Question 91. Ask if the family has a latrine, and circle the answer.

Question 92. Ask if the family has an appropriate method of sewage disposal, and circle the answer.

COMMENTS

At the end, in the lower right hand corner, there is room for a brief comment. Use this if you think that any of your answers may not be clear, or if there is other relevant information. You may write on the back of the page if you need extra space.

## SUMMARY

You have learnt about four separate forms that need to be filled out. These forms will be sent to the DHQ's Office to be summarized and analyzed. When a summary is ready it will provide information on the general profile and health status of the community. This information will then be used by the District Health Officer and Divisional Director to plan for needed community services. By filling out these forms properly you will be helping the Health Officers to meet the needs of your community. This is a big responsibility. Therefore, only write down information that is given to you directly by the respondents.

**UNIT THREE**  
**CARE OF THE SICK**

# INTRODUCTION

As a CHW, you may be asked to assist a sick or injured person. This unit will teach you what to do and what not to do. First, evaluate the seriousness of the person's condition. Proceed only if you feel that your training so far has adequately prepared you to handle this situation. Otherwise, apologize to the patient's family and explain that you do not feel qualified to help, thus ending your responsibility as CHW, in this particular incident.

This unit also deals with two common conditions: fever and pain.

First we will discuss how to give immediate and direct assistance; then, what to do for the further treatment of severe or persistent conditions. The procedure for hand washing is also included in this unit, because this is of vital importance before providing direct care to a patient.

Next, we will discuss how to refer a patient to another person or facility. Later on you will be taught how to provide direct assistance in routine situations. You will be taught that when you are faced with a moderate, severe or unknown situation, you should refer these cases to personnel with more training and equipment. If you make timely referrals, you will be helping people to obtain early and appropriate treatment, to prevent complications and to minimize their suffering. This is why the topic of referral is covered early in this manual.

The process of referral is the same for any condition or disease. All referrals should be in writing and you should include all relevant information in order for the patient to receive appropriate assistance.

The last item in this unit is on filling out a verbal autopsy form.

## 3.1 HAND WASHING

Before doing any procedure, you must wash your hands adequately. Hands and nails are major sources of infection and should be cleaned thoroughly to protect oneself and the patient.

### WHEN SHOULD HANDS BE WASHED?

- Immediately after coming home from shopping or from any other public place; after gardening; and after handling animals or poultry.
- Before eating.
- Before and after caring for a patient or handling any discharge.
- After defecating.
- Before preparing or handling food.
- Before breast-feeding or giving other kinds of feedings to babies.



### ITEMS REQUIRED:

- Soap.
- Water.
- Clean towel.

### HOW DO YOU WASH YOUR HANDS PROPERLY?

Roll up your sleeves.

- Remove your wrist watch.
- Wet hands, apply soap and rub hands to make a lather.
- Rub the whole surface of the hands, including the nails and wrists.
- Rinse off the bar of soap after each use.
- Rinse hands.
- Soap a second time, rub well, work up a lather and rinse off under running water or have someone pour water from a jug.
- Dry hands with a clean towel.
- If hands are dry, use cream or lotion at night.

Now you are ready to carry out any procedure.

## 3.2 FEVER

### WHAT IS FEVER?

When a person's body temperature is too hot, he has a fever. Fever itself is not a sickness, but a sign of one of many different sicknesses.

A person with an abnormal temperature needs to be attended to right away. This is because an abnormal temperature is an indication that all is not well with the person's body.

The body's temperature is normally

between 96 and 98 F. Temperatures below 96 or above 98.4 are considered abnormal - too low or too high. Fever refers to a temperature that is above normal. Fever of 100 to 102 degrees F is considered moderate (37.2 - 39 C). Fever of 102 to 108 degrees F is considered high.

High fever can be dangerous, especially in a small child.

---

### SIGNS OF FEVER

- The whole body feels hot.
- The face may look red.
- The person sweats a lot.
- The pulse rate increases.
- Sometimes a person is alternate-

ly hot and cold. If a person has a fever and feels cold and shivers, this means that his temperature is rising. If the person feels hot and sweats, the body is trying to lose heat and bring the temperature down.

---

### EFFECTS OF FEVER

- Fever causes the body to lose lots of water and the person will become dry.
- Fever causes to the patient to feel tired and sleepy.
- Fever indicates an infection in the body. If the patient does not eat, he will become weak and thin and

his body will not have enough energy to fight the infection.

A high fever in a child can cause fits, which may result in damage to his brain. This is because the brain is still growing and cannot control the temperature of the body very well.

## UNIT THREE: CARE OF THE SICK

### TAKING A TEMPERATURE

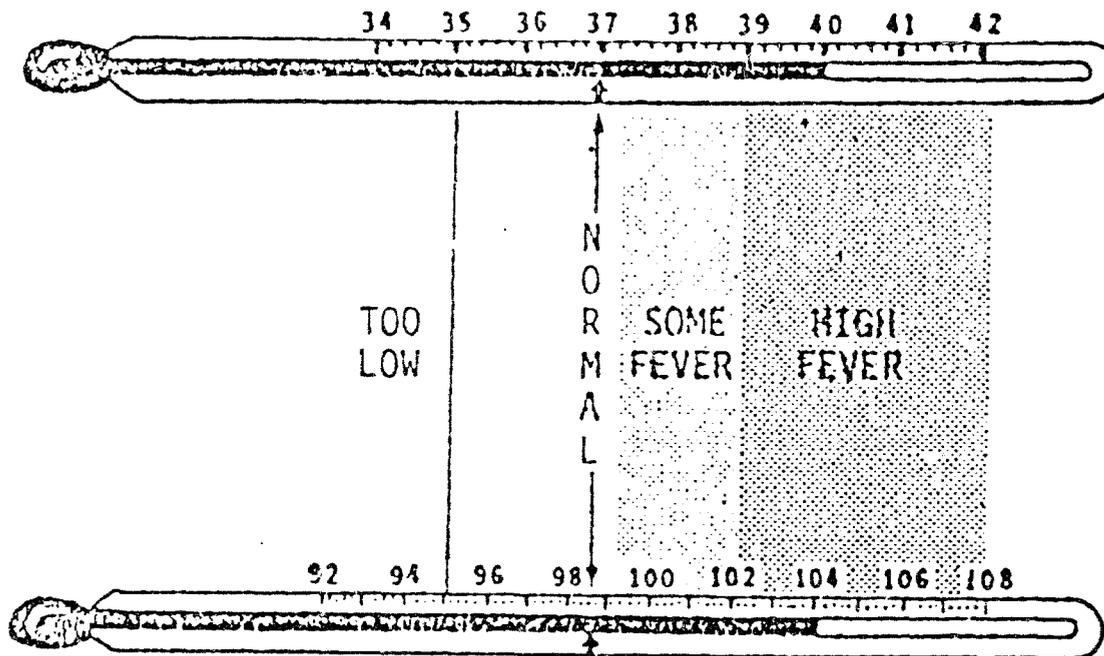
A thermometer is used to take a person's temperature. Thermometers are available in fahrenheit and centigrade. The glass tube of a thermometer contains mercury. This mercury expands with heat, so

when the temperature is taken, the mercury will rise in proportion to the temperature of the body. The mercury will remain at this point until it is shaken down with several sharp downward flicks of the wrist.

Here is how they compare:

#### CENTIGRADE:

This thermometer reads 40 C (Forty degrees centigrades).



#### FAHRENHEIT:

This thermometer reads 104 F. (104 degrees Fahrenheit).

## UNIT THREE: CARE OF THE SICK

### ORAL TEMPERATURE (BY MOUTH)

- 1** The thermometer should be clean and dry and the temperature should register at least two degrees below normal. (Normal is 98.6 F or 37 C.)
- 2** Have the person sit or lie down.
- 3** Place the bulb in the mouth under the tongue to one side.
- 4** Ask the person to keep his lips closed, to breathe through his nose, not to bite on the thermometer and not to talk.
- 5** Leave the thermometer in the mouth for three minutes.
- 6** Remove the thermometer and clean off the saliva with a wipe containing a disinfectant, using a firm rotary motion from the top downward. Discard the wipe in a waste container.
- 7** Read the thermometer, holding it in a good light. Record the reading.
- 8** Clean the thermometer and put it away in its case, with the bulb end down.

---

### RECTAL TEMPERATURE

- 1** Make sure the mercury is down to 95 F (32 C).
  - 2** Ask the child or older person to lie on his side.
  - 3** Place a small child on his mother's lap or on the bed, on his abdomen.
  - 4** Explain how you are going to take the temperature and the need to lie still.
  - 5** Lubricate the thermometer with vaseline, cold cream or even water so that it slides in easily.
  - 6** Separate the cheeks of the buttocks so that the anus is visible.
  - 7** Insert the bulb of the thermometer gently, about one inch into the anus, and hold it in place for three minutes. Someone needs to stay with a very sick, restless or small child at all times. Sometimes adults also need to be watched.
  - 8** Remove and wipe off the thermometer. Read the temperature and record it.
  - 9** Clean and put away the thermometer.
- NB** The average normal rectal temperature is approximately one degree higher than the oral temperature - 99.6 F ((37.5 C).

## AXILLARY TEMPERATURE

### (UNDER THE ARM)

**1** Shake the mercury down to 95 F (35 C) or below. Do not moisten or lubricate the thermometer.

**2** Dry the area under the arm.

**3** Place the bulb end of the thermometer in the axilla and have the person put his hand on his opposite shoulder so that his arm is firmly against his body.

**4** Hold the thermometer in place until the temperature registers (about five minutes).

**5** Remove the thermometer; read and record.

**6** Clean and put the thermometer in its case.

**NB** The normal axillary temperature is one degree lower than the oral temperature 97.6 F (35.5 C).

---

## CLEANING THE THERMOMETER

**1** Moisten a cotton ball with water and soap it well.

**2** Hold the thermometer with your left index finger and thumb over a kidney dish or waste container. The mercury bulb should be down.

**3** Beginning at the top, using an antiseptic, wipe down with a firm rotary motion all the way to the end of the bulb.

**4** Discard wipe.

**5** Rinse under cool running water, using the same downward rotary motion.

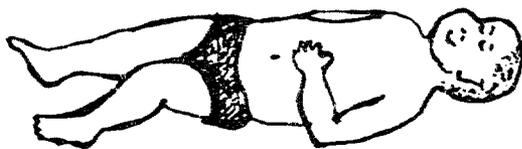
**6** Dry with a clean wipe or cloth.

**7** Put the thermometer in its case.

## HOW TO TREAT FEVER

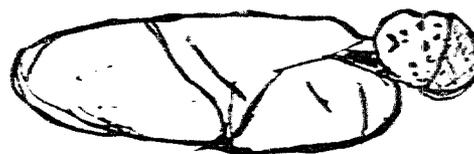
- Uncover him completely. Small children should be left naked until the fever goes down. Never wrap the child in clothing or blankets. This makes the fever go up.
- Fresh air or a breeze will not harm a person with fever. On the contrary, a fresh breeze helps lower the fever.
- Have the sick person rest as much as possible.
- Anyone who has fever should drink lots of water, juices, or other liquids. For small children, especially babies, drinking water should be boiled first (and then cooled).
- Encourage the patient to take small, frequent feeds. Continue breastfeeding sick infants.
- Give paracetamol to reduce fever if temperature is over 38.5 degrees C or 101 degrees F, according to dosage on page 78.
- Observe the patient. If he improves, continue the same care until he recovers. If he becomes sicker, REFER him. (See Page 80)

YES!



UNCOVER THE CHILD TO HELP  
THE FEVER GO DOWN

NO!



NEVER COVER A FEVERISH CHILD  
WITH WARM WRAPPINGS. THIS IS  
DANGEROUS.

## 3.3. PAIN

Pain is a symptom of a physical problem. In evaluating pain, you must find out:

- Type of pain. Is it dull, sharp or throbbing?
- Location of pain. Where does it hurt?
- Severity. How bad is the pain? slight? moderate? or severe?
- Duration. How long has the person been suffering from this pain? hours? days? or weeks?
- Factors affecting the pain. Does movement make it worse or better? is it worse before or after meals?

Pain can be temporary and of short duration - e.g. headaches, backaches and general body aches associated with influenza **OR** it can be of long duration or chronic. As a CHW you can treat only temporary pain i.e. you can give paracetamol according to the dosage on page 78. If the pain lasts longer than 48 hours, or is chronic, you need to refer this person. (See page 80)

A person with pain should be encouraged to rest, to maintain a normal diet and to increase fluid intake.



## 3.4 PARACETAMOL

Paracetamol is a medicine given to reduce pain and fever. It is given in liquid form for young children and in tablets for older children and adults. To be effective, it is important to make sure that an adequate dose is given. However, too large a dose is dangerous. So when giving any medicine, always read the label on the box or bottle and give the correct dose, according to the printed information. If this information is not available you may use the following guidelines for determining the correct dosage of paracetamol:

Using 500 mg. tablets:

Adults: 500 - 1000 mg (1-2 tablets).

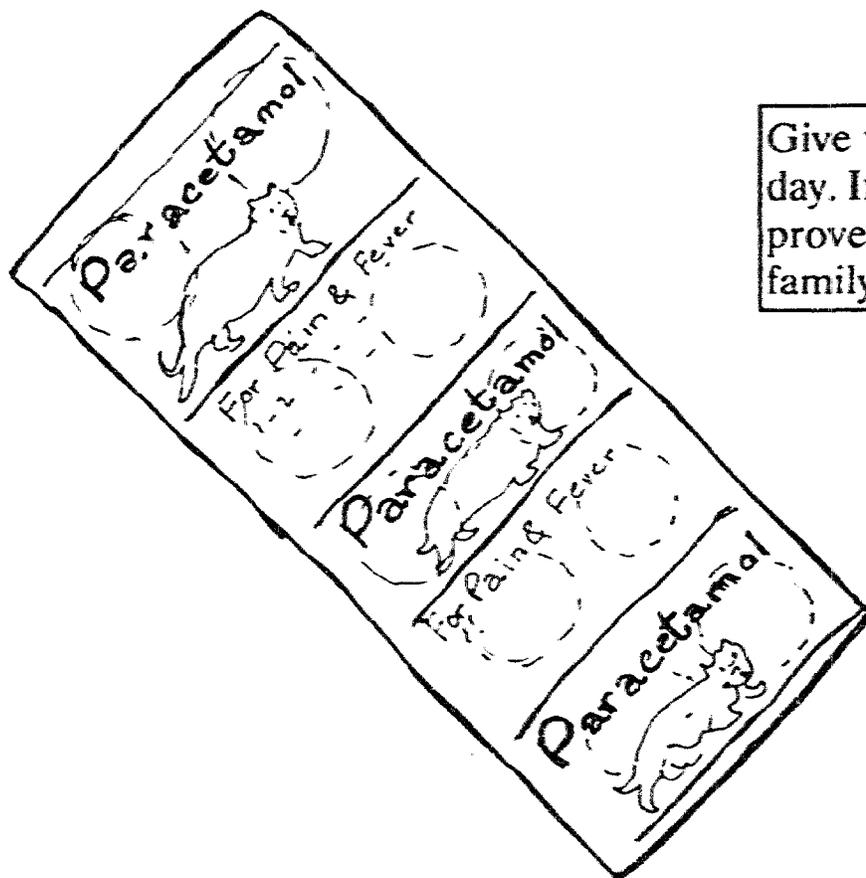
Children 8 - 12 years: 500 mg. (1 tablet).

Children 3 - 7 years: 250 mg. (1/2 tablet).

Babies 6-36 months 2 years: 125 mg. (1/4).

tablets).

Babies under 6 months: 62 mg. (1/8 tablet).

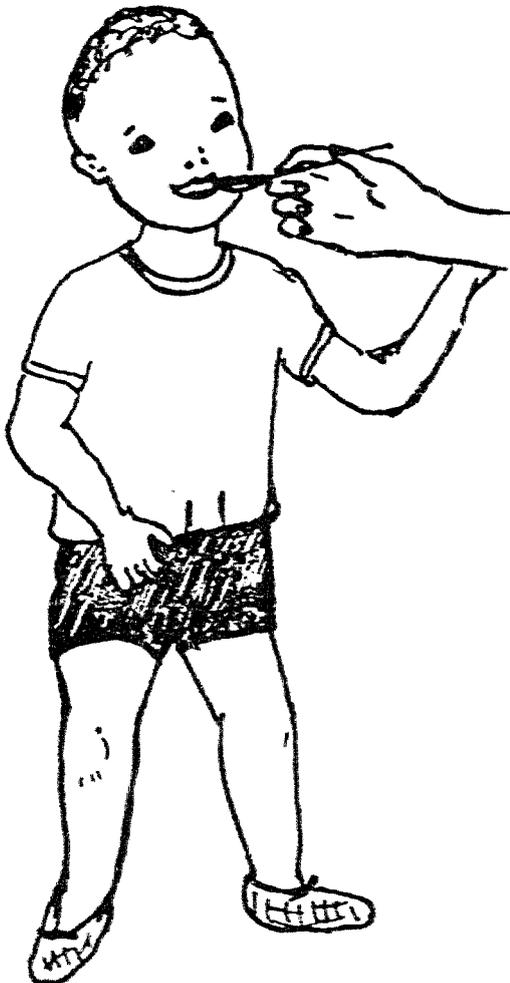


Give the above dose up to 6 times a day. If the symptoms do not improve in 24-48 hours, have the family consult a MO.

## 3.5 GIVING MEDICINES

When the medicine is prescribed:

- Carefully explain to the family why the medicine is being prescribed, how much to give and how often to give it. Write down the directions. If the parents can't read, a neighbour may be able to help.
- All medicines should be stored in a cool, dark place and out of the reach of children. The dose should be repeated if the child spits it out or vomits it within 30 minutes of administration.



TABLETS:

- Show parents how to divide the tablet in order to obtain the correct dose. Show parents how to crush the tablet by placing it between two spoons.
- Help the parents think of something with which to mix the medicine, to make the child swallow it (for example, porridge or sugar water).
- Ask the parents if they think they will have trouble preparing and giving the tablets at home. If they do, plan ways to help overcome the problem.

LIQUIDS:

- Teach the family to shake the bottle well before use.
- Teach the family how to measure the correct dose.

## 3.6 REFERRAL

To refer means to direct someone to another person or place.

### WHEN SHOULD A PATIENT BE REFERRED?

- If there is diarrhoea, vomiting and fever.
- If a fever lasts more than two days.
- If it is malaria season.
- If there are signs of other illness (CHWs will learn more about these signs in the following units).
- If fever is very high.  
(See the chart on vital signs).
- If the person's condition is not improving.



### STEPS:

- Explain to the family that the patient needs treatment in a hospital.
- Discuss with the family how they can travel to the hospital, and help them to work out any problems in getting there.
- Write a letter of referral for them to take to the hospital. Explain that this should be given to the health worker or Medical Officer who sees the patient.

### INFORMATION NEEDED

- Who started or initiated the referral?
- Who is to receive the referral?
- Who is the person being referred? (patient's report will contain this information).
- What is the reason for the referral? (See referral form on following page )

UNIT THREE: REFERRALS

REFERRAL FORM

FROM \_\_\_\_\_

TO \_\_\_\_\_

Name of the sick person \_\_\_\_\_ Age \_\_\_\_\_

Male \_\_\_\_\_ Female \_\_\_\_\_ Address \_\_\_\_\_

What is the main sickness or problem? \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

When did it begin? \_\_\_\_\_

How did it begin? \_\_\_\_\_

Has the person had this problem before? \_\_\_\_\_ When? \_\_\_\_\_

Is there fever? \_\_\_\_\_ How high? \_\_\_\_\_ When and for how long? \_\_\_\_\_

Pain? \_\_\_\_\_ Where? \_\_\_\_\_ What kind? \_\_\_\_\_

What is wrong, or different from normal, in any of the following? \_\_\_\_\_

Skin \_\_\_\_\_ Ears \_\_\_\_\_

Eye \_\_\_\_\_ Mouth and throat \_\_\_\_\_

Genitals \_\_\_\_\_

Urine: Much or little? \_\_\_\_\_ Colour? \_\_\_\_\_

Trouble urinating? \_\_\_\_\_

Describe: \_\_\_\_\_ Times in 24 hours: \_\_\_\_\_ Times at night \_\_\_\_\_

Stools: Colour? \_\_\_\_\_ Blood or mucus? \_\_\_\_\_ Diarrhoea? \_\_\_\_\_

Number of times a day: \_\_\_\_\_ Cramps? \_\_\_\_\_

Dehydration? \_\_\_\_\_ Mild or severe? \_\_\_\_\_

Worms? \_\_\_\_\_ What kind? \_\_\_\_\_

Breathing: Breaths per minute: \_\_\_\_\_ Deep, shallow, or normal? \_\_\_\_\_

Difficulty breathing (describe) \_\_\_\_\_

Cough (describe): \_\_\_\_\_

Wheezing? \_\_\_\_\_ Mucus? \_\_\_\_\_ With blood? \_\_\_\_\_

Does the person have any SIGNS OF DANGEROUS ILLNESS?

Which? (give details) \_\_\_\_\_

Other signs: \_\_\_\_\_

Is the person taking medicine? \_\_\_\_\_ What? \_\_\_\_\_

Has the person ever used medicine that has caused hives (or bumps) \_\_\_\_\_

with itching, or other allergic reactions? \_\_\_\_\_

What? \_\_\_\_\_

The state of the sick person is: Not very serious \_\_\_\_\_

Serious: \_\_\_\_\_ Very serious: \_\_\_\_\_

On the back of this form write any other information you think may be important.

## 3.7 VERBAL AUTOPSY

Each time you hear of the death of a child under five in your community you are expected to visit this family to complete a verbal autopsy form and send it to the BHU.

The Verbal Autopsy form for children under 5 is designed as a flow chart through nine questions. When you find a family where an infant or child under 5 has died, you must complete this form. Begin at the top of the page with question 1, answering either "Yes" or "No" and following the appropriate arrows until the probable cause of death has been identified. Each of the nine questions has two possible answers. If the answer to the first statement is yes, then the child was still born and

there is no need to look further for the cause of death.

Had the answer to question 1 been "No", you would have followed the "No" arrow down the page to question 2. Then, if the answer to question 2 is "Yes", follow the arrow to the right, thus ending the verbal autopsy.

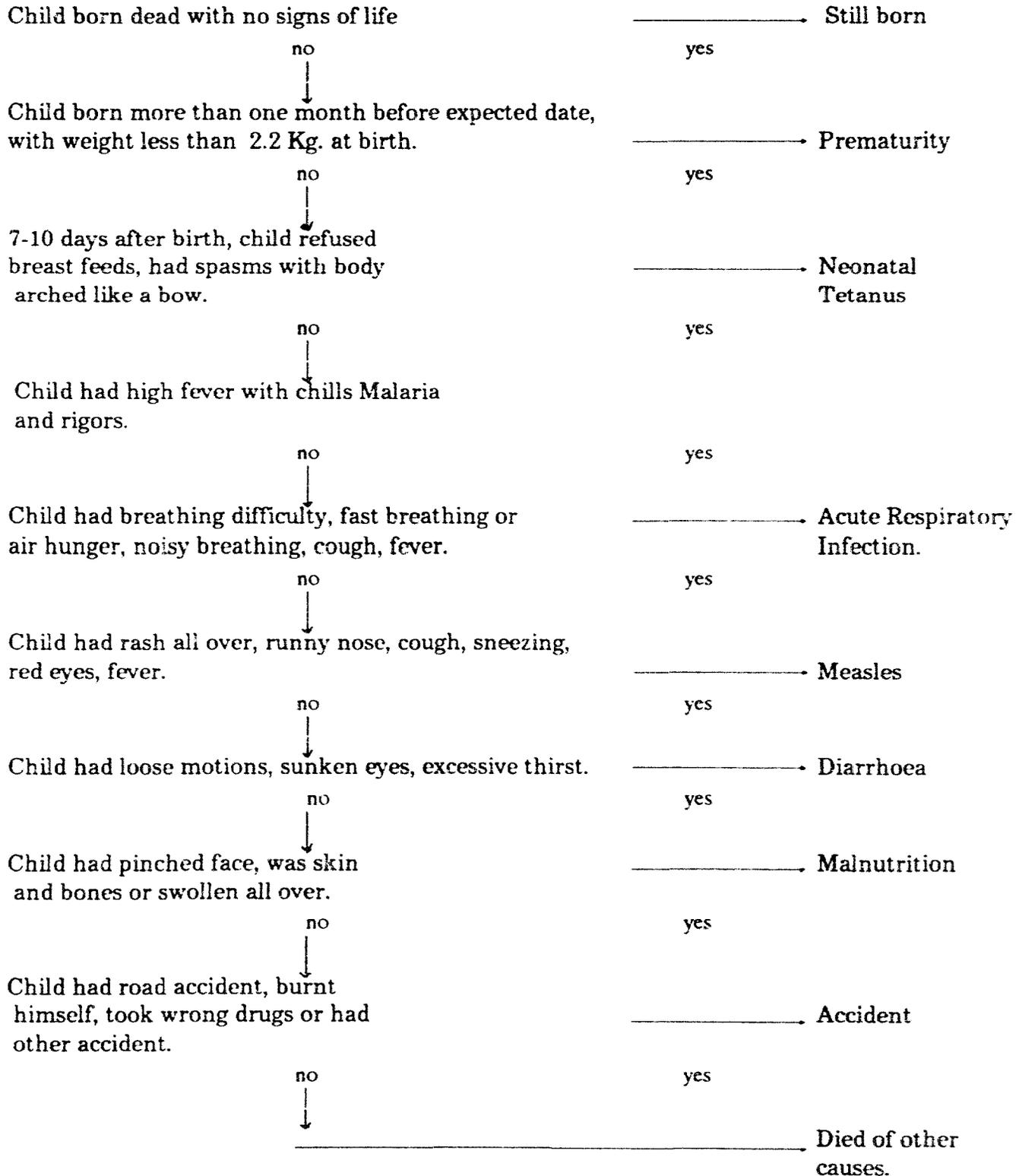
If the answer to any of these remaining questions is "No", follow the arrow downward until you reach the statement for which the answer is yes. Follow the horizontal arrow to decide on the probable cause of death.

UNIT THREE: CARE OF THE SICK

PROBABLE CAUSE OF DEATH  
(VERBAL AUTOPSY)

FORM FIVE

Village:  
Family head:  
Date of death:  
Person completing:  
Date:



## SUMMARY

This unit covered the CHW's role in the following areas: management of fever and pain; referral; and the verbal autopsy form.

A general description of fever and pain was given. The need to wash one's hands prior to carrying out a procedure was highlighted. The procedure for taking oral, axillary and rectal temperatures was given. This was followed by general guidelines on teaching families how to care for their sick at home.

Next, referral was discussed at length, beginning with the CHW's role in referring cases he is not yet trained to manage alone. One of the CHW's responsibilities is to

facilitate the appropriate use of resources like the BHU and RHC. The topic of referral is discussed in detail here so that this information can be applied in any situation.

Two forms on referral and verbal autopsy are included here. A written note should accompany all referred patients so that they receive appropriate care. Also, when you are in the community, you will learn of deaths. You are required to fill in a form for each death of a child under five years of age. The CHW should get in the habit of filling in these forms right away.

# **UNIT FOUR**

## **FIRST AID**

# INTRODUCTION

This unit covers your role and responsibility in providing emergency care or first aid to a person who has been injured or found in a serious condition. Any CHW is expected to give immediate care and to send the person to a health facility or physician for further diagnosis and treatment. In this unit you will learn about:

- Giving artificial respiration to a baby, young child or adult.
- Ways to control bleeding.
- Ways to protect wounds from infection.
- What to do for an unconscious person.
- Ways to manage burns.
- What to do for fractures and sprains.
- What to do for accidentally swallowed poisons.
- What to do for over exposure to heat and cold.
- What to do for animal and snake bites.

# 4.1 ARTIFICIAL RESPIRATION

Artificial respiration is a procedure for keeping air flowing into and out of a person's lungs when normal, natural breathing stops.

Breathing may stop due to severe illness, injury, gas poisoning, smoke suffocation, drowning, poisoning, electric shock, choking or taking too much of certain medicines.

A person will die within 6 minutes or less if breathing stops completely. Giving artificial respiration may start the breathing again.

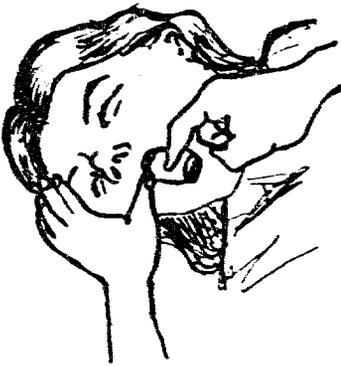
Artificial respiration can save lives.

It supplies fresh air to the body until normal breathing starts again.

When a person stops breathing his lips, finger nail beds and tongue become blue. There is loss of consciousness and the pupils of the eyes become enlarged. There is no chest movement.

There are two methods for starting artificial breathing:

- Mouth to mouth breathing for older children and adults.
- Mouth to nose breathing for young infants and children.



**1** Quickly remove anything stuck in the mouth or throat. You can use your finger to remove a visible foreign body or other matter from the mouth. Try and remove object only if you can see it and can easily reach it with your finger.



**2** Tilt the head back and pull the chin and tongue forward. Using the same hand that is pressing on the forehead to tilt the head back, pinch the nostrils shut with your thumb and index finger.



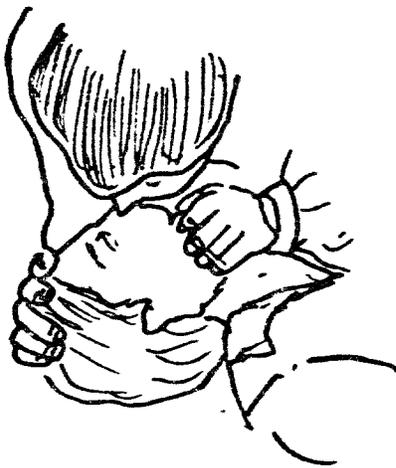
**3** Open the mouth wide, and cover with your own mouth; blow until the chest rises.



**4** Then stop blowing, let the air come back out and blow again. Repeat about 15 times per minute.

MOUTH TO NOSE METHOD

FOR NEWBORN INFANTS



Close the victim's mouth with your hand and blow into the nose until the chest is expanded. Open the victim's mouth to allow air to escape. Repeat about 15 times per minute.



Breathe very gently, about 25 times per minute.

**NB** Artificial respiration should continue until the victim begins to breathe for himself.

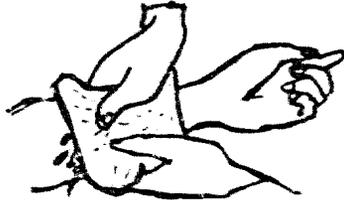
## 4.2. BLEEDING

Common causes of bleeding are road accidents, falls and mishandling of knives, tools and weapons.

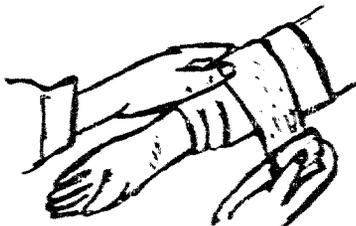
Blood is very important for life.

Severe bleeding will lead to death unless it is controlled in time. Sometimes the injury itself is not very serious but the excessive blood loss will cause death.

### HOW TO CONTROL BLEEDING

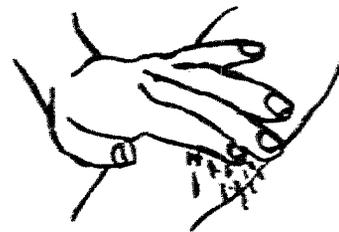


**1** The best way to stop bleeding is to apply direct pressure to the wound. Take a piece of clean cloth, fold it many times to make a pad, then place it directly on the bleeding part and press. Pressure should be applied towards the bone. The pad also helps to control the bleeding by absorbing some of the blood so that clotting will take place.



**2** Do not remove the clot. Bandage it and seek help from the BHU.

Never use dirt, ashes or other substances to stop bleeding.



**NB** In an emergency, if you have no piece of cloth, apply pressure with your bare hand.



**3** The bleeding part should be elevated to reduce the amount of blood flowing to that area. This procedure will help to reduce the amount of blood lost.

**4** Besides controlling bleeding, reassure the patient. Make him as comfortable as possible and obtain help or send the person to a health facility. Have him drink plenty of fluids.

## 4.3 CARE OF WOUNDS

We have learned how to stop bleeding. Now we will discuss ways to keep an open wound from becoming infected.

A person with an infected wound may develop a fever and spasms of the back and neck muscles. He may die.

This sickness is caused by a germ and is called tetanus. This germ is found in dust and cowdung, and when it enters an open wound it causes tetanus.

### TREATMENT

The most important First Aid measure for preventing infection is keeping the wound clean.



**1** When giving First Aid for cuts, scrapes and small wounds, first wash your hands thoroughly with plenty of soap and water.

**2** Then wash the wound with boiled water and soap. All of the dirt and foreign material must be removed from the wound.

**3** After the wound has been cleaned with soap and boiled water, cover it with a sterile bandage or a clean cloth that has been sterilized with a hot iron.



**NEVER** put animal dung or mud on a wound, because these can cause tetanus which is a very serious and dangerous infection.

**4** Anyone who has an open wound should be referred to the RHC/BHU for an injection to prevent "tashanj" or CHANANY (TETANUS).

**5** People who have large or serious wounds (like a puncture wound of the chest or abdomen or a large wound where the edges of the skin do not come together by themselves) should have the wound covered with a clean dressing, and be sent immediately to the BHU.

## 4.4 SHOCK

Shock is a very serious condition which can lead to death.

Shock can be caused by severe bleeding, great pain, a serious burn, severe illness, dehydration (loss of body fluids) or an allergic reaction to a drug.

When a person is in a state of shock the pulse will be very rapid and weak. The skin will look pale and feel cold and damp (cold sweat). There may be mental confusion, weakness or loss of consciousness.

There are some measures that you can take to prevent or treat shock.

**1** Have the person lie down and raise his feet higher than his head (unless he has fractured legs). Cover him with a blanket if he feels cold, and give him warm water or other warm drinks. You should remain calm and reassure the person that help is being arranged for.

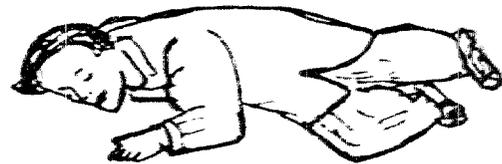
**IF** the shock is so severe that the person is unconscious:

**2** Check to see if the person is breathing. If not tilt the head back and pull the tongue and jaw for-

ward. If he still is not breathing, give mouth to mouth breathing.

**3** Look to see if the person is losing blood. If he is, apply pressure to the wound.

**4** If you have to give First Aid to an unconscious person in shock, lay him on his



side with his head lower than his feet. Tilt the head back and to one side. If he is choking pull the tongue and jaw forward. If he vomits, remove any matter from his mouth at once so that he does not choke. Do not try to give the person anything to drink until he becomes conscious.

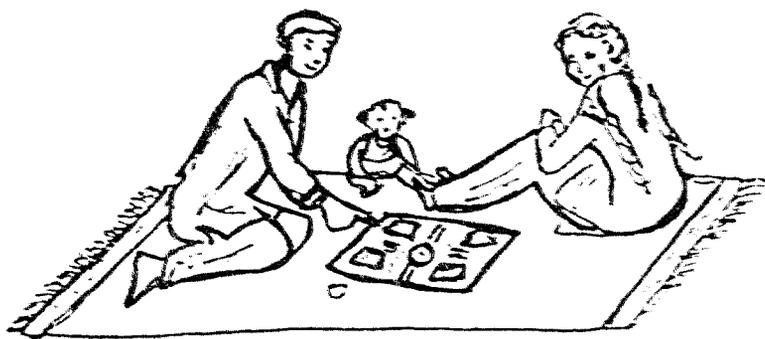
**5** Shock is a very serious condition. Call for the HT at once or arrange for the person to be transported to the RHC/BHU.

## 4.5 BURNS

Burns are very common, especially in children. They may be burned by fire, boiling water, a hot iron, hot pans, electricity or with chemicals.

Let us discuss some measures that you as a CHW can promote to prevent children, and adults as well, from burns.

For example, mothers should be taught to keep their children away from cooking and other open fires. Match boxes, oil lamps and other hot objects should be kept out of the reach of children.



Sometimes, while cooking, women accidentally let a piece of their clothing brush against the fire. If they are wearing very flammable clothing, like nylon or rayon, it can catch fire very quickly and cause a serious burn. Women can prevent such burns by remembering to keep any loose clothing from touching the fire and by not wearing highly inflammable clothing when cooking.



### CLASSIFICATIONS OF BURNS

- minor burns cause the skin to turn red;
- moderate burns cause blisters to develop;
- severe burns are when there is deep tissue destruction and the skin has a white or charred appearance.

TREATMENT

- FOR MINOR BURNS - Put the burned part in cold water. This prevents the burn from going deeper, if done within 30 minutes. No other treatment is needed.



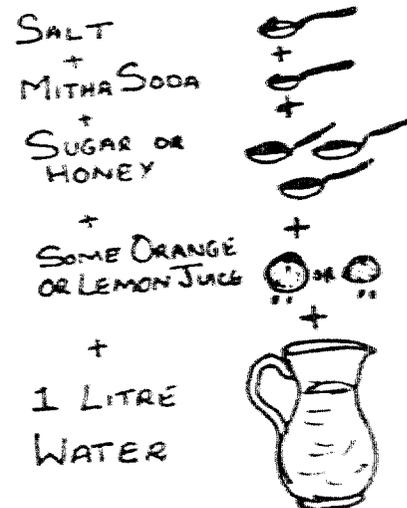
- FOR MODERATE AND SEVERE BURNS - Do not put anything on the burn. Clothing around the burn should not be pulled off but cut around with scissors. Wrap the burned part in a clean cloth and take the person immediately to the BHU or RHC.



**NB** Any person who has a serious burn can easily go into shock because of pain, fear, and the loss of body fluid from the oozing burn. Give first aid for shock. Comfort and reassure the burned person and give plenty of fluids to drink. The fluids are necessary to replace the fluid being lost through the burned area.

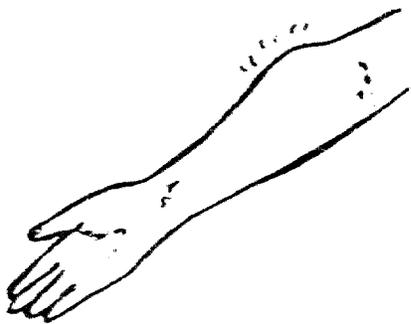


Make the following drink: to one litre of water add half a teaspoon of salt, half a teaspoon of bicarbonate of soda (mitha soda), 2 or 3 tablespoons of sugar or honey and some orange or lemon juice. The burned person should drink this fluid as often as possible.



## 4.6 FRACTURES AND SPRAINS

**FRACTURES** - A fracture is a crack or break in the bone that may have been caused by a road accident, a fall or a sports activity. You can often recognize a fracture. If the person is conscious, he will be able to tell you the location of pain and will have difficulty moving the injured part. When a person is unconscious, you can recognize a possible fracture by the swelling and discolouration of the injured area.



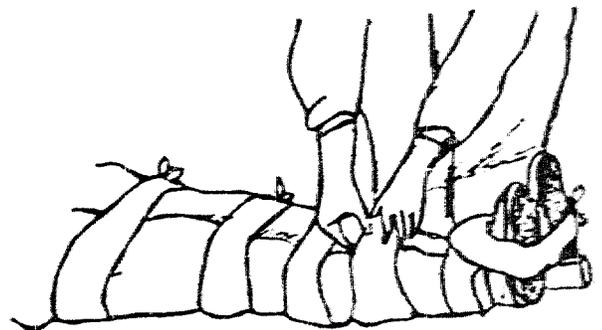
### TREATMENT

**1** Do not attempt to set a fracture or try to push a protruding bone back. Movement of the affected part should be avoided. The main thing to do is to keep the broken bone in a fixed position.

**2** Make the injured person as comfortable as possible and then arrange for him to be sent to the RHC.

**3** Proper preparation for moving the injured person is very important if the leg is fractured. Keep the affected area from moving by using a splint stick.

A splint can be made of sticks or cardboard. A folded cloth or a handkerchief can be used for binding the splint. A fractured leg can be tied to the uninjured leg.



An injured arm can be bound to the chest.



**NB** Immediate skilled help to an injured person will help prevent complications.

**SPRAINS** - A sprain is an injury to the ligaments and tissues around a joint, without a dislocation or fracture of a bone. The ankles, fingers, wrists and knees are most often sprained.

A sprain can easily be recognized by the swelling around the affected area, pain on motion, tenderness and blue discolouration.

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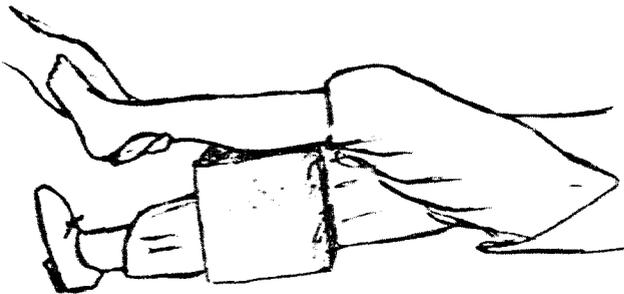
TREATMENT

**1** In the case of an ankle or knee sprain, do not allow the person to walk. Many times it is impossible to know whether a hand or foot is bruised, sprained or broken.

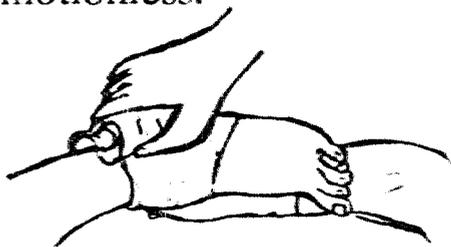
**4** Reassure the patient, give treatment for shock if present and send him to the RHC.

**5** To help reduce the swelling and pain, put ice or cold wet cloths over the swollen joint during the first 24 hours. After the first 24 hours, hot soaks will help relieve the pain and swelling.

**NEVER** rub or massage a sprain or broken bone. It will not help and can cause more harm.



**2** Keep the affected part elevated and motionless.



**3** Wrap the injured joint with something that gives firm support.

## 4.7 POISONING



Many people, especially small children, die every year from eating or drinking various kinds of poisonous substances. We will now talk about what you can do to help save a person from death from poisoning.

There are many things commonly found in the home which are poisonous if swallowed. Some of these things are: rat poison, DDT and other insecticides, medicines taken in excess, petrol, lye, castor beans, poisonous leaves, seeds and berries.



Two things mothers and fathers can do to prevent accidental poisoning of their children are:

- KEEP ALL POISONS AND MEDICINES OUT OF REACH OF CHILDREN.
- NEVER KEEP KEROSENE, PETROL OR OTHER POISONS IN SOFT DRINK BOTTLES, BECAUSE CHILDREN MAY TRY TO DRINK THEM.
- If you suspect that someone has swallowed poison, immediately

make him vomit. (However, there are some exceptions. Do not make a person vomit if kerosene, petrol, strong acid or corrosive substances such as Lye have been swallowed).

To make the person vomit, put your finger in his throat, or make him drink one glass of water with two teaspoons of salt in it. Also have the person drink as much milk as possible, mixed with beaten eggs, and give two teaspoons full of powdered charcoal. Keep giving more milk with beaten eggs, and keep the person vomiting until the vomit is clear.

(A small quantity of salt is beneficial for treating dehydration, but a concentrated salt solution will make a person vomit).

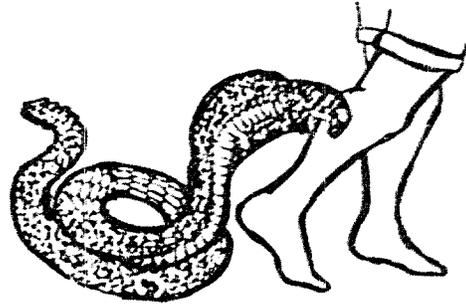
Arrange for the person to be taken to the RHC/BHU.

- Try to identify the kind of poison swallowed. Whenever possible, send the bottle containing the poison to the RHC/BHU; it will help the doctor or HT give the best treatment.

Commercially prepared poisons will have the antidote written on the label.

## 4.8 SNAKE BITES

In Pakistan each year many people die from poisonous snake bites. Some of these deaths can be prevented if prompt treatment is given by a doctor or HT.



### TREATMENT

Most people can recognize a cobra, but there are other poisonous snakes which may or may not be recognized. It may not be possible to tell whether the person was bitten by a poisonous or non-poisonous snake.

**1** Therefore encourage anyone bitten by a snake to stay quiet and not move the part of the body bitten. If the snake was poisonous, the more the person moves, the faster the poison will spread throughout the body.

**2** If the person was bitten on an arm or a leg, tie a cloth around the limb just above the bite. It should not be tied very tightly. Loosen the tie for a few minutes every half hour. Do not make the cloth so tight that it completely cuts off the flow of blood.

**3** Make arrangements to immediately move the person to the RHC/BHU. Anti-snake bite venom must be given as quickly as possible, particularly after a bite by a krait or cobra. **THE SPEED WITH WHICH YOU TRANSFER THE VICTIM TO THE RHC/BHU, MAY MAKE THE DIFFERENCE BETWEEN LIFE AND DEATH.**

**4** Whenever possible the snake should be killed and taken along with the victim for identification by the Doctor or HT.

**NB** home treatment for a poisonous snake bite will not save the person's life. If the person lives, it can be safely assumed the bite was by a non-poisonous snake.

## PRECAUTIONARY MEASURES

The most dangerous time of the year for snake bites is during the rainy season. People who live in the monsoon areas of Pakistan should be extra careful about avoiding snake bites during this period. When the rains flood the fields and other areas, snakes are driven to dry places, such as frequently used foot paths.

- Encourage people to carry a lathi (stick) when walking on these paths, and to avoid tall grass.
- If people must walk through the jungle or other snake infested areas, they should be encouraged to wear leather shoes and long trousers to carry a torch or lantern and to keep a sharp lookout for snakes.

At night, particularly during the warm season, snakes often come into houses in search of food. The kind of food they search for includes rats and other rodents, bird's eggs and newly hatched birds.

Rodents will chew holes through mud walls, and even brick walls, to

reach food stored in the house. These holes give snakes easy access into the house. Rat holes are frequently found in the walls and floors of grain storage areas.

- There are some measures which you can encourage people to follow which will help prevent snakes from entering the house.
- Villagers should frequently inspect their walls and floors for holes and cracks, and seal them promptly.

Cracks around doors and windows also let snakes enter the house. Any spaces around doors and windows should be sealed. For example, if there is a space at the base of a door an old tube can be cut and nailed to the base of the door to eliminate the space.

- Birds should not be allowed to build their nests inside the house, because their presence will attract snakes.

## 4.9 ANIMAL BITES

Animal bites, and in particular dog bites, happen very frequently in the villages of Pakistan. There are many different animals that may bite a person including cows, dogs, cats, buffaloes, horses, donkeys, camels and several different wild animals.



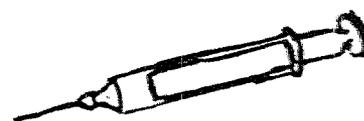
### RABIES PREVENTION

Although any animal bite may be serious, the most dangerous bites are those by animals sick with a very serious and fatal disease (unless treated) called rabies. The animals most likely to carry rabies are dogs, cats and wild animals like jackals and foxes.

When an animal that is sick with rabies bites a person, the rabies germ is passed to the victim bitten through the saliva in the animal's mouth. Since all animals that bite a person do not have rabies, the best way to decide whether it has rabies is to keep the animal tied up or in a cage for 10 days. If the animal dies during the 10 day period, you can

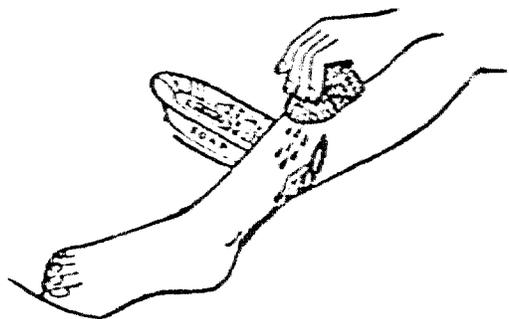
presume the animal was sick with rabies. In such cases, the person bitten must be given anti-rabies injections by a doctor. **IF THESE INJECTIONS ARE NOT GIVEN, THE PERSON BITTEN BY AN ANIMAL SICK WITH RABIES WILL DEFINITELY DIE.**

If the patient does not follow the doctor's instructions exactly, the anti-rabies injections will not work well. Once the symptoms of rabies start in a person, the anti-rabies injections will not be able to prevent him from dying.

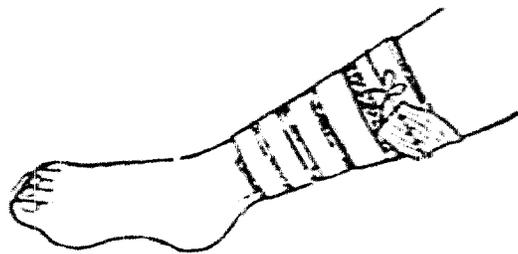


# TREATMENT OF ANIMAL BITES

**1** The next first aid measure for a person bitten by an animal is to thoroughly wash the wound with plenty of soap and water. Thoroughly washing the wound with soap and water helps wash away the animal's saliva which carries the dangerous rabies germ. Washing the wound, even if it is painful, should be done several times.



**2** After you have washed the wound, it should be covered with a bandage, (following the instructions on the Care of Wounds P.90)



**3** Then send the person to the RHC/BHU.

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## PROTECTING THE COMMUNITY

As a CHW you can help protect your community from dangerous animal bites, particularly dogs, by encouraging people to prevent stray animals from remaining in the village.

Always keep a lookout for stray dogs in your village. When you see

stray dogs or other animals acting strangely in your village, report their presence to the Health Committee and the HT at the BHU. The HT will make the necessary arrangements to eliminate any stray dogs, or other possibly dangerous animals.

## 4.10 EXTREME HEAT

During the summer in Pakistan the weather is very hot. No doubt you have seen or heard about people dying because of the hot weather.

There are three different kinds of illnesses caused by heat: Heat Cramps, Heat Exhaustion and Heat Stroke.

**HEAT CRAMPS** often happen to people who work hard and sweat a lot in hot weather. They get painful cramps in their legs, arms or stomach. These cramps happen because the body has lost a lot of salt due to sweating.

**TREATMENT** Mix a teaspoon of salt into a seer of safe water. Have the person drink it.

**HEAT EXHAUSTION** also may happen to people who work hard in the hot weather. The signs of heat exhaustion are sweating, pale and cool skin, large pupils, no fever and weakness.

### TREATMENT

The person should lie down in a cool place. Raise his feet and rub his legs. Have the person drink salt water. (1 teaspoon of salt in a seer of safe water).

**HEAT STROKE** is an extremely serious and dangerous condition. The person will die unless immediate and correct first aid is given.

In Heat stroke the skin is dry, red and hot. There is a high fever and the person is very ill, or unconscious.



### TREATMENT

The body temperature must be lowered immediately. Send for the HT. In the meanwhile, lay the patient in the shade, remove clothing and soak him with cold water (ice water is best). Continue pouring cold water over him and fanning him vigorously until the fever drops. This is an emergency. You must reduce the victim's body temperature quickly, or he may die.

## 4.11 EXTREME COLD

Exposure to extreme cold for a long time can be dangerous especially when the low temperature is accompanied by high winds or high humidity. It can lead to hypothermia or frostbite, a condition in which body tissues are damaged or die due to freezing. Once freezing begins, it progresses rapidly unless the tissues are warmed quickly. The fingers, toes, nose, ears and cheeks are most commonly affected.

**HYPOTHERMIA** Can be recognized by the following:

- Person shivers.
- Has numbness in hands, feet, face and ears.
- Feels drowsy and weak.
- Body temperature may be low.

### TREATMENT

- 1 Bring person indoors.
- 2 Remove wet or frozen clothing and replace with dry clothes.
- 3 Wrap the victim in a warm blanket.
- 4 Give him hot liquids to drink.



## UNIT FOUR: FIRST AID

**FROSTBITE** can be recognized by the following:

- To begin with the skin of the affected area appears flushed. Then the skin changes to a wax white or mottled-blue colour.
- Pain may be felt at first.
- Later the affected area starts tingling and then becomes numb.
- When an area is frozen it becomes hard.
- In severe cases the person feels drowsy the whole body becomes numb.
- Blisters, ulcers and gangrene may develop later.



## TREATMENT

- 1** Place the body part in luke warm water. **DO NOT RUB** the affected area, expose it to direct heat or use a hot water bottle.
- 2** Cover the affected area.
- 3** Give a warm drink.
- 4** Refer person to a Medical Officer if large area of body is involved.

## PRECAUTIONARY MEASURES

- Wear gloves, a hat that covers the ears and an extra pair of socks.
- Limit outdoor activities by periodically coming into a warm place.

## SUMMARY

In this unit you learnt how to give artificial respiration to both babies and adults; how to control bleeding; how to care for wounds, shocks, burns, fractures, sprains, poisons, bites and people exposed to extremes of temperature. You have, therefore, been taught how to take immediate action to preserve and minimize suffering.

Your role in first aid is to provide immediate help and then to arrange without delay, for transportation of the casualty to a health facility. (This may mean talking to the family and convincing them that this is necessary.) Your responsibility ends only when the patient reaches a health facility where he can be evaluated by a more highly trained person.

**UNIT FIVE**  
**HEALTH EDUCATION**

# INTRODUCTION

Most of us enjoy good health as long as our basic needs for food, shelter and safety are met. These basic needs are normally met by our families and we tend to take our health for granted until we become ill or injured. Experience and scientific research show that illness and injury can often be prevented by taking some simple health measures.

Health Education means providing information about these health measures.

In this unit, you will find four lesson plans, for teaching families, using several different teaching methods. (See page 26 of Unit One).

## 5.1 NUTRITION (EATING RIGHT)

### LECTURE

There are six basic nutrition messages.

- 1 Breast milk for at least two years.
- 2 Use a cup and spoon. No bottle.
- 3 Add supplementary foods (porridge, legumes, eggs and vegetables) at 4 to 6 months of age, and feed four times a day.
- 4 Continue to feed the sick child at least four times per day, and preferably more often.
- 5 Give extra protein-rich foods (legumes, eggs, fish, meat and vegetables) to nursing mothers and pregnant women.
- 6 Breast feeding should be discontinued gradually.

In this lesson we will learn why these six messages are important:

### BREAST MILK FOR 2 YEARS:

In the Holy Quran it is mentioned: "Mothers should suckle their babies for complete two years." Breast milk is the best food for a baby for the first four to six months of life. After that babies need additional foods in order to keep growing. Breast milk is best, because it contains all the nutrients needed for the first 4 to 6 months of life. The first milk (colostrum) is very important and should always be given to the newborn, because it contains a special nutrient which promotes growth, and a special substance that helps protect the infant from infections. Breast-feeding on the first day



after delivery has two other very beneficial effects. It helps start the production of breast milk and it helps cause the uterus to return to its normal size. Some other good reasons for breast feeding are that breast milk is always available when the infant is hungry, it is cheaper and easier than preparing artificial feeds, it is clean and it helps prevent diarrhoea.

REMEMBER:

Breast milk is best. Encourage mothers to:

- put the newborn infant to the breast as soon as possible after delivery;
- give colostrum (first milk) to the baby;
- go on breast feeding as long as possible or for two years.

USE A CUP AND SPOON, NO BOTTLE.

Sometimes breast feeding is not possible. For example:

- the mother does not have enough milk;
- the mother is sick;
- the mother has to work outside the home;
- the mother dies.

When breast feeding is not possible, the infant should be fed with a cup and spoon. This is a clean and safe method for feeding infants and young children. Bottles should never be used because they cannot be kept absolutely clean. Dirty bottles cause serious diarrhoea.



When babies are first given supplementary juice or other semisolids, they may be reluctant to take the food with a spoon, simply because they are not used to it. Mothers should be patient and continue to offer the food with a spoon.

**ADD SUPPLEMENTARY FOODS AT 4 TO 6 MONTHS OF AGE:**

Mother's milk gives a baby all the nutrients he needs until 4 to 6 months of age. After 4 to 6 months, breast milk alone does not meet the growth requirements of the baby. Other mixed foods should now be given. The baby may not accept these new foods at first. Start him on very small quantities of sooji, milk, halva, mashed potatoes, banana, spinach, etc.

You may choose from the family diet. Just mash the food thoroughly before giving it to the baby.

Offer the baby any new foods before he breast feeds. Foods the baby already likes should be given after breastfeeding. Use local foods because they are readily available and cheaper. Gradually, by the age of one year, the child should start eating solid food from the regular family meal.

A small child needs to be fed four times during a day in addition to breast milk. A child's stomach is small and he needs to eat more often than an adult.

**CONTINUE TO FEED A CHILD WHEN HE IS ILL:**

Some parents feel that a child should not be fed when he is sick with a fever, a cold or diarrhoea. But this is just when the child needs most food, because he is burning up more food when he is ill. The sick child must be offered food in small quantities several (4 or more) times a day and the parent must gently encourage the child to eat. Because he feels sick he is often too tired to eat. Special favourite foods can be helpful. Food is necessary to ensure that he will get well.

What are the feeding practices in your community for a sick child?

Do mothers change the routine diet or withhold food when their child is sick?

Do mothers have beliefs regarding 'hot and cold' foods that should or should not be given to a sick child?

If the mother is feeding her sick-child, encourage this practice.

# UNIT FIVE: HEALTH EDUCATION

## DISCUSSION

Identify what foods are given to whom in the village setting.

Determine what foods are prohibited during illness and pregnancy.

Utilizing the table below help identify the nutritional needs of different individuals.

Draw up a list of food that is forbidden for sick children and pregnant women.

DAILY INDIVIDUAL NUTRITIONAL REQUIREMENTS FOR PAKISTANIS

	1 cup Rice	1 cup Aloo	1 banana or 1 orange	2 cup curry	1 cup eggplant	1 cup spinach	1 cup beans	1 cup oil	1 cup fruit	Servings in	Estimated calorie- content
1	675	150	120	75	212	227			100		2600
2	160	215	120	75	227						2500
3	170	228	216	75	106	33		1/2			2100
4	160	280	216	75	106	33		1/2			2100
5	160	102	120	75	51	33		1/2	1/2		1400
6		220	216	150	2	33		1/2	100		3100
7			216	150	15	33		1/2	100		2500
	1000	1000	1000	1000	1000	1000	1000	1000	1000		1000

Above table gives you an idea of the amount and type of food individuals need at various ages and developmental stages. You can use this table to evaluate the adequacy of a family's daily intake and to help them eat the right kinds and amounts of food.

## 5.2 PERSONAL CLEANLINESS

### LECTURE

Each morning, we should wash our hands and faces. This washes away the dirt and feels very good. It even helps us wake up.

There are three basic things we should do each day.



- Wash our hands, nails and faces with soap and water.
- Clean our teeth with a brush, twig, miswak or datan after breakfast and before going to bed.

- Comb our hair.



### DEMONSTRATION

Wash your hands and face with soap and clean water. Clean your teeth in the manner practised in your area and comb your hair.

During the day we should also always wash our hands after going to the latrine, after preparing cow dung cakes or pathian, before eating, before cooking food and before feeding our children. This keeps our hands clean and will help protect us and our families from getting sick.

You should always practise these habits of good hygiene but you also need to teach your family.

- Another part of personal cleanliness is bathing. We should do this as often as possible. In very hot weather, we should bathe and wash our hair daily. In cold weather, we need to bathe 2-3 times a week. Bathing in ponds is unhygienic because the water there is dirty. When we keep our hands, face, hair and bodies clean with soap and water, we kill germs which cause disease. This helps us remain healthy.

- Our clothes also get dirty, just like our bodies. We need to wash our clothes with soap and water. Whenever possible they should be dried in the sun. The sun's heat helps clean our clothes and gives protection from the spread of disease.

It is best to put on clean clothes after bathing. If this isn't possible, wash your clothes at the same time as you bathe, dry them in the sun and then put them on again.

- It is also important to clean and air our homes. Mats, blankets and other covers that we use for sleeping should be put in the sun once a week. If the house has a lot of bugs or insects, we need to air our covers

in the sun every day.

To practise personal cleanliness in our homes, we need to:

- Wash our hands, nails, and faces daily
- Clean our teeth daily (after breakfast and before going to bed)
- Comb our hair daily
- Bathe at least 2-3 times a week. Remember that sharing towels spreads disease
- Wash or air our sleeping covers every week
- Clean and air our homes every day

It may be easy to remember all these things, but it is even more important to practise them each day until they become habits. We must also teach our family to do these things daily.

**HINT:** Learn what difficulties, if any, people have in practising personal cleanliness. If there is no soap, use the material that local people use for cleaning, such as ashes.

## 5.3 HEAD LICE



### LECTURE

In this session we will talk about head lice. You must have seen children with lice in their hair.

Head lice are external parasites that lives in the hair and make a person's head itchy.

### DISCUSSION

Can you tell me what word you use for lice?

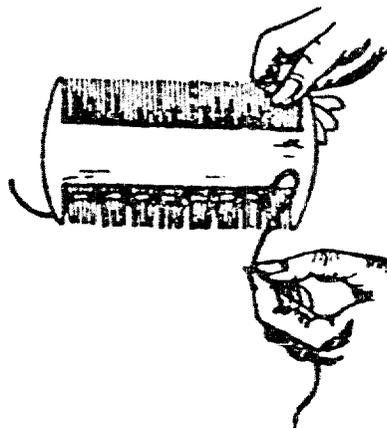
Tell me how you manage to get rid of lice.

### LECTURE

We can sometimes save ourselves from this nuisance by keeping our hair clean and having a daily bath. However, when someone in the family gets head lice it usually spreads to other members of the family. Therefore when someone in the family has head lice, everyone living in the household should be treated.

The most effective treatment is the application of Benzyl Benzoate to the hair. Apply the medicine to the hair, and leave it until the next day; wash it out with soap and water, and comb the hair.

Sometimes mothers try to remove the lice with a fine tooth comb and thread, dampened with Sirka (Acetic acid). However this method is not very effective. All of the lice, and the small white eggs attached to the hair, must be killed or removed before the person is free of this nuisance.



## 5.4 ROUND WORMS

Now we are going to talk about another kind of problem. Once again, teaching about habits of personal cleanliness will be very important. This kind of teaching will be your principle job as Community Health Worker. It is very important work. All the medicine in the world will not stop disease, unless people learn to

keep themselves, their houses and yards clean. You are the best person in your village to teach hygiene to the people there. It will be up to you to find a way of teaching the knowledge you have learned. In a way, you are your village's best hope of escaping much sickness and much suffering.

### LECTURE COMBINED WITH DISCUSSION

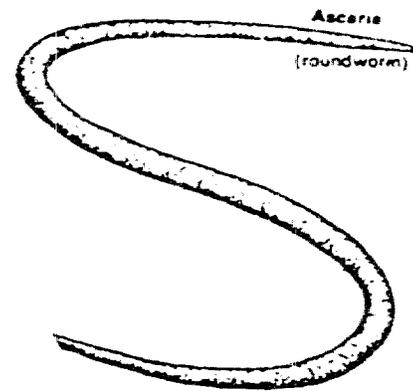
Today we shall be talking about round worms. Do you know what round worms are?

Do you have a special name for them in your village?

Once the local name for round worms has been identified, use it throughout the lesson.

Who has seen round worms? What do they look like? They are about 20 to 30 centimeters long, and are pink or white in colour. They are passed in the stool.

Make sure that your listeners know exactly what is meant by the word "stool". Do not be embarrassed at using the local name for faeces if necessary.



How long is 30 centimeters?

### DEMONSTRATION

Compare different objects in the room so as to give an idea of the length represented by 30 centimeters.

So you see that round worms are long and thin, pink or white in colour and are seen by people when they pass them in their stool.

You may have had round worms yourselves. Have you? If you have,

can you remember how your belly felt while you had them?

People who have round worms often feel very uncomfortable in their bellies. They have colicky pains.

Try to elicit the symptoms experienced (Colicky pain and abdominal discomfort).

Do you know what colicky pains are? You probably have a special word for them. They are pains that start slowly and then get worse and worse. Then they decrease (get less and less) and go away for a short while, until they begin again.

Now you know what round worms look like, where they are found and how uncomfortable they make people feel.

Habits of personal cleanliness are very important, especially for people who have round worms. Can you think of any reason why hygiene should be important for people who have round worms? Think about this a little.

Have each person try to establish the relationship between personal hygiene and round worms.

Congratulate anyone who suggests that transmission is from faeces to mouth via the hands.

Well, hygiene is very important to prevent people being troubled with round worms. The worms lay eggs in a person's belly and these eggs are passed out in the stool. When a person cleans himself after emptying his bowels, it is easy for the eggs to get on his hands. His hands then carry the eggs to his mouth and are swallowed.

How can a person escape from being troubled by round worms?

Congratulate anyone who suggests that washing the hands after defaecation would effectively prevent transmission of the parasite.

The best way to prevent the spread of round worms is for everybody to wash their hands with soap and water after emptying their bowels and cleaning themselves. The soap will kill the eggs and the water will rinse them away.

In places where there is not much water, it is, of course, difficult to wash your hands immediately after emptying your bowels. The next best thing then is to make sure you wash your hands before eating or preparing food.

Of course, not only can people swallow the eggs of their "own" roundworms - they can also swallow the eggs that have come from the faeces of other people! People shake hands or touch each other and the eggs get passed to the other person's hand and carried to his mouth.

The eggs of round worms can also be transported to the mouth on fresh, uncooked fruit and vegetables. One way to avoid this is to peel fruit and vegetables or wash them in clean water before eating them. Peeling or washing vegetables and fruit will get rid of the roundworm eggs on them.



The only way we can ever hope to prevent the spread of round worms from one person to another is by teaching people to be clean - and you are the only person in your village who is going to be able to do that.

Happily, there is a simple way of curing the round worm problem, with medicine obtainable from the HT. The medicine is called **PIPERAZINE** and is made into tablets. This medicine kills the round worms, and thenext day they are passed out in the stool. If left un-

treated, round worms cause a very bad problem. Sometimes so many worms grow in the belly that they block it up. If this happens, even though that person is sent to the hospital, he may die. So you see, prevention of round worms is very important.

When a person tells you that he has seen round worms in his stool, send him to the HT who will give him Piperazine tablets. This will get rid of the worms.

## SUMMARY

This unit covers the CHW's role and responsibility in providing health education for the family. The CHW also teaches people to utilize available resources to meet their basic needs. For example:

- Babies can and should be breastfed. (Breast milk is best for babies).
- Locally available food such as "suji" and fruits can be used as weaning foods.

- Extra amounts of local foods may be given to pregnant and lactating women.

This unit also discusses the importance of cleanliness: washing one's hands, bathing and keeping oneself clean generally. It describes how the CHW can help in cases of lice infestation and round worms. The CHW's role in health education is to provide information so that families can make decisions on ways to improve their health status.

**UNIT SIX**  
**SANITATION**

# INTRODUCTION

This unit covers two main topics: safe drinking water and proper disposal of waste. Under the first topic, sources of water such as wells, springs, ponds, streams and rivers are listed. Then two methods of making water safe for drinking are discussed - boiling and treating water, followed by an explanation of the need to store drinking water properly.

The second topic covered in this unit is the proper disposal of waste. The unit discusses the construction and correct use of a sanitary-pit-latrine which is the cheapest and best way of disposing of human waste. This section also discusses the importance of selecting a site far enough away that your drinking water supply will not be contaminated.

## 6.1 SAFE DRINKING WATER

A very important part of our daily life is drinking and using water. Water is essential and we cannot live without it. We all know this, and we also know that in places it is difficult to get enough clean water.

Where does your family get its water for drinking?.

Is it from a well, a hand pump, a spring, a river, or a pond?

Do you have difficulty getting enough water at certain times of the year?

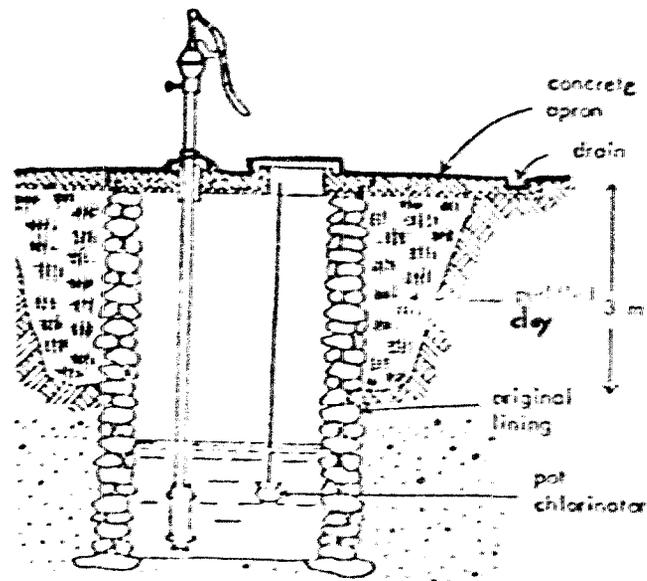
It is most important to be able to get enough water. However, it is also important to be able to get clean water.

There are scientific ways to tell if our water is clean enough to drink but, we can also be reasonably sure that our water is safe for drinking if we know it comes from a safe place.

### WELL WATER

A dug well can be a safe source of drinking water. To be safe it should be about three metres deep and about 30 metres away from any latrine or refuse heap. The sides should be protected so that ground water cannot seep into the well. The sides of the well should be lined with

stones or bricks and cement, to make it water tight - to a depth of about three meters if it is clay soil, and to a depth of six meters if it is sand or gravel. There should be a protective cover on the top so that dirt and polluted surface water cannot fall into the well. It should have its own bucket or Boka. Annual cleaning of the well must be carried out. The men of the community should take out the silt and chlorinate the well with the help of the BHU staff.



If your village or family has such a well, it is probably the best source of safe water and you should be sure that all your family members use it.

If your well is uncovered, or surface water is able to seep into it, the water is not safe to drink. It should be boiled before drinking.

## SPRING WATER

Most of us don't have access to dug wells, but we may have natural springs close to our villages where we can collect safe drinking water.

Be sure that the spring water is really seeping from the ground and is not a stream that has gone underground for a short distance. Real spring water is usually pure, but it can become polluted if it stands in an open pool, or flows over the ground. The spring should therefore be protected with brick masonry or concrete, allowing the water to flow directly into a pipe without being open to pollution from the outside.

To protect a spring, dig back the hillside to the water bearing layer, where the water is flowing from the "EYE" of the spring, and build a collecting tank or "Spring Box" around the eye. Be careful not to dig

too far into the impervious layer, as that may let the water seep downwards so that the spring disappears or moves downhill.

Before building the back of the spring box, pile loose stones against the eye of the spring. This is partly to make a foundation for the box, and also to prevent the spring water washing soil away from the eye. Remember that the spring may sometimes flow much faster, (i.e., after rain) than it is flowing while you work, so everything should be firmly in place. This may require quite big stones, perhaps with smaller stones, gravel and even sand laid behind them, to plug the spaces between them.

The outlet pipe should be at least 100 mm above the bottom of the spring box, but below the eye of the spring if possible. If the water level in the spring box is too high, silt may settle over the eye and block it up. The end of the outlet pipe inside the box should be covered with a screen, to prevent stones, rubbish and frogs from blocking the pipes. One way to make a screen is with a length of black plastic (polythene) pipe, tied off or plugged at one end, with small

## UNIT SIX: SANITATION

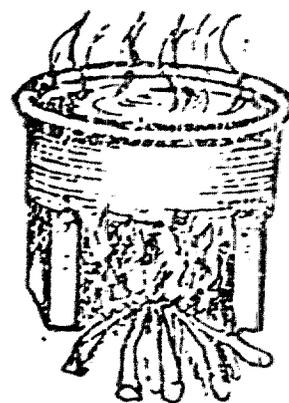
holes in it. There should also be an overflow pipe that is big enough to carry the maximum flow of the spring in the wet season. This pipe also should be below the eye of the spring, if possible. The end of the overflow pipe inside the spring box should be covered with a screen fine enough to keep out mosquitoes but strong enough to hold back frogs and other objects that could block the pipes. It should preferably have an access hole so that it is possible to get inside and clean it.

The top of the spring box should be at least 300 mm above the ground, to prevent surface water running into it. The box should be covered with a concrete slab, but it should preferably have an access hole so that it is possible to get inside and clean it.

The hole should have a raised edge to prevent surface water running into the box. The cover should be lockable, or so heavy that it can only be opened with a lever or a manhole key, to stop anyone from interfering with it.

If we have a well or natural spring we should consider ourselves fortunate, because these are two safe sources of drinking water. However, many of us can only collect water from ponds, streams and rivers and we need to be very careful to boil all our drinking water.

These water sources can be very dirty and drinking from them may cause diarrhoea, vomiting, worms or typhoid. Rivers and ponds are used for bathing, swimming, for animals and for the disposal of waste material and faeces.



The water may look clean and clear, but really be dirty and unsafe to drink. If a pit is dug in the sand near the bank of a stream, this water will also be unsafe.

we should treat it by the addition of tincture of Iodine. The water to be treated should be clear. Add six drops of tincture of iodine to 4 litres of water and allow it to stand for half an hour before drinking.

### COLLECTING WATER

Sometimes, in a fast flowing stream, the water may be safe to drink, especially when there is melted ice in it. We should always collect water upstream from where people live. This means that it will be as clean as possible.

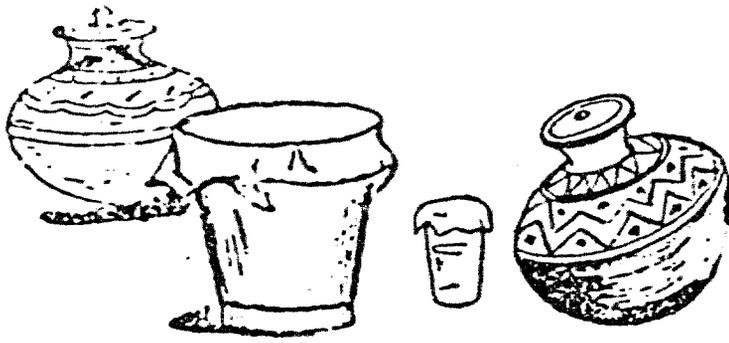
During the dry season, when the streams and rivers are low, we must always boil our drinking water for at least five minutes after it comes to a full boil. We should especially boil it for our children under 5 years of age, and for everyone during diarrhoea outbreaks.

### BOILING AND TREATING WATER

It is always best to boil drinking water from rivers, streams or unprotected wells. If this is not possible to do every day, then we should be very careful how we collect it, and

### STORING WATER

No matter how much care we take producing safe water, it will be of no use if the water is polluted after collection. It is therefore very important to protect the stored water from contamination. The container used for storage must be kept



clean and regularly rinsed with boiling water, or washed out with a bleach solution (1 part liquid bleach to 5 parts water), which is later removed by rinsing with pure water. Each container should have a cover which fits closely enough to keep out insects, dust and other impurities. It is best to use containers with small mouths so that cups or hands cannot be dipped into the water.

## REVIEW

The most important thing to remember in having a safe water supply is to know where it comes from. If it is from a correctly built covered well, that is the best source of drinking water.

If we need to rely on springs, they must be protected from contamination.

If our village needs to use river or stream water, we should collect it upstream; boil it whenever possible, or treat it with tincture of Iodine. It is particularly important to boil it when someone in the family has diarrhoea.

In our homes, we need to keep our drinking water covered so that flies and dirt cannot fall into it. If this happens, the drinking water becomes dirty and we may become sick.

Find out all the sources of water for your community. Look to see if, or how, they are protected from animals, people, flies and dirt. Also look to see how the water for your own family is collected.

What is the source of drinking water in your village?

Decide whether or not this is safe. If it is not safe, discuss this with your supervisor, community leaders and families. Plan to find an acceptable and affordable source of drinking water.

## 6.2 LATRINES

One of the most important ways to protect ourselves and our village from the spread of illness is to dispose of human waste in a sanitary way. If we do not do so, disease can spread from one person to another. Disposing of body waste may seem like a very simple matter, but personal habits that we have learned during childhood are often the most difficult to change. This seems to be particularly true in regard to personal cleanliness, which includes proper disposal of human waste.

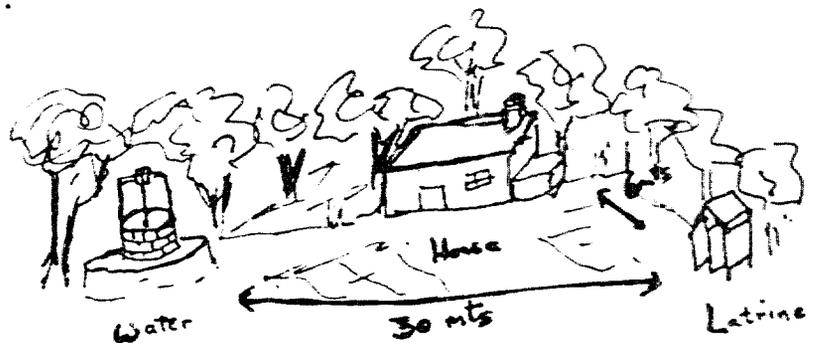
- How do the people of your village dispose of human waste?
- Is there any particular place that villagers go to pass stool?
- Do villagers usually wash or wipe themselves after passing stool?
- Does your family have a latrine?
- Are there village
- latrines?
- Who uses them?
- Who cleans them?
- Do people wash their hands after going to the latrine?

We have many different ways of disposing of our body waste.

The cheapest and best way is for each family to construct a sanitary pit-latrine.

Select your site carefully in order to prevent human waste germs from reaching your drinking water supply and homes.

The place selected for constructing a pit latrine should be at least 30 meters (approximately 30 long steps) downhill from the nearest drinking water supply. The pit latrine should be at least 6 meters (approximately 6 long steps) from the nearest house.



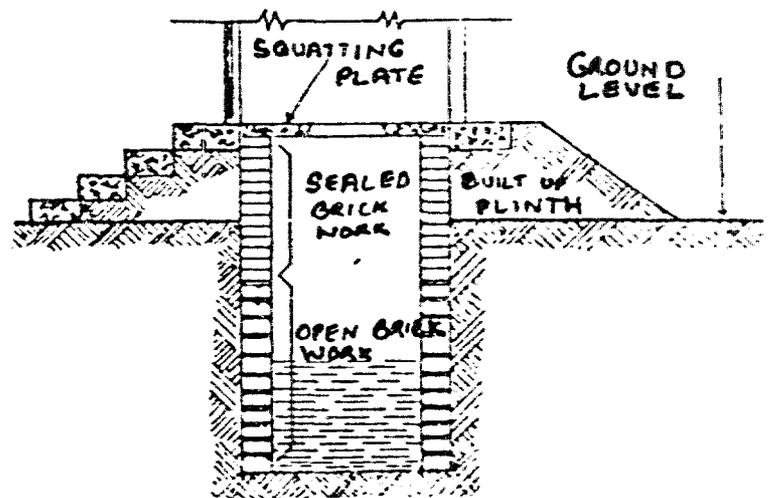
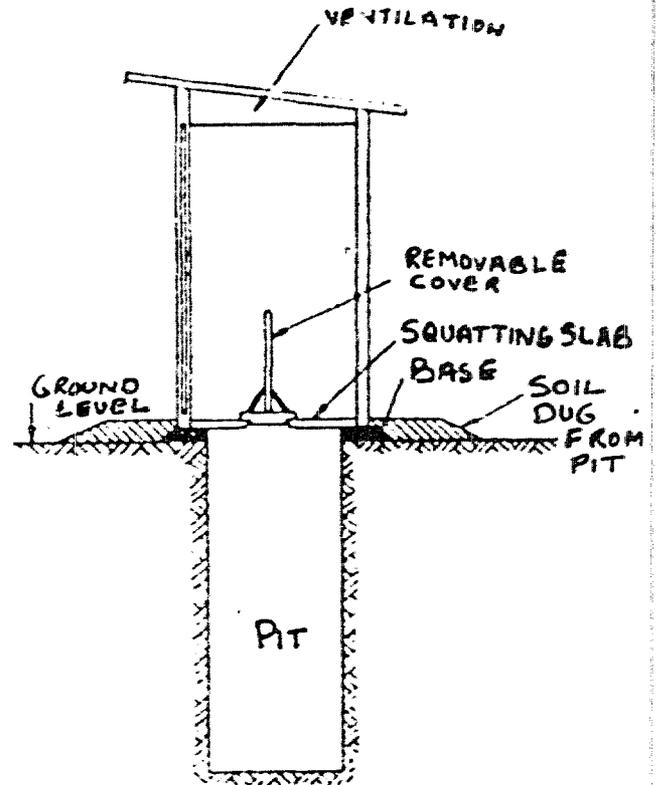
## UNIT SIX: SANITATION

### BUILDING THE LATRINE

Dig a pit in the selected location about 3 meters deep and 1 meter across. Pits deeper than 3 meters should not be dug by inexperienced workmen because of the danger of a cave in. The sides of the pit should be vertical, but in loose or sandy soil the sides will cave in unless they are supported. The sides can be supported by making a lining with old burnt bricks, spaced so that waste fluid can seep into the ground.

Water at the bottom of a pit latrine helps decompose human waste, but the water level should not be too high or you will have an odour and mosquitoes breeding.

During the rainy season, the water level in pit-latrines will rise. Therefore, in locations where the water level changes, the latrine should be built up above the ground. This type of construction is also useful in rocky ground that is difficult to dig.

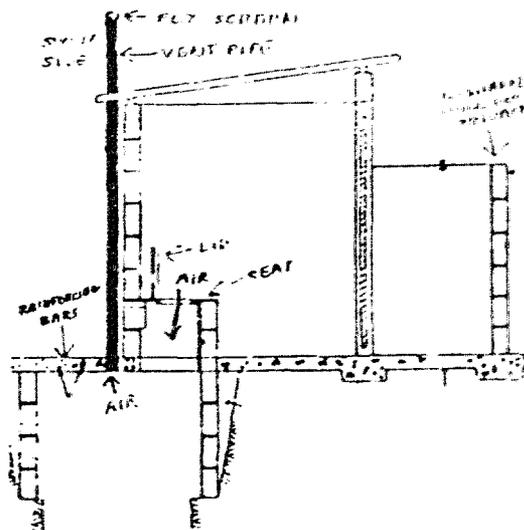


## ADDING A SQUATTING SLAB

After the pit is constructed, a squatting slab needs to be put in place. Concrete slabs are usually the most long lasting and the easiest to keep clean, but are also more expensive. Cheaper materials may be used instead such as wood, or reinforced concrete with a brick filler.

If a concrete slab is selected, it should be reinforced with steel bars 8 mm in diameter, crossing each other in a square grid. It is very important that the steel bars be well embedded in concrete.

The slabs should be at least 60-70 mm thick at the edge and 50 mm at the centre making it possible to slope the surface of the slab down towards the hole. This, together with providing raised foot-rests, will make it easier to clean. The shape of the hole and footrests can vary, but the hole should have a length of at least 360 mm to prevent soiling of the floors. The width should be less than 180 mm to prevent small children falling through. The distance from the back of the hole to the back wall of the superstructure should be more than 150 mm to prevent people leaning against the wall while squatting. The squatting hole should be provided with a lid to reduce odours and the breeding of flies or mosquitoes.



Some people may wish to improve the squatting hole by purchasing from the bazaar a ready made squatting pan. This can be fitted into the cover of the pit-latrine. Either type, home made or ready made, is satisfactory.

The simplest way to finish the pit-latrine is to cover it with boards that overlap the edge of the pit by 15-20 cms. The wood used should be termite resistant (either naturally or treated) to prevent collapse. Leave a small opening in the middle of the boards for passing stool.

Secure the edges of the boards with large stones so that they cannot move.

## UNIT SIX: SANITATION

### VENTING THE LATRINE

A pit latrine should be fitted with a vent pipe to prevent odours from being released through the squatting slab hole. The vent pipe should be painted black, be on the sunny side of the latrine and be covered with a mosquito wire at the top. The pipe will be warmed by the sun, causing the odours to rise up it, and causing a downward draught to flow through the squatting slab.

### MAINTAINING THE LATRINE

When the waste comes within half a metre of the top of the pit, fill in the hole with earth and dig a new pit. You can also build protective walls out of grass, "kana" bamboo or wood. This makes the latrine private.

### TEACHING ABOUT THE LATRINE

Now that you know how to build a sanitary pit-latrine, teach the people how to build one for each family.

If all members of the family use the latrine, they will have a safe environment around their house.

When we get rid of our human waste in a safe way we help prevent the spread of disease by:

- controlling flies;
- restricting our waste to one area, thus keeping our gardens clean;
- protecting our young children from touching harmful excreta.

Since cleanliness of the latrine is very important, it is usually best if each family digs and uses its own pit. Sometimes villagers want to make community latrines, but often their arrangements for maintenance are inadequate. The best arrangement is for each family to have its own latrine. Mothers and fathers can then teach their children how to use it and how to keep it clean. We can keep it clean by sweeping and washing it.

Please talk about making a latrine with the head of each family. Help him choose the best places for it, and find out if there would be any difficulties.

Some families may resist the idea of using a latrine. If this is the case, then at least encourage them always to cover up their stool. Passing the stool in the open should be done at least 400 steps away from any houses.

## 6.3 WASTE DISPOSAL

Now we are going to talk about village cleanliness. We have learned about the importance of making and using a family latrine. It is also very important to keep the village clean.

If families use latrines, that is the first step in keeping the village clean. This means that no human waste will be lying around the village.

However, we still need to find ways to dispose of waste water and other garbage from our kitchens.

### WASTE WATER

#### WHY IS WASTE WATER DISPOSAL IMPORTANT?

- Mosquitoes breed in stagnant water and spread diseases like malaria and filariasis.
- Waste water carries germs and bacteria. It can seep through the soil and contaminate ground water.
- Stagnant water is unattractive and makes it difficult for people to reach the water supply (tap, hand-pump, well).
- Stagnant water around the house makes it difficult for children to play.

#### HOW CAN WASTE WATER BE PROPERLY DISPOSED OF?

- By making gutters outside our homes for all the waste water from washing, cleaning and bathing. This allows the waste water to be collected in one area and helps stop the spread of disease. These gutters should be covered.
- By constructing compacted earth drains, lined with stones or clay pipes, to drain the waste water from the kitchen to a vegetable plot. (Ensure that there is an adequate slope, so that the water flows easily to the plot.)
- By providing a soak pit to drain away the waste water from the bathroom. (However, it is not advisable to direct this water to a vegetable garden, as it contains soap.)
- By making a concrete platform around the tap, hand pump or well.
- By making a concrete drain, leading away from the source of water.

## UNIT SIX: SANITATION

### WHY IS RUBBISH DISPOSAL IMPORTANT?

- Dirt attracts rats, flies, cockroaches and other insects. All of these spread disease.
- Dung encourages the breeding of insects. Be sure to keep the area round your house clear of all animal and human waste matter.
- A dirty house creates a bad impression of the family. Keep your house clean and tidy.

### HOW CAN RUBBISH BE PROPERLY DISPOSED OF?

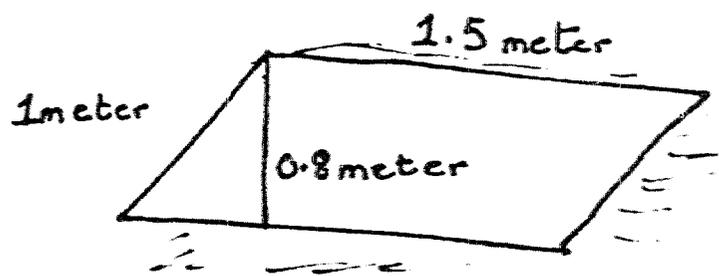
- By keeping a dust-bin in the kitchen, as well as in the corner of the courtyard. (The dust-bin need not be expensive. An empty box or oil-can will do.)
- By involving families in keeping their houses clean and by teaching them to use a dust-bin.
- By burning rubbish like waste paper and dry leaves.
- By feeding left over food scraps to the animals.

By digging two waste pits for all other rubbish.

Dig a pit 1 metre wide, 1-5 meters long and 0.8 meters deep. Make it bigger or smaller depending on the size of your family. When the pit is full, cover it with a layer of compact soil and leave it undisturbed for 2 to 3 months. During this period the contents of the pit will be turned into good fertilizer, which can then be used in the fields.

Before the first pit is full, select a new site and dig another pit for waste disposal. Use the new pit until the contents of the first one have turned into fertilizer.

You need two pits for waste disposal. They should be at least 400 steps away from any houses. Rubbish should never be thrown into the streets, but may temporarily be stored in a dust-bin with a lid, in the courtyard.



## SUMMARY

In this unit, you learnt about various sources of drinking water and two methods of making unprotected water safe. These two methods were boiling and treating with iodine. In addition, you were informed of the importance of the proper storage of water in clean containers. Covering the water containers to prevent flies and dirt from getting in was pointed out as being just as important as boiling.

The second topic covered in this unit was the proper disposal of human and other liquid and dry wastes.

Now that you have this information, you should act as a model for the community by using safe drinking water or by making your available water safe for drinking, as well as by disposing of waste properly.

**UNIT SEVEN**  
**NUTRITION**

# INTRODUCTION

In the Health Education Unit, general information on nutrition was given. Refer to that section for this information. This chapter will cover the nutritional needs of infants and children (newborn to five years old) and how to meet them. In addition,

it will discuss malnutrition and the CHW's role in helping the HTs with growth monitoring and nutrition education.

## 7.1 BREAST FEEDING

The ideal food for a baby is its mother's milk. Breast milk not only has the right amount of calories, but it also has the right proportion of proteins, carbohydrates and fats, as well as vitamins, minerals and water for the baby's needs.

Babies should be put to the breast immediately after delivery to help contract the uterus and prevent heavy bleeding. Colostrum, a thin

watery substance, is produced until the third or fourth day, after which milk is produced. Starting off breast feeding with colostrum is very, very important for the baby, since the colostrum contains antibodies against diseases to which the mother has been exposed, such as dysentery, chickenpox, measles and local viruses. It also has a laxative effect which helps to evacuate the bowel.

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### ADVANTAGES TO THE BABY

Breast milk is the perfect food for an infant.

Breast-feeding allows for close maternal/child contact.

Breast milk contains antibodies to fight disease.

Breast milk does not spoil. It is always fresh and clean.

### ADVANTAGES TO THE MOTHER

Breast milk is the most economical form of feeding.

Breast-feeding is convenient, because the milk is always available in the right quantity and at the right temperature.

Breast-feeding ensures that the mother regularly sits or lies down. This gives her a chance to rest.

Breast-feeding causes the uterus to return to the pre-pregnant size earlier.

Breast feeding decreases the chance of breast cancer later in life.

## UNIT SEVEN: NUTRITION

### HINTS

- Breast feeding can be done in any position that is comfortable for the mother and baby.
- The mother should be taught to insert her finger gently inside the baby's mouth, or put a little pressure on the baby's chin, to break the suction before taking the baby off the breast. This will prevent pain for the mother.
- In rare instances, or for travelling, some women feel the need to bottle-feed their babies. Even though bottle-feeding is not desirable, if a mother does bottle feed for some reason, teach her to wash the bottle and nipples with soap and water, and to boil them for ten minutes.

Pakistani mothers in the rural areas are very successful at breast-feeding and need little instruction. They do, however, need help with breast care during pregnancy and with the proper cleaning of the breast once they start breast-feeding. Some also need help in learning how to express milk, if this is necessary for any reason.



## 7.2 WEANING

Weaning refers to the process of introducing semi-solid (soft) food while continuing to breastfeed.

Breast milk on its own is sufficient food for most infants until four to six months of age.

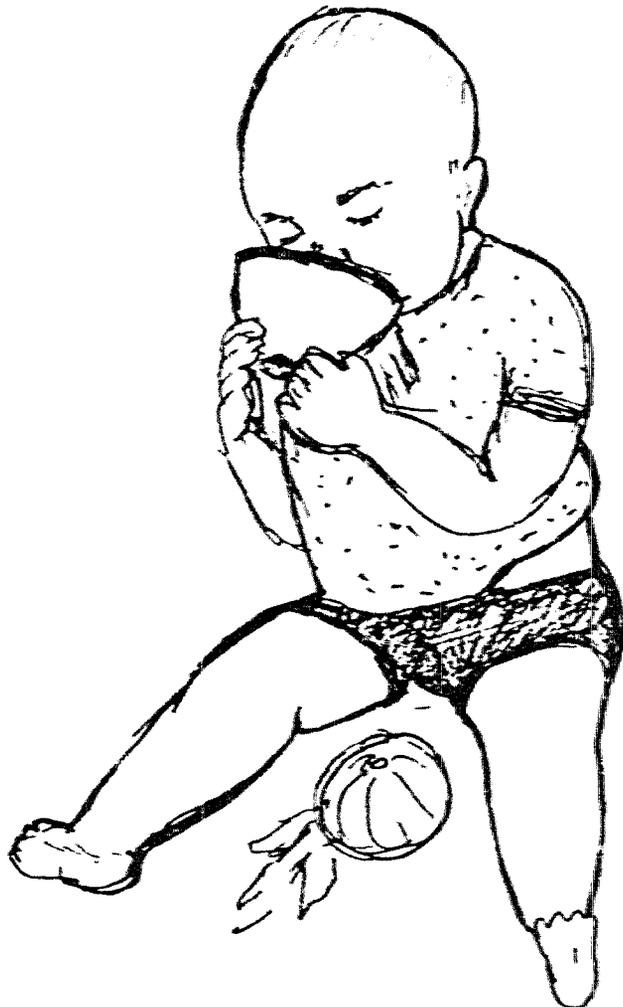
However, most infants need additional foods by the age of six months to meet their growth requirements. The purpose of these foods is to complement the breast milk and make certain that the young child continues to have enough energy, protein, and other nutrients to grow normally. It is important that breastfeeding be continued for as many months as possible, as it provides many substances and nutrients for the baby's best health.

A baby will show signs of readiness when it is time for him to be weaned. For example, he may want to drink from a cup or feed himself, or he may want to eat with other members of the family.

Encourage and help the baby with the process of weaning. A baby may begin to drink from a cup but may spill more than he swallows. In this case the mother needs to continue breast feeding until he is able to

swallow a sufficient amount of milk from the cup.

A baby should not be forced to give up the breast at the end of one or two years, or at any time. This creates tension and reluctance in the baby. The most important thing is to help the baby go from the breast to a cup when readiness is indicated by his behaviour. One important factor to remember is that there is no fixed time for switching over completely from the breast to a cup.



## 7.3 INTRODUCING SOLIDS

The first solid foods for a baby should be given as follows:

### AT 5-6 MONTHS

**Cereal:** This is generally introduced first because of its high iron content. Start with a teaspoon of rice cereal. Mix well with breast milk and feed with a spoon. Gradually increase the amount and variety of cereals. For example, try using "Sujee" or wheat.

### AT 6-7 MONTHS

**Fruits and vegetables:** After cereal, fruits and vegetables (strained or mashed) may be given to ensure an adequate supply of minerals and vitamins, particularly vitamin C.

Juice from oranges, pomegranates or apples should be diluted a little.

Fruits such as pears, bananas, peaches and mangoes can be mashed with a fork or a spoon.

Vegetables and fruits can be steamed in a little water and the cooked food mashed and given to the baby. Start with carrots, string beans, squash or peas. The water used for boiling fruits and vegetables should not be thrown out because it contains water soluble vitamins. Instruct the mothers to mix a little of

this water with the mashed food.

From about five to six months of age a baby should have hand-eye coordination and should be able to pick up food and feed himself. Food such as crackers and chopped fruits and vegetables can also be put in front of him, to encourage him to eat. When his teeth begin to appear, and the baby shows the need to chew and bite, dry toast, sticks of cucumbers without seeds, carrots and peeled apples will not only keep him busy eating, but will also meet his teething needs by providing something to bite and chew when his gums are itchy.

At first these foods should be given only once a day; then gradually the frequency should be increased so that by about six months of age complementary meals are being given two to four times a day.

### AT 8 MONTHS

**Egg yolk, soup and meat:** Egg yolk is usually hard boiled and mashed with a little milk. (Egg white should be introduced later, because it is difficult to digest.)

If there is a way to blend or grind meat, do so; otherwise give vegetables cooked in meat broth. It is advisable to start with lamb, if it is available. Also include organ meat.

A infant over six months needs to be fed about 4-6 times a day in addition to breast feeding.

Encourage combinations of foods which give a balanced diet.

### **AT 8-12 MONTHS**

Cheese, curd, salted biscuits, toast, egg white, chopped meat and fish:

As the child grows older a variety of foods may be given to meet his nutritional requirements. The child may now be given boiled eggs. Meat and fish should be boiled, steamed or baked not fried. It should be lean, because the infant is still unable to digest fat well.

Try and introduce three solid meals a day by one year of age, the same as an adult's eating pattern. Emphasize that pure carbohydrates should not be given.

Give food that is locally available, affordable and of high nutritive value.

### **HINTS**

A baby who is used to sucking milk may not like the idea of being fed solids with a spoon. To begin with, the baby may even spit out the food. Therefore, patience and tact is important in introducing solids. The following suggestions may be helpful:

- Introduce solids after four months of age.
- Introduce new solids when the infant is hungry - before giving milk, not after.
- Begin spoon feeding by placing the food on the back of the tongue.
- Use a small spoon and begin with a total of one or two teaspoonfuls; then gradually increase the amount.
- Introduce only one new food item at a time. Then wait four to seven days to allow for signs of food allergy.
- Because a baby's stomach capacity is small, the volume of the meal must not be too large. Frequent small meals are important to make sure the baby gets enough food.

## HOW TO MAKE SURE WEANING FOODS ARE CLEAN AND SAFE

Weaning is a dangerous time for infants and young children. It is well known that there is a higher rate of infection, particularly of diarrhoeal diseases, during weaning than at any other period in life. This is because the diet changes from clean breast milk which contains anti-infective factors, to foods which are often prepared, stored and fed in unhygienic ways.

- As the baby begins to be more independent in feeding and self-care, make sure he continues to be held in his mother's arms after feeding.
- Only fresh cooked, freshly peeled or washed foods should be used.

- The hands of both mother and child should be washed before handling food.
- Use a spoon to feed the infant as spoons are easy to clean and much safer than hand feeding.
- Utensils should be scrubbed, washed well, boiled if possible, dried in the sun and then kept covered.
- Food must be covered to protect it from insects and dirt.
- Gruels should be boiled for several minutes so that all harmful bacteria are destroyed.
- Cooked foods should not be kept for more than one to two hours in hot weather.



## 7.4 RECIPES

These recipes are for the mother who wants to cook a meal especially for her young child. They tell her how much of each ingredient to use for one child.

The recipes have a low volume with a high concentration of energy and other nutrients.

Some fat or oil is included to improve consistency and to increase the amount of energy. Fats and oils are often expensive or in short supply. Even so, mothers should be encouraged to use any type of cooking fat or oil they can get and also foods which contain oil, such as groundnuts.

### WHEAT

#### Multi-mix

Local  
Measure

Wheat flour	25	g
Lean meat/chicken/fish (cooked)	10	g
Ghee/oil	5	g

1. Make a chapatti with some water and the flour.
2. Mince or cut finely the cooked meat/chicken or fish and mix with the oil.
3. Use the mixture to eat with the chapatti.

Approx. 100 ml

### RICE

#### Multi-mix

Local  
measure

Rice	40	g
Mung dal (split beans)	10	g
Ghee or butter	5	g

1. Mix cleaned rice and split beans.
2. Add water and cook gently until rice is soft and water is absorbed.
3. Add ghee and mix well

Approx. 150 ml

This recipe from the family pot is given to save mothers having to cook separate meals for their small children. The amount of each cooked ingredient which should be given to a small child is shown.

The cooked food should be put into a separate bowl, to make sure the child gets his full share of the meal. A young child eats more slowly than his older brothers and sisters and might not get enough if he eats from the family plate or bowl.

WHEAT

Family cooking pot

Equivalent raw weight (a)		Approx. cooked volume (ml)	Local measure
25	wheat flour	1	small chapatti
20	Mung beans	60	
40	Spinach leaves	15	
25	Carrots	10	
5	Ghee	5	
50	Banana	15	
50	Milk, buffalo	50	

1. Make flour into one small chapatti.
2. Cook clean, washed beans in a little water till soft, with spices.
3. Add washed, chopped spinach leaves and carrots, and continue cooking until soft.
4. Add oil and mix well. Serve with chapatti.
5. Give banana to eat and milk to drink.

Approx. 200 ml

## 7.5 MALNUTRITION

Malnutrition is more common during the weaning period than in the first four to six months of life, because families may not be aware of the special needs of the infant, may not know how to prepare weaning foods from the foods that are available locally or may be too poor to provide sufficient nutritious food. During the weaning period the volume of breast milk decreases and the food intake of the young child entirely depends on what his mother gives him. If these foods are of poor nutritional value and unhygienically prepared this often leads to infection, under nutrition or marasmus. Therefore giving right amount and kind of food is important.

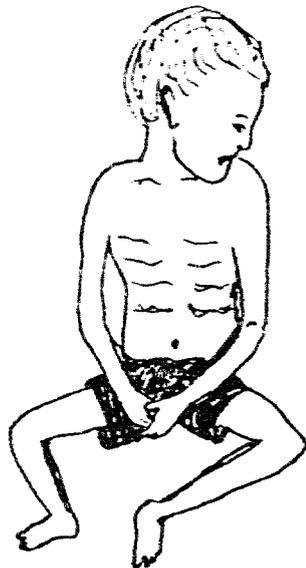
A child who has not had enough growth producing foods like, milk, eggs, fish or meat will look weak.

You have probably seen children who look weak and undernourished in your village. We are going to talk about this problem and what you, as a CHW, can do to help mothers prevent malnutrition and what should be done for children who are undernourished.

Why is good nutrition important?

Eating more food, and the right kind of food, is important for:

- Building strong and healthy babies;
- Developing resistance to disease;
- Recovering more quickly when sick;
- Maintaining the ability to learn and remember.



## 7.6 MEASURING THE ARM

The nutritional status of children can be measured by weighing them or by measuring the circumference of their arms.

Weighing a child requires a scale, available at a BHU, but measuring the arm circumference requires only a tape, which you can carry with you. Arm measurements should be done during home visits and while filling out the "under five" form.

A well-fed child has more muscle so the area measured by the arm band will be bigger, while an underfed child will have less muscle so the area measured will be smaller.

The arm band is divided into three colour bands. One is red, one is green and one is yellow. There is also one black line on the arm band, which is used to measure the arm circumference.

The arm band measurement is only for children between one and five years of age and can be used for screening purpose only.

In order to determine if a child is well fed or underfed, we measure his upper arm.

### HOW TO MEASURE THE ARM

Have the child hold his arm at his side and put the arm band around the middle of the upper arm. Check to see where the black line meets the coloured area.

If the black line touches the green area the child's weight may be considered normal. At the earliest opportunity, weigh the child to confirm his nutritional status.

If the black line touches the yellow area, it shows that the child is not getting enough of the right kinds of food to eat, and is moderately undernourished. He needs special attention to assure an adequate intake of the right combination of foods.

### REVIEW

If the black line touches the red area it shows that the child is severely undernourished and needs special nutrition, education, observation and treatment. Instruct mother on preparation of the recommended recipes, frequent feeding and bringing the child to the BHU for weight gain assessment.

## 7.7 GROWTH MONITORING

The green colour shows that the child is growing well, provided that he continues to eat a sufficient quantity of the right kind of foods. The red and yellow areas show that the child is undernourished and needs special nutrition, education, observation and treatment.

Identifying children at risk is the first step in the prevention of malnutrition. The following factors contribute to malnourished children requiring special care. Therefore, if any are applicable for a particular child, write it down under "reasons for special care" in the top left corner of the growth chart.

- Malnourished mother.
- Child with low birth weight.
- Mother suffering from TB.
- Mother unable to breast feed.
- Extreme poverty.
- One parent dead.
- Too many children in the family.
- Any illness. (Write name of illness.)
- Child not gaining weight.
- Twins.

### HOW TO COMPLETE THE GROWTH CHART:

The growth chart has vertical and horizontal lines. The vertical lines represent the child's age in months and the horizontal lines represent his weight in kgs or pounds. There are 48 months divided into four years and the weight goes up to 17 kg or 38 lbs.

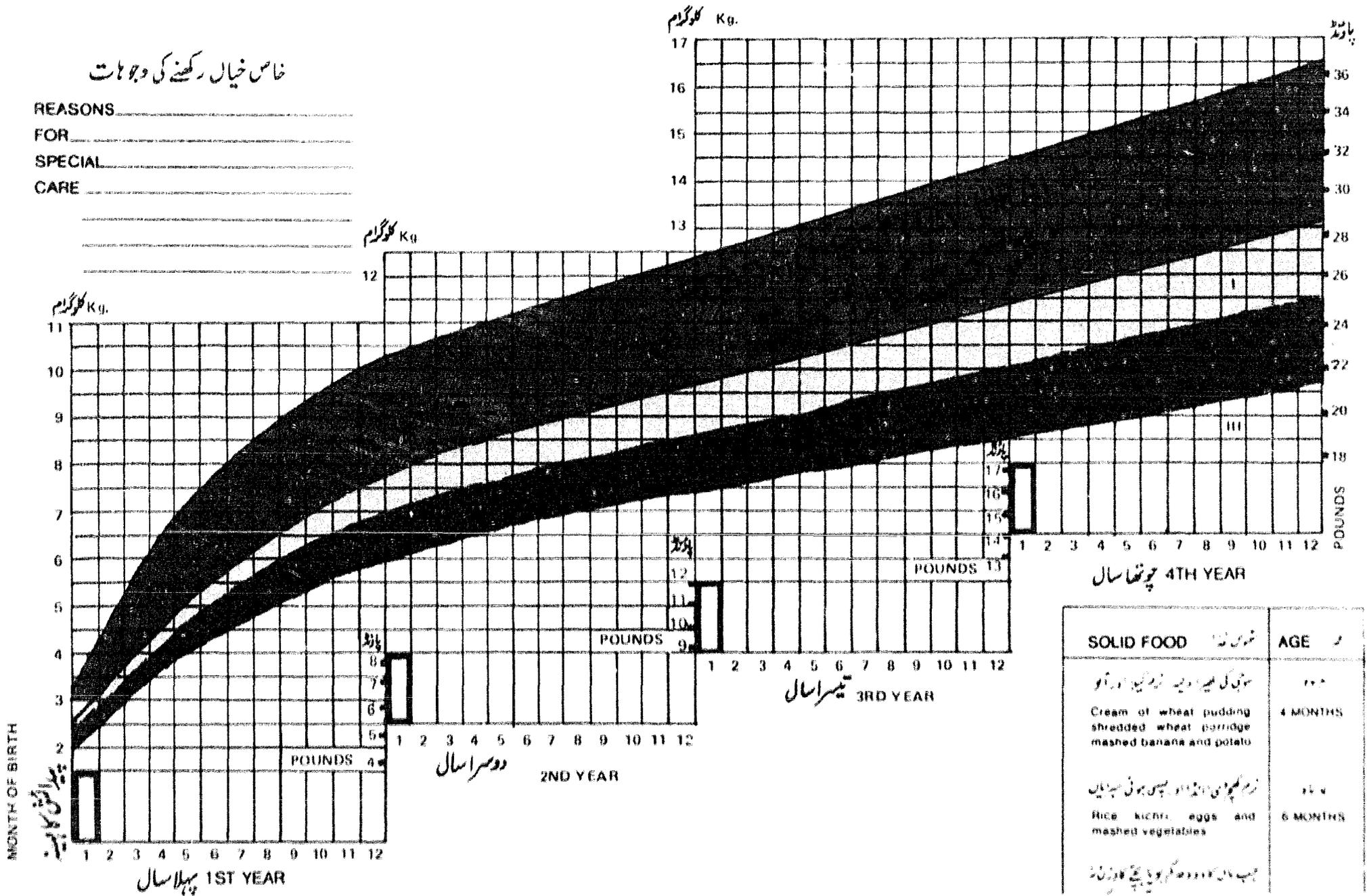
In filling out the growth chart, first fill in the month and year of birth of the child in the extreme lower left hand corner of the card. This box has dark lines and has "month of birth" written next to it. You will also note that there is a box with dark lines at the beginning of each year. Write the birth month and year in each of these boxes.

Now weigh the child and put a large dot on the horizontal line that equals the weight, directly above the month in which the weight was taken. For example, Shakir-Ullah Khan, who was born in October 1986 came to the RHC in January 1987 and weighed 5 Kg.

When the child comes again, weigh him and put the dot above the month he is weighed. Connect the new dot to the previous dot. The line formed by joining dots is the growth line of the child.

خاص خیال رکھنے کی وجوہات

REASONS  
FOR  
SPECIAL  
CARE



How to use the chart: There are three coloured curved areas on the chart. These are growth reference lines. If the child's weight falls in the green portion, this means that the child is growing well and the family may be advised to continue the existing feeding pattern. If the weight falls in the yellow area, it means that the child is borderline malnourished and requires frequent small feedings (5 times a day). If the child's weight falls in the red area, the child is not getting enough nutrition and may even be ill. So in addition to paying special attention to nutrition, a medical evaluation may also be required. Children who fall in the red line require follow-up visits or home visits by the Health Technician. A monthly or periodic increase in the weight of a child should follow the direction of the reference lines. It does not matter if the growth line falls above or below the reference line, what is more important is that the growth line should continually go up. If the child's growth line is flat, this is a

warning that the child is not gaining weight and may be ill. If a child's growth line is going down, this is a dangerous sign and may indicate an episode of acute illness. In this case, teach the mother how to give special care and extra nutrition. Follow the child carefully.

Procedure for weighing infants and children: Infants and children may be weighed on a variety of available scales. The most commonly used are:

- Infant scales.
- Salter scales.
- Stand up scales.
- Bathroom scales.

When available, an infant or Salter scale should be used for weighing infants and toddlers. If these are not available, an adult may hold the infant or child and take a combined weight on a stand up beam and balance scale or a bathroom scale.

## SUMMARY

This unit covers the topic of nutrition for newborns, infants and young children. It also discusses the amounts and types of foods required for the normal growth and development of infants and young children. There are two ways to find out if children are growing normally: by weighing them and by measuring the circumferences of their upper arms. You were taught both methods.

Work very closely with your supervisor in helping mothers and children with nutrition education and growth monitoring.

Help her by weighing and measuring the children. She will help you use the information from the growth chart and arm measurements and will guide you in counselling the mothers.

**UNIT EIGHT**  
**MATERNAL CARE**

# INTRODUCTION

This unit on maternal care starts out by teaching you how to estimate the number of pregnant women in each village. This information will help you in planning your visits.

It explains the woman's requirements during a normal pregnancy. You will also be taught how to iden-

tify cases which are "at risk" of developing complications during pregnancy, labour or delivery. You will be taught the importance of coordinating with the TBAs and dais in meeting the needs of pregnant women and new mothers.

## 8.1 PLANNING

What is the expected number of pregnant women in your village? What is the actual number? How do you plan your activities?

Your supervisor can give you the answer to the first question. The answer to the second question can be obtained from the summary of Form 3: "Married Women(15-44 years)", Section 1, which you completed. (Page 59).

In your village you will find TBAs already providing services to pregnant women. It is very important that you find out who they and who the midwives are. Keep a list of their names and addresses. You and your supervisor should meet with them regularly to decide on how you are going to work as a team.



## 8.2 THE NORMAL PREGNANCY

As a CHW your role is to identify each pregnant woman in your village and help her throughout her pregnancy so that she has a safe delivery of a healthy baby. Most women have no major problems during pregnancy, but some do. The women who experience signs of possible trouble are said to be "at risk." This section will discuss the care needed for the normal pregnancy. The next section will discuss women who are at risk of developing complications.

Keep a record of all pregnant women you are attending so that this can be reported to the HT.

It is important that each woman be encouraged to visit the prenatal clinic at the BHU at least three times during her pregnancy. She should visit the BHU early in her pregnancy, at 7 months and during the last month.

In the clinic she will be weighed, her blood pressure checked, the baby's position checked, the foetal heart checked and certain very important questions asked.

Try to accompany her to the BHU for at least one of the visits so that you can discuss with the HT the woman's health, her baby and any potential problems.

If any special problems are found during the examination they will be managed by the HT.

At the end of the prenatal exam she will be given iron and folic acid tablets. All pregnant and lactating women should receive these tablets.

This is because when a fetus is growing in the uterus, extra iron and folic acid are required. The iron and folic acid are important for blood production. If too little iron and folic acid is eaten in her food, her blood will become thin (anemic) and the woman will become weak. Iron and folic acid, taken every day throughout pregnancy and lactation, will improve the woman's strength and allow her to go through her delivery in the best possible condition. Also her baby will be as healthy as possible.

## UNIT EIGHT: MATERNAL CARE

The pregnant woman needs more food than other women and more food than men, for her own body and for the growing baby inside her.

Good balanced food intake, especially legumes and vegetables, is very important.

During your visits to the pregnant woman, check on her food intake. Is she eating:

- Plenty of green leafy vegetables?
- Plenty of legumes, milk, eggs and meat, if available?
- Usual amounts of grains?

**NB** There may be many foods that are being neglected. If entire food groups are being neglected it is best to find appropriate alternatives rather than giving recommendations the woman probably will not accept.



## 8.3 THE HIGH RISK PREGNANCY

The earlier we can identify women who may have problems, the better. Signs of trouble are called 'high risk' signs.

Some of these signs can be found in the prenatal stage.

### PREVIOUS DIFFICULTIES

An important sign may be found when you ask about previous pregnancies. The woman who has had one or two earlier pregnancies ending with a foetal death, newborn death, difficult delivery, etc., should be seen by the HT and probably delivered in a hospital.

### VERY SHORT OR DEFORMED WOMEN

Women who are very short or crippled, and pregnant for the first time, should be sent to the BHU. They may have too tight a pelvis for a normal delivery.

### VOMITING

Persistent vomiting after the 3rd month, with severe abdominal pains, is a sign of a high risk pregnancy.

### BLEEDING

Bleeding or discharge of water from the vagina during pregnancy is another bad sign. These women should be sent to the BHU.

### BABY STOPS MOVING

If the baby stops moving during the pregnancy, the woman should be sent to the BHU. There, the HT will check for the sound of the baby's heart and determine whether or not the baby is alive.

### SWELLING

Swelling of hands or feet, headaches or problems with vision are always serious signs and should be referred to the BHU. These symptoms may lead to convulsions (fits) and the possible death of both mother and baby.

### BOGGY ABDOMEN

A woman with a large boggy abdomen, and fetal parts that are hard to feel, has too much water in her uterus. This is a sign of something wrong. She should be sent to the BHU.

## UNIT EIGHT: MATERNAL CARE

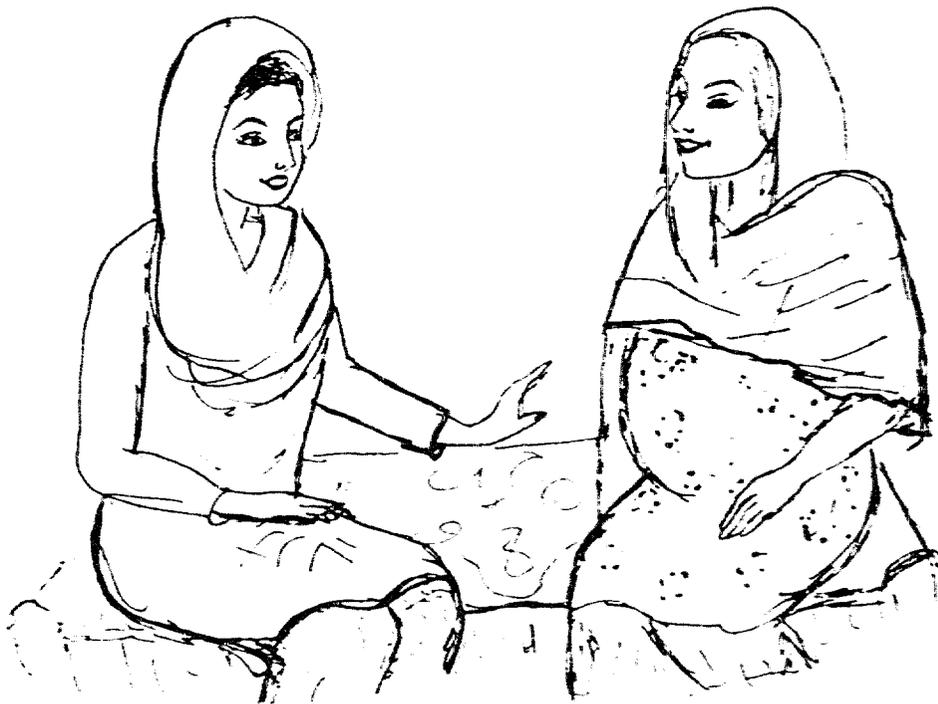
### REVIEW

ALWAYS ASK A NEW PREGNANT WOMAN:

- How many pregnancies have you had? How many children are living? If any are dead, how and when did they die?
- Do you have any bleeding or other discharge?
- Are you having any vomiting (after 3 months)?
- Is the baby still moving (after the 5th month)?
- Do you have any headaches or trouble with vision?

CHECK FOR:

- Swelling of the hands or feet.
- "Boggy abdomen."



## 8.4 THE HIGH RISK DELIVERY

We have been learning about signs of possible trouble during pregnancy. The earlier we find these signs the better for the woman and the baby.

However, sometimes we don't find these signs until we are called for the delivery. There are some things that can go wrong during the delivery that must be handled speedily or the woman or newborn will die. Now that you are linked to the health system, it will be easier for you to refer the woman to the right place if something goes wrong.

### UNUSUAL POSITIONS

Usually a baby comes head first, but sometimes it presents buttocks first, feet first, hand first or even shoulder first. Each one of these presentations should be referred to the hospital. You may have managed these in the past, but you also know that much can go wrong and that it is best that a HT or doctor be present, along with the supportive equipment found in a hospital.

### BLEEDING JUST BEFORE DELIVERY

This is always a serious condition. Send the patient to the nearest facility, BHU/RHC or hospital. Never examine this person vaginally, or more bleeding may start.

### PROLONGED LABOUR

The woman's pelvis may be too small for the baby, or the uterus too old to contract well. After 12 hours of labour, the woman should be sent to a BHU/RHC or hospital for a special check up to see what the problem is.

No perineal massage, oiling or abdominal pressure should be applied during this prolonged labour. These treatments may make it more difficult for the HT or MO at the BHU or hospital to help the pregnant woman through her delivery.

### CONVULSIONS (FITS)

This is always a serious condition. This patient should be sent to the nearest health facility. She should be transported lying on her side so she doesn't choke.

## BLEEDING

Bleeding after the delivery is another emergency, but you can do one very important thing to help. This bleeding is due to a soft uterus. A firm rotating motion over the uterus on the lower abdomen will cause the uterus to clamp down and stop bleeding. Next, transport the patient to the nearest health facility, but stay with her and if she bleeds again, continue rubbing the uterus.

## RETAINED PLACENTA

Do not worry about this for the first two hours following delivery, unless there is bleeding. If there is bleeding, or if the placenta is still retained after two hours, send the woman to the BHU/RHC or hospital.



## 8.5 REFERRAL

Sometimes it will be necessary to work very hard to convince the family to take the woman to the hospital. In some cases, you, as a CHW, may be the only one to help the woman get there.

A very important part of the referral process is transportation.

- Where is the nearest health facility?
- How can you get there?
- Who should go with the pregnant woman you send?
- Who should make the travel arrangements?

As you know, going to a BHU/RHC or hospital for a delivery or an emergency is sometimes difficult, but if it can help the woman in labour to have a healthy living child, we need to be certain that these difficult cases can get to the BHU/RHC or hospital.

Often, referral needs to be done quickly. Help the family to find the fastest and safest way to go. You or someone from the family should go with the pregnant woman.

Be sure to memorize the high risk signs so that you will know how to

help your patients. Our goal is to have healthy living mothers and children.

### REVIEW

Let us review all the high risk signs that require referral to a BHU/RHC or hospital.

#### DURING THE PREGNANCY:

- History of difficult earlier pregnancies.
- The woman is pregnant for the first time and is very short or crippled.
- Persistent vomiting after 3 months.
- Bleeding.
- Baby stops moving during pregnancy.
- Swelling of hands and feet.
- "Boggy abdomen."

#### DURING THE DELIVERY:

- Unusual position.
- Prolonged labour.
- Bleeding just before delivery.
- Convulsions (Fits)

#### AFTER THE DELIVERY:

- Retained placenta.
- Bleeding after the delivery.

## 8.6 PREPARING FOR THE BIRTH

Now we are going to talk about preparations made with the pregnant woman and her family before the delivery time begins. These early arrangements are very helpful at the time of the delivery.

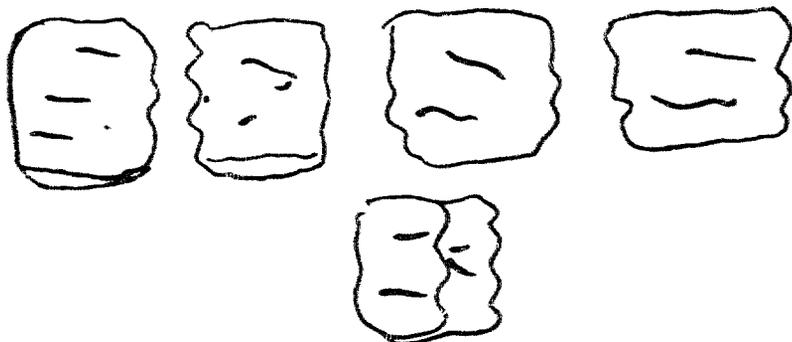
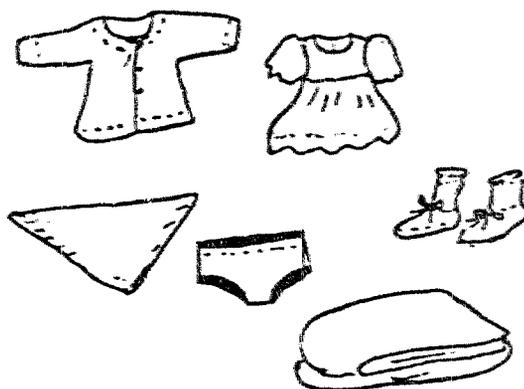
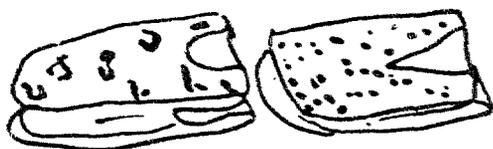
What kinds of materials - clothing, razors, soap, scissors, food should be prepared by the family?

Several weeks before the delivery, visit the family to discuss the home preparations.

The mother should have ready two clean sets of clothing for herself. When the contractions begin, she should take a shower and put on one of the clean sets of clothing. The second set of clothing is to be put on after the delivery. Also, she should have at least five clean rags

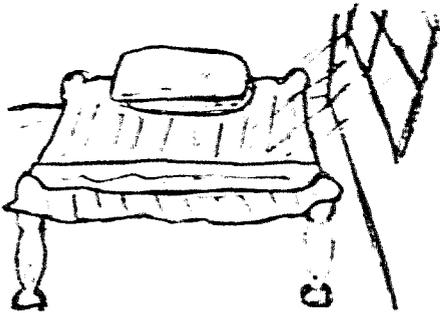
for the delivery. These should be folded into perineal pads.

After delivery, the baby will need clean clothes, a clean small blanket, and some clean cloths for nappies.

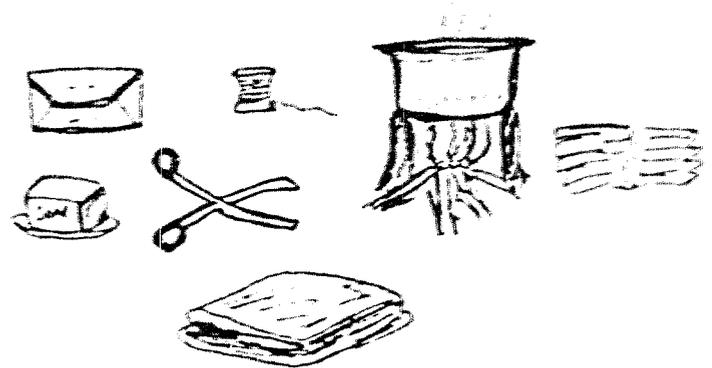


## UNIT EIGHT: MATERNAL CARE

The room should be airy and light so that you are able to see clearly. Since the delivery may occur at night, be certain an electric light or a kerosene lamp will be available. The bed should be clean, and two clean sheets and a plastic sheet should be prepared. One should be used before and during the delivery, and the other after the delivery.



The family should have ready a new razor blade or scissors, a spool of thread, firewood, a cooking pot and a pan. Soap and clean water must be available so that you can wash your hands. Cloths must be prepared for washing the mother.



The week before the baby is expected, visit the home to check that everything is ready.

### THE MOTHER NEEDS:

- 2 sets of clean clothing
- 5 perineal pads.

### THE BABY NEEDS:

- clean clothes and a clean small blanket
- clean nappies.

### THE ROOM SHOULD HAVE:

- fresh air
- a good light

- 2 clean sheets for the bed.
- A plastic sheet.

### FOR THE DELIVERY:

- soap and water
- clean washing cloths
- a razor blade or scissors
- thread
- pan and fire
- oil.

## 8.7 HAND WASHING

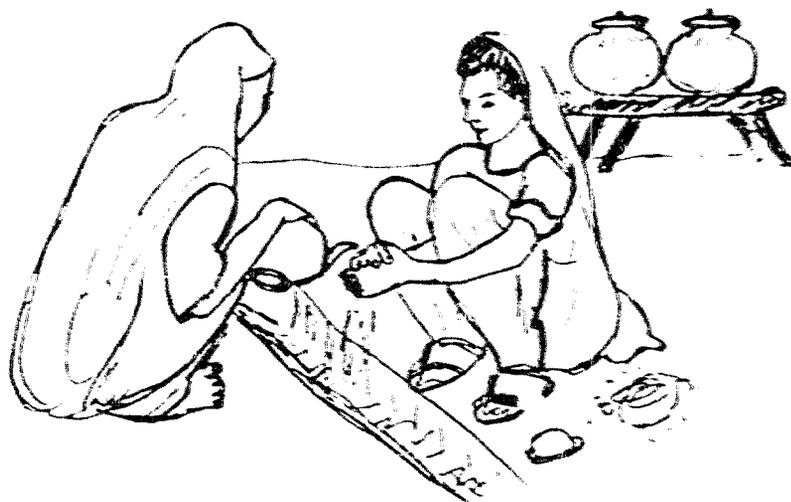
Now we are going to discuss hand washing, one of the most important parts of a safe delivery. All of us wash our hands after a delivery, but the most important time to wash our hands is before the delivery. This is a very special hand washing procedure which helps prevent diseases which make the mother and baby ill.

As soon as the person who is going to assist with the delivery enters the house, she should ask for soap and water. She should remove all her rings and bracelets, pull up her sleeves above her elbows and wash her hands and arms in the ordinary fashion with soap and water. Following the hand washing, she should examine the woman's abdomen, observe her contractions and determine how far along she is in the delivery process.

When the actual delivery is about to begin, the attendant should wash her hands again. This time she should soap and rinse twice, with particular attention to the areas between the fingers and under the nails.

This special hand washing must be done just before the actual delivery so that her hands are clean when touching the mother's perineum, the baby or the placenta. Nails should always be well-trimmed and clean.

From now on, if you are present for a delivery, begin this hand washing technique too. The use of this technique begins to distinguish you as a trained CHW.



## 8.8 THE BIRTH

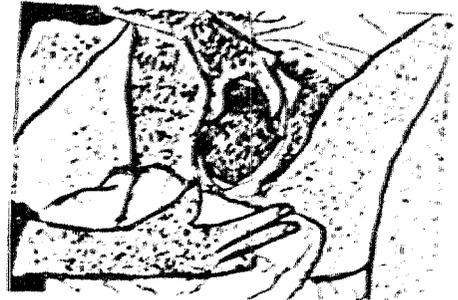
This section is written for anyone who assists with a delivery. It could be you, the TBA, LHV or a female HT. The following points need to be adhered to by the attendant and the mother should be instructed earlier to make sure she knows what to expect.

As soon as the woman begins to feel some labour pains, she should be instructed to put on her clean (but old) clothes. This will mean that her clothes are clean for the arrival of her new baby.

A clean sheet should be placed on the bed with plastic sheet underneath if available to protect the bedding. Whoever is present should wash her hands, and then check the woman's abdomen and contractions. When labour becomes harder, she should boil the string and razor blade or scissors, and wash her hands the special way.

Using a clean cloth and boiled water, she should wash the woman's

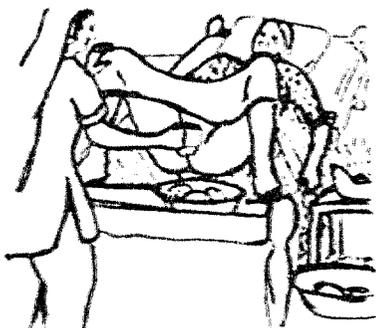
perineum from the top down and set aside the cloth.



When the baby's head can be seen, she should take another clean, dry cloth and hold the lower part of the perineum with her right hand, so that it won't tear, and carefully control the head's delivery with her left hand. She should check to be sure the cord is not around the neck before delivering the baby.



She should take another clean cloth and wipe the baby's eyes, nose and mouth.



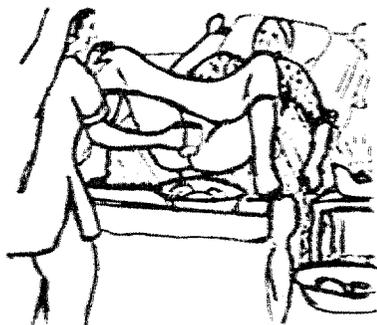
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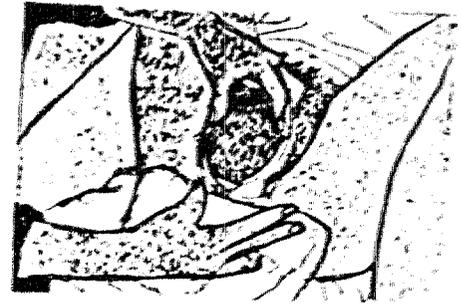
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perineum from the top down and set aside the cloth.



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She should take another clean cloth and wipe the baby's eyes, nose and mouth.

If the baby is not crying, she should tickle its feet or pat its back until it cries. If the baby still does not cry, she should use mouth to mouth resuscitation (small puffs of air over the baby's nose and mouth). See page...



She should then wait for the delivery of the placenta, but keep the infant warm by wrapping him in clean clothing. She should cut the cord and give the infant to the mother to hold, suckle and keep warm. Baby suckling helps the uterus contract and slows bleeding.



She should feel the mother's abdomen and gently massage the uterus to stimulate contractions. She should take another clean cloth, wet with boiled water, and wipe the perineum from the front downwards. She should place a clean perineal pad on the perineum and remove the dirty sheet. She should change the woman's clothes and put a clean sheet on the bed.

The baby is now ready to be cleaned.



## 8.9 NEONATAL TETANUS

In neonatal tetanus, a baby stops sucking 3 to 10 days after delivery, has a puckered face, a rigid body and occasional fits - then dies.

This condition can be reduced or prevented by two methods:

Immunization of the mother with tetanus toxoid injections during the last three months of pregnancy;

Practising a safe cord cutting method.

### T T IMMUNIZATION

If pregnant women will accept a series of Tetanus Toxoid injections (according to the schedule P 197), they can protect their new born babies from developing tetanus.

Mothers who have been given two tetanus toxoid injections during their first pregnancy need one tetanus toxoid injection annually, until they have received a total of five doses.

### SAFE CORD CUTTING

The first step is to prepare two 6 inch lengths of thread, by doubling back and forth regular sewing thread 6-9 times. Then, twist the ends to make them thick tight strings.

These strings, and a new razor blade or scissors, should be placed in a small pan of water and boiled together for 20 minutes.

This is called sterilization. After boiling, the string and razor or scissors are clean, and all germs which can cause newborn tetanus (and other diseases) are removed. Let them cool and keep them free from dust and flies by covering the pan.

After the baby is born and the placenta delivered, pick up one of the strings with your clean hands. Tie one string at 3 finger widths above the baby's abdomen, and another at 5 finger widths.

Cut the umbilical cord with the sterile razor blade or scissors, between the two strings.

## 8.10 AFTER THE BIRTH

- If the baby is born alive, fill out Section 3 of Form 3, (P 59).

- One of the members of the team. CHW, Dai/TBA or HT needs to visit the mother and the baby at least three times during the 6 weeks following delivery to;

- 1** Make sure that the mother and baby are progressing well.

- 2** Inform the mother about immunizations for her baby.

- 3** Refer the mother or baby if problems develop.

- 4** Discuss child spacing.

When you include the special hygienic procedures in your deliveries, you qualify as a CHW and will be more helpful to the women in your village. If you need help or want to practise these new techniques, let the HT know and she will be happy to help you.

## SUMMARY

In this unit you have learned what a normal pregnancy is. You have also learned to identify pregnant women who may develop complications. You know that even in a normal pregnancy, a woman needs to see a health professional at least three times during her pregnancy. You also know that women who are "at risk" of developing complications

need to be referred to a RHC or BHU where there is a Medical Officer. By prompt referral it is possible to prevent many complications and unnecessary suffering. You also know that you play a very important role in bringing healthy babies into the world.

**UNIT NINE**  
**CHILD SPACING**

167-

# INTRODUCTION

Child spacing refers to the interval between two pregnancies. Some women become pregnant every year while others experience longer intervals between pregnancies. You have learned that when a woman is pregnant, she has to take extra care of herself. This is because the demand on her body is greater during pregnancy. When she has babies at short intervals her body does not get a chance to recover fully and the babies may become weak and sick.

Today, it is possible for women to time their pregnancies so that their bodies have a chance to recover from their previous pregnancies. They become pregnant again only when they are ready,

physically and mentally. In order to plan their pregnancies, women need to be informed about the various methods available for child spacing.

This unit will teach you of how pregnancy occurs and how women can prevent pregnancies until they are ready. You will be taught temporary and permanent methods of child spacing, for both men and women. These include:

- condoms
- oral contraceptive pills
- foam, cream and jellies
- IUDs
- injections.

## 9.1 THE GOAL

Child spacing is a way to help parents to have children by "Choice, not by Chance".

Children are a gift from God and everyone loves them. The goal of child spacing is to promote healthy, happy families.

In the first few years of life a baby depends on its mother for food, warmth, love and care. If a mother is healthy she can easily care for the baby's needs and help it grow up to be strong and healthy.

The growth of a baby starts 9 months before birth, at the time the mother becomes pregnant. During the pregnancy and during the first 4 to 6 months after delivery, the growing baby takes all its nourishment from the mother. This is a normal process, but the mother needs to be particularly careful about maintaining her health during pregnancy and after the baby is born.

Mothers who have a baby every year find it difficult to meet all the demands placed on them: to care for the newborn baby, older children and other family members as well as

routine household chores.

Also mothers who are not given enough time to regain their strength between pregnancies will find that their health suffers. It is just like plants. If they grow too closely together they will not grow well, but if they are planted with space in between, they will grow better and will produce better fruit. In a similar way, babies who are well spaced can be breast fed for 2 years and can be given special care and attention so that they will grow up to be healthy, happy and intelligent.

For a happy family life, parents have to work hard to provide basic life needs for their children: food, shelter, clothing, medical care and education. These needs are expensive and when a couple has many children, it is difficult for them to meet all these needs.

Do you know any parents who have many children?

Are all the children being given the basic things they need?

## UNIT NINE: CHILD SPACING

It is difficult for families with limited amounts of money to take care of many children.

Mothers who have many children usually have little spare time, because of the extra amount of work required to take care of the family, such as cooking, washing clothes, house cleaning and all the other regular chores. Mothers who have to do so much work, usually get tired and cannot find the time or energy to look after the many other needs of their families.

Fathers of large families must also work hard to provide food, money and other family requirements. Sometimes they must find an extra job to pay for these necessities. When they are unable to make more

money, the entire family suffers, because there is less food, clothing and money to educate the children.

On the other hand, let us discuss families who have few children with at least two years space between the birth of each child.

What are the differences between large families and small families?

Small families have more to give their children and usually have a happier family life.

Mothers have time and energy to see to the needs of their family and fathers have fewer worries about providing the basic family necessities.



## UNIT NINE: CHILD SPACING

Do you know that there are methods parents can follow to help them plan when to have a new baby and the total number of children they wish to have? This is called child spacing.

Child spacing does not mean couples should not have children. The idea is to have children, but with a space of two to three years between each one.

Couples who do not have children can also be helped by child spacing. These couples should be referred to a doctor who can give special medical advice and treatment, which may help the couple have a baby.

Child spacing is not only important for individual families and the community, but for the country too.

As families grow, more food is needed. Large families with 3, 4 or more children may have difficulty producing the extra food needed.

Moreover, when the land is divided between children from large families, each child will have less land to share. If every family in the community has many children, more food will have to be grown and extra space will be needed for building more houses. This will result in less for all.

Small families usually find it easier to produce enough food for their needs. Their children will own more land and this will help the entire community to prosper.

There are many thousands of villages in Pakistan. If the families in each village increase beyond the limit for which they can produce enough food, all the people in the country will have less.

Again, the goal of child spacing is to help parents decide how many children they wish to have and when; and to promote a happy family life.



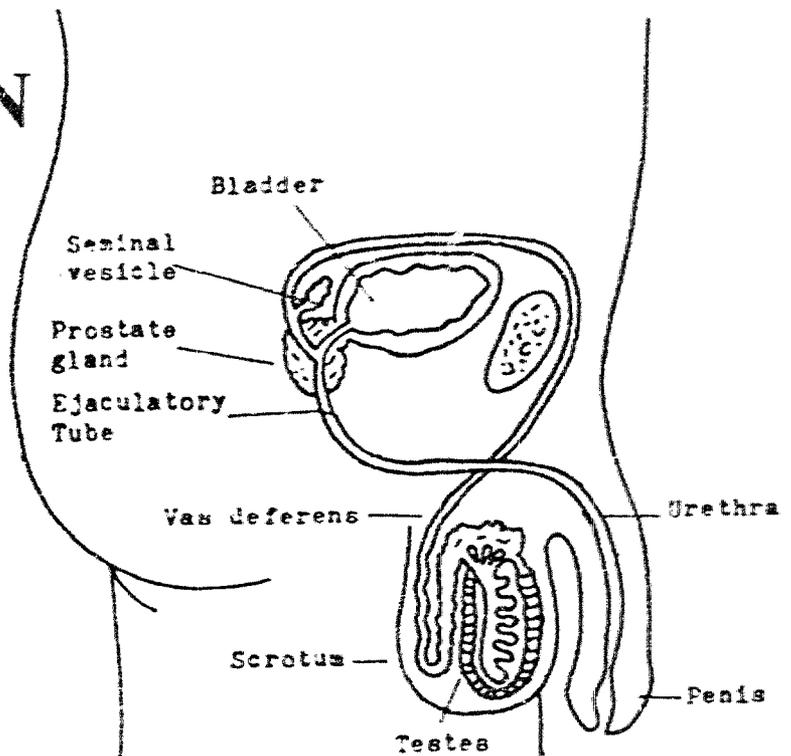
## 9.2 CONCEPTION

Before discussing the child spacing methods and how they work, you need to know some facts about how conception takes place.

The man's role in conception is to produce millions of tiny sperm and to deposit these sperm in the woman's body during intercourse. These sperm are so small that they can be seen only with a microscope. If we look through a microscope we see that the sperm is oval and has a long thin tail. This tail helps the sperm swim through the fluid which both the man and woman produce, to meet the egg produced by the woman.

These tiny sperm are produced in the man's testicles. The testicles hang inside a skin pouch called a scrotum, which hangs down between the man's thighs, behind his penis.

Sperm are continually being produced by the testicles, and travel upward through a tube, called the vas deferens, to the seminal vesicles. The seminal vesicles are pouches where the sperm is stored. Although you can see the scrotum which holds



the testicles, you cannot see the seminal vesicles. While the sperm is in the seminal vesicles some fluid is added to help the sperm swim toward the woman's egg, after they are released by the man's body during intercourse.

Most of a woman's reproductive system lies deep inside her body. Once a month a very small egg is produced by one of the two ovaries. The ovaries are oval shaped and each is about one and a half inches long. From the time a girl has her first menstrual period until she reaches menopause, her body releases one egg from one of her ovaries every 28-31 days (except when she is pregnant). Most women are not aware of

## UNIT NINE: CHILD SPACING

the exact time that this egg is released, although some women feel a slight pain at the time.

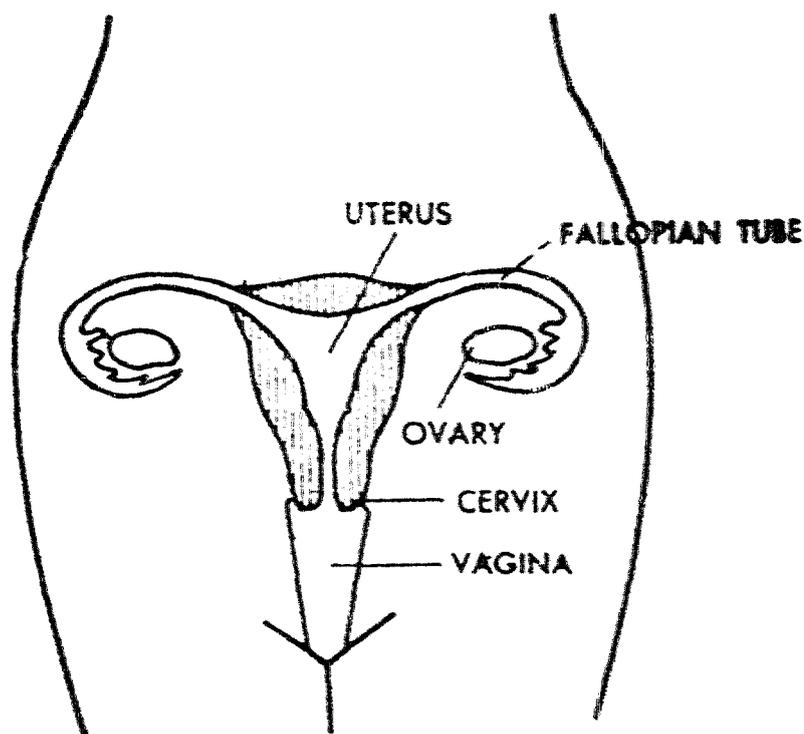
The egg travels from the ovary into the fallopian tube and continues travelling into the uterus. The uterus is pear-shaped and about three inches long by two inches wide. The vagina is the passage into which the semen is deposited, and through which the baby passes during birth.

During intercourse the man deposits his sperm deep in the woman's vagina, with his penis. If an egg is travelling through the fallopian tubes when the sperm is deposited, one of the sperm will meet the egg and the two may combine. Then we say that the egg has been fertilized or that conception has taken place.

The fertilized egg attaches itself to the wall of the uterus and grows into a baby over a nine month period.

If the woman's egg is not fertilized by the man's sperm, it is absorbed within about twelve hours of being released by the ovary. Now the woman will be unable to become pregnant until the following month when another egg will be released by one of her ovaries. She will have her menstrual period about fourteen days after the egg was released from her ovary.

If there is no egg present, the woman's body absorbs the sperm. Pregnancy only occurs when a live sperm meets a live egg inside the woman's body. If this does not occur, the woman will not become pregnant.



## 9.3 TEMPORARY METHODS

There are two very different kinds of child spacing methods which you need to learn well. One is for temporary child spacing and the other is for permanent child spacing.

First we will discuss the temporary child spacing methods which are for couples who want to delay the birth of a new baby. This is also called spacing.

When couples use a temporary child spacing method, they can do so until they wish to have a baby.

Why do you think couples would want to use a temporary method?

There are many reasons why couples are interested in spacing the births of their children.

Child spacing helps the mother have more time for breast feeding and for caring for her baby. This helps it grow to be strong and healthy.

Spacing helps a new mother have time to fully recover her strength before her next pregnancy.

The couple may perhaps want to save money for their child's education, for improving their house or for buying more land.

Most importantly a temporary child spacing method can be stopped any time the couple wishes to have another baby.

The temporary methods which will be explained in detail are:

FOR THE MAN:

- Condoms

FOR THE WOMAN:

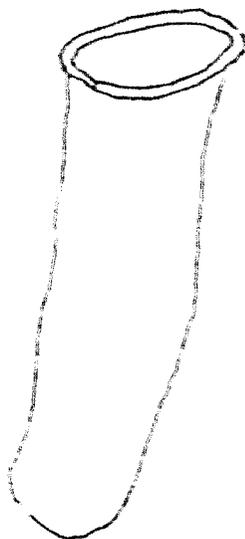
- Oral Contraceptive Pills
- Loop or Intra-uterine Device (IUD)
- Foam, Cream and Jellies
- Depo Provera Injections
- Diaphragm.

## THE CONDOM

The condom, which is made of thin rubber, is one of the temporary methods for preventing a pregnancy.

The condom catches the sperm during intercourse and keeps the sperm from entering the woman's uterus and fertilizing the egg. Just a few minutes before intercourse, the condom is rolled back from the tip of the penis until it is fully covered by the condom. After intercourse,

the mouth of the condom is held securely to the penis and pulled out of the vagina so as to avoid spilling semen inside the vagina. The condom is then pulled off the penis and discarded. The condom once used should not be used again. The husband must understand that a new condom must be used each time they have intercourse.



## THE PILL

The most effective temporary child spacing method for women to use is the oral contraceptive pill or the child spacing pill. The pill almost always prevents pregnancy, if the woman follows the instructions exactly.

The pill contains some medicine which prevents an egg from being released from the woman's ovary. This is not harmful for the woman and she will continue to have her regular monthly menstrual cycle as before. When the couple decides the time is right for a pregnancy, the woman stops taking the pills and her ovary will again start releasing an egg every month.

When a woman decides she wishes to use the oral contraceptive pill, she must be given very detailed and exact instructions for its use.

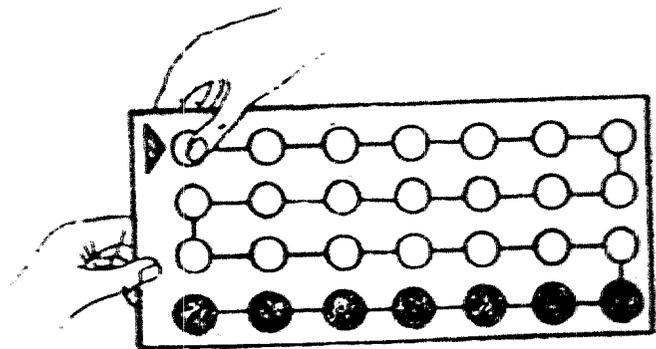
The pills may be given by any medical or family planning worker who is trained to decide whether it is advisable for the woman to take the oral contraceptive pill and to give exact instructions for its use. This is important because a woman should not be given the pill without a medical examination if she has any of the following signs or symptoms:

- Suspected pregnancy
- Jaundice
- Swelling of the feet and shortness of breath
- Redness, swelling and pain in the legs during previous pregnancies
- Frequent severe headaches
- Lumps in the breast
- Irregular menstruation
- No menstruation
- Excessive bleeding during menses.

There are several different brands of pills, each with slightly different instructions, but they all work the same way. Because of the different instructions for the use of different child spacing pills, the mother must consult a Health Technician, Medical Officer or Trained Family Planning worker for her specific child spacing pill instructions, before taking the pills.

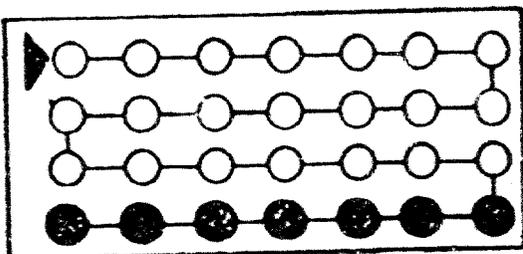
## HOW TO TAKE THE PILL

The following instructions are for the child spacing pills most commonly available:



There are 28 pills in each packet or cycle: 21 white pills and 7 brown pills. Starting on the first day of menstruation (bleeding), one pill is to be taken each day at about the same time, preferably at bed time. The arrow on the packet shows which pill should be taken first, and the remaining pills are taken according to the direction of the line.

When the first pill packet is finished, the woman should start taking the pills from a new packet the next day. The first pill to be taken is the white pill which is shown by the arrow. During the last week of the cycle the woman will usually have her menses. If the menses does not occur however, she should continue with the next packet, since missing a menstruation is not a cause for worry. It is essential that the woman continues the pills daily for as long as she wishes to prevent a pregnancy.



## AVOIDING PROBLEMS WITH THE PILL

- Women who take child spacing pills sometimes have a few harmless symptoms in the beginning. They may complain of slight headaches, giddiness, nausea or bleeding.

These symptoms, if they occur, will usually disappear gradually and the woman should be encouraged to continue taking the pills. If any other symptoms develop, refer the woman to the Health Technician.

- One of your important duties is to regularly visit women who are taking child spacing pills.

During the visit, find out if the woman is taking the pill correctly. It is helpful if she shows you the packet and explains to you how she is taking the pill. If she has not understood the instructions, explain again how the pill is to be taken. If she is experiencing any side-effects, she can discuss these with you. If necessary refer her to a Health Technician.

- In some cases, a woman may forget to take the pill. If she misses taking a pill for one day, she should take it as soon as she remembers and then take her daily pill at the usual time.

If the woman forgets to take the pill for two days, she should not take the forgotten pills but just take the pill that is due on that particular day. However, her husband should use condoms until her next menstrual period. As soon as her next menstrual period begins, she should start a new packet of pills, at which time her husband may stop using condoms.

- Before the woman's supply of pills is finished, arrange for her to receive another supply.

## THE LOOP

Another very effective temporary method used by women for child spacing is the intrauterine device (IUD) commonly called "the loop."

The following illustration shows one common type of loop. This loop is made of plastic and is shaped like a double "S". The loop is inserted into the uterus where it prevents the fertilized eggs from attaching themselves.

When the loop is in place the woman will not become pregnant. Inserting the loop is a very quick and simple procedure, to be done by a trained family planning worker. Once the loop is inserted it can remain in the uterus for as long as the woman does not want another pregnancy.

After the loop is inserted into the uterus, two threads remain in the vagina. Once a week the woman should feel the threads to be sure the loop is still in place. Nothing else needs to be done. When the woman wants to have another baby she goes back to the clinic and asks to have the loop removed.

The best time for loop insertion is after delivery, during the postnatal period or at any time in the last days

of menses. The advantage of this is that the mother knows that she is not pregnant and it is easy for the female Health Technician to insert the loop. There are some conditions where a loop should not be inserted. If there is:

- Suspected pregnancy or early pregnancy
- Heavy menstrual flow
- Irregular vaginal bleeding
- Pelvic infection

After a loop has been inserted, regularly visit the woman to help her understand the action of the loop. Some women complain of a few minor side effects like slight back pain, heavy menstrual flow or slight abdominal cramps. These minor symptoms are expected and will gradually disappear.

Sometimes the loop may be pushed out by the muscles of the uterus. Because of this, it is important that the woman remembers to feel for the threads in the vagina. If she cannot feel the threads, she should consult the Lady Health Technician.



## FOAMS, CREAMS AND JELLIES

There are several different brands of foams, creams and jellies for a woman to use, which can temporarily prevent a pregnancy. All of these work in a similar way. First they contain a special medicine which kills the sperm and secondly, they block the sperm from moving toward the egg.

The foam, cream or jelly must be inserted into the vagina by the woman before intercourse.

This method, although very easy for

the woman to use, does not always prevent pregnancy. It is recommended that the woman also use a diaphragm, or the man a condom, to increase the protection against an unwanted or unplanned pregnancy.

If a woman decides this is the best family planning method for her, arrange for her to meet the health technician or family planning worker to obtain a supply of foam, cream or jelly and detailed instructions for its use.

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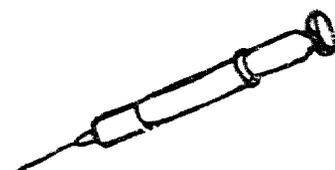
## INJECTIONS

A child spacing injection called Depo Provera is available from some clinics. This injection is for women, and works like the oral contraceptive pills. It prevents the release of an egg from the woman's ovary.

This is a temporary child spacing method, and one injection protects the woman from pregnancy for 3 months. If the couple wishes to continue delaying a pregnancy, the woman must return to the clinic every three months for another Depo Provera injection.

This is a very temporary child spacing method because nothing is required to prevent pregnancy except a Depo Provera injection every three months.

Some women who use Depo Provera may notice a few changes in their menstrual cycles. Therefore, if a woman wishes to use this temporary child spacing method she must be examined by a trained health worker who can also explain in detail the changes that may occur.



## THE DIAPHRAGM

Another temporary child spacing method which women may use is the diaphragm.

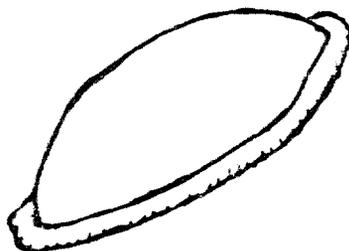
The diaphragm is cup shaped and made of soft rubber. It fits between the wall of the vagina and the uterus, to block the entrance of sperm into the uterus. When the sperm cannot reach a woman's egg, pregnancy will not take place. The diaphragm is placed inside the vagina, by the woman before intercourse, and must remain in place for 6 hours after intercourse. It is then removed by the woman. If the diaphragm is not properly inserted before intercourse, or is removed in less than 6 hours after intercourse, it will not be effective for preventing pregnancy.

After use, the diaphragm should be washed and put in a convenient

place for future use. The diaphragm can be used over and over again as long as it has no tears or holes.

If a woman decides that she would like to use a diaphragm to temporarily prevent pregnancy, she should consult a lady doctor, health technician or LHV. This is necessary because diaphragms come in different sizes, and she must use the correct size for the diaphragm to work well. After the correct sized diaphragm has been fitted, a detailed explanation for its use will be given.

Once this is done there is no need for the woman to consult the lady health worker again, unless she needs to obtain a new diaphragm or has specific questions.



## 9.4 PERMANENT METHODS

Permanent child spacing means that the couple uses a method which permanently prevents future pregnancies. Methods are available for either the man or the woman.

Why do you think couples would want to use a permanent child spacing method?

As with a temporary method, there are many reasons why a couple would choose a permanent child spacing method:

- If the couple has many children and cannot provide proper care for more children.
- If the couple has decided that

they now have exactly the number of children they want.

- If the mother is in poor health and another pregnancy would cause further complications.
- If the mother had serious complications during the last delivery.

If the family's resources are insufficient to meet the cost of another baby.

The important point for you to remember is that once a couple uses a permanent child spacing method, they cannot change their minds and have another baby.

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### REVIEW

What is the meaning of a permanent child spacing method?

Using a permanent child spacing method means the couple has definitely decided they do not want to have any more children. Once this method is utilized, it cannot be

changed.

Now we will discuss the permanent child spacing methods, sometimes referred to as sterilization.

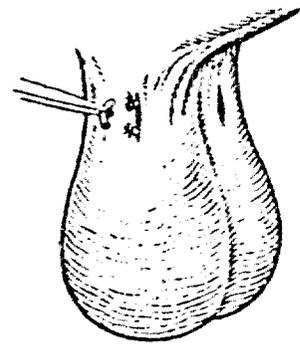
## VASECTOMY

A permanent child spacing method, or sterilization, requires a minor operation by a doctor. The operation for the man is called a vasectomy and the operation for the woman is called a tubal ligation.

Some people believe that a vasectomy is castration and therefore are afraid of it. Castration means removal or destruction of both testicles. This is done only to animals.

Vasectomy is a minor operation performed by a doctor in 10-15 minutes.

The operation does not cause any disability and the man can return home right after the operation. Only the tubes which carry the sperm to the penis are cut and tied. The testicles are not removed or damaged in any way and the man who has this operation will notice no change in his potency or sex habits. During intercourse there will be the same white discharge (semen) as before, but it will not contain the sperm that fertilizes the egg. This operation permanently prevents the fertilization of a woman's egg since the man's sperm will not be released during intercourse.



In vasectomy the testicles are not disturbed or removed. Only the tubes, which carry the sperm from the testicles, are cut and tied. All sexual functions will be the same, except that the sperm will not be able to reach the woman's egg to fertilize it.

After the vasectomy operation, the man should not engage in heavy work, ride a bicycle or have sexual intercourse until the wound is healed. The stitches are usually removed 7 days after the operation.

When the man starts having intercourse after the operation, he should use condoms until he has had 25 ejaculations. Alternatively his wife may take child spacing pills for three months. This is necessary because some sperm will remain in the seminal vesicles for a period of time and the woman could become pregnant.

## TUBAL LIGATION

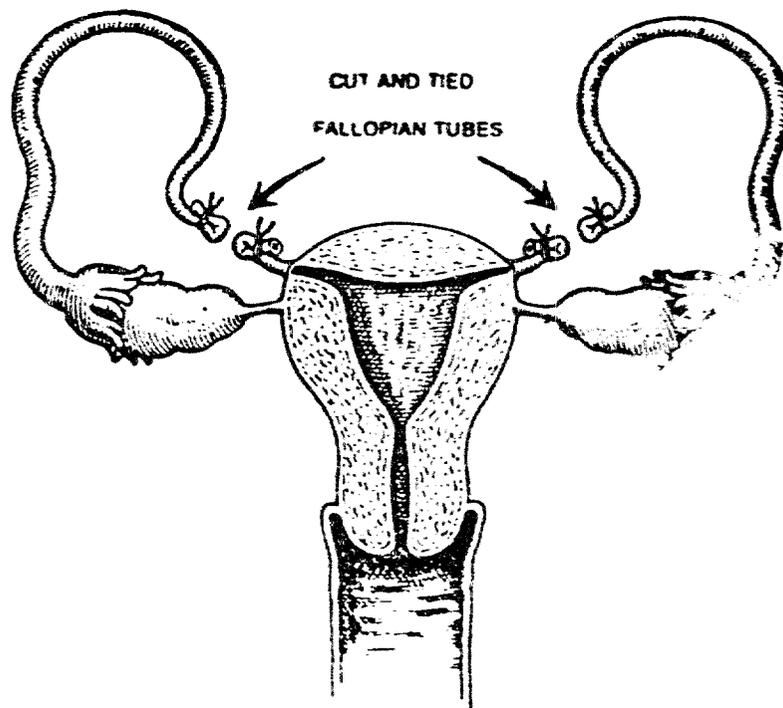
Tubal ligation is a minor operation for women which permanently prevents pregnancy.

In this operation, the tubes which carry the ova (eggs) from the ovaries to the uterus are cut and tied.

Therefore, the eggs cannot travel through the tubes and pregnancy cannot occur. The operation is done in a hospital and the woman should

remain in the hospital for a few days. When she leaves, it is recommended that she perform only light household work for one week before resuming her regular work schedule.

This operation has no effect on the woman's sexual desire and she will continue to have her regular menstrual cycle.



## 9.5 YOUR ROLE

We have been discussing human reproduction, and temporary and permanent child spacing methods. Now we will be discussing how to use this knowledge in your community.

To start the child spacing work in your community, members of the health committee, locally elected councilors, maulvies and other highly respected people should be contacted and encouraged to help promote the goals of child spacing.

Members of the health committee, and formal and informal leaders are important, because they can help explain the goals of child spacing and encourage couples to consider using either a temporary or permanent child spacing method.

You should meet with these influential people to discuss their opinions regarding child spacing. Explain to them how child spacing can benefit the married couples in the community:

If you meet with resistance from any of these important people, let the HT know and she will assist you in this effort.

In your community, who are the people who can be most helpful and influential in helping you promote the goals of child spacing?

How do you think these people can be most helpful?

Up to this point we have not specifically discussed which couples should be encouraged to use a temporary child spacing method and which couples should be encouraged to use a permanent child spacing method.

When should you promote a temporary method? and when should you promote a permanent method?

Generally, married couples who have three children or less should be encouraged to think about a temporary method and couples with more than three children should be encouraged to use a permanent child spacing method.

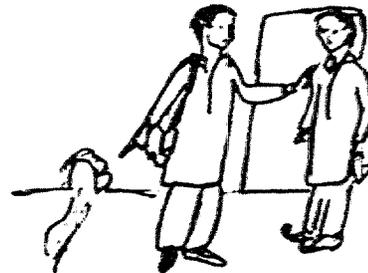
Since each couple will have a different opinion regarding the number of children they wish to have, the choice must be their own. Your responsibility is to provide information for both permanent and temporary child spacing methods,

emphasizing the differences and encouraging them to think about what is best for them.

Now you need to introduce the idea of child spacing to the married couples. It is best to introduce the idea gradually. You can easily do this while visiting the home for other reasons.

For example, while discussing nutrition with a mother who has three children under the age of five, you can easily tell the mother that there are methods available which can help her delay her next pregnancy. If she seems interested, explain the benefits of spacing. If she is not interested, avoid forcing a child spacing discussion. During the next visit say, "Do you remember that when I was here last time I mentioned that it is possible for couples to delay the birth of their next baby. Have you thought any more about this?"

A male CHW, while visiting a man to promote improving the drainage system in his compound, can casually introduce child spacing by asking if he knows that there are methods available which can help couples plan the timing of their next baby.



Now that we have covered the knowledge and skills you need for promoting child spacing in your community, go to the village leaders to introduce the idea.

If you need assistance, or have any questions, be sure to ask the HT.

## SUMMARY

In this unit you were informed about the importance of child spacing, the available methods and your role in helping women plan their pregnancies. In order for one of the methods to be effective, women must be fully informed about how pregnancy occurs, how the selected method

prevents pregnancy, and what they need to know and do to make sure that the methods they choose will work. In summary, your role in helping women plan their pregnancies involves teaching them the available methods and helping them select the ones best suited to them.

**UNIT TEN**  
**IMMUNIZATIONS**

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# INTRODUCTION

This unit covers the general information you need to know about the National Institute of Health's policy on immunizations for six childhood diseases:

- Tuberculosis
- Diphtheria
- Tetanus
- Whooping cough
- Measles
- Polio

It includes the immunization schedule, so that you can advise parents and answer their questions.

Your specific role in the Expanded Programme of Immunizations (EPI) is described at the end of the unit.

Your role started when you filled out the "Under Five Children" and "15-44 year old Females" forms earlier. From these forms it is possible to summarize the information and estimate how many children and women were vaccinated and how many still need vaccinating. With this information, it is possible for your supervisors to plan the number, location and frequency of the EPI clinics. You will of course be expected to inform people about these clinics and to be there to assist.

## 10.1 CHILDHOOD DISEASES

A vaccine, or immunization, helps the body build a special defence against a specific disease. However, if a baby or child already has that disease, the vaccine will not be of any help. This is why babies need to be immunized early in life, before they come in contact with any preventable diseases.

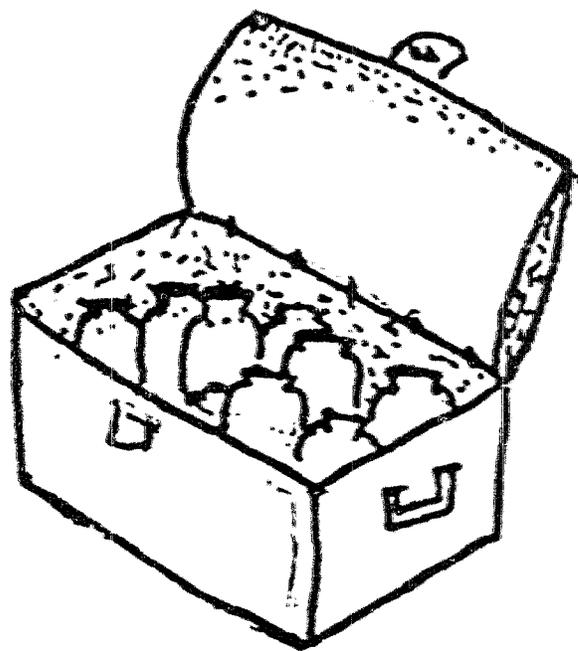
Because each vaccine has been specially prepared for a specific disease, the method of immunization and the number of doses required vary with each vaccine. For those vaccines that need to be given in 2 or 3 doses, it is important that the child receives the prescribed number of doses. Less than the prescribed number will not be enough for the body to build the special defence against that disease. A child who is not fully protected may come down with the disease.

It is very important that vaccines be kept cold at all-times, because they are very sensitive to heat. If vaccines

are allowed to become warm, or are exposed to direct sunlight, their ability to help the body build the special defence against the disease is destroyed.

Vaccines that are stored at the RHC are kept in a refrigerator. When vaccines are brought to the village, they should be kept in an ice chest or flask that is packed with ice.

Now we will discuss each of the vaccines available and the specific diseases that can be prevented.



**B C G**

The first vaccine we will talk about is called BCG. BCG vaccine helps prevent TUBERCULOSIS (T.B).

Tuberculosis is a serious infection, usually located in the lungs. It causes a cough that makes a person spit up thick sputum or sometimes blood. People suffering from this disease lose weight, have no appetite, become weak and pale, and experience unnatural sweating at night. There is medicine for T.B., but it must be taken for a very long time. Those who do not follow the treatment exactly as recommended by the doctor often die after a long period of suffering.

- T.B. is passed on by an infected person, usually an adult, coughing and spitting near a healthy child. This disease can be prevented if BCG vaccine is given before the healthy baby comes in contact with the infected person. Once a healthy child has had contact with a person sick with T.B. the BCG vaccine cannot build its special defence. Because of this, the vaccine must be given to infants before they have contact with some one who is sick with T.B. There is a test to find out if an older child can benefit by receiving

BCG vaccine. You need to ask your doctor about this.

It is recommended that newborn infants be given BCG vaccination. If for any reason the newborn does not receive BCG vaccine, this immunization can be given any time up to 15 years. Health Workers can easily tell if the child needs BCG vaccine by the absence of a scar on the arm.

BCG is given by injecting a small amount of vaccine into the skin in the upper right arm. Immediately after the injection a small raised area in the skin can be seen. This raised area, after 2-3 days, becomes red and slightly painful. The red area then becomes sore and eventually a scab forms. In a few weeks the scab falls off and a small scar is left behind. This is normal. The mother should be told that this will happen and taught not to touch or put anything on the sore like oil, or medicine or bandages or cloths. It will heal by itself if not touched.

## D P T

The next vaccine we will talk about is called D.P.T. This is a combined (mixed) vaccine that builds a special defence against three diseases. The three diseases are Diphtheria, Whooping Cough and Tetanus.

- **DIPHTHERIA:**

This is a disease that mainly occurs in young children. It is passed from a child sick with diphtheria to a healthy child. A few days after contact a fever and pain in the throat develop.

This is followed by the formation of a white, greyish white or greyish green membrane in the throat. Sometimes this membrane interferes with breathing and the child dies.

- **WHOOPING COUGH:**

This disease is more common and, like diphtheria, usually occurs in young children. It is also spread by contact with a sick person. First, the child develops a dry cough which gradually becomes more severe and frequent. Then a number of coughs occur, without stopping even to take a breath.

After a continuous number of coughs, the face becomes deep red in colour. When the coughing stops

a deep breath is quickly taken and the whoop sound is heard. During and following the cough a large amount of thick sputum is produced. Sometimes there is vomiting.

- **TETANUS:**

This is a very serious disease occurring at all ages, from new born babies to old age. The disease develops when dirt or dung enter an open wound. Tetanus causes tightness of the neck and jaw muscles. Later the muscles become so tight that there is difficulty with swallowing and breathing. Usually this disease causes death.

All of the above diseases can be prevented by DPT vaccine which is given by injection. DPT must be given in 3 doses, at least one month apart, to protect well. One or two doses will not be enough for the body to build a special defence against these diseases.

This vaccine should be given to babies starting at six weeks of age, but can also be started any time up to two years of age. A total of four doses should be given by two years of age.

## D T

If the baby has had whooping cough, or has already reached two years of age, it is recommended that we give a vaccine called D.T. This is two vaccines combined into one and gives a child protection against diphtheria and tetanus, which we have already discussed.

D.T. is given by injection in 2 doses with at least one month between injections to protect well. One injection of the vaccine is not enough for the body to build the special defence

against diphtheria and tetanus.

The mother should be told that after her child receives DPT or DT vaccine there may be a little pain, where the injection was given, and a low fever for a couple of days. Mothers should be told to expect this and not worry.

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## T T

Tetanus is a common cause of new born deaths in the village. All married women should have two TT (Tetanus Toxoid) injections no later than their first pregnancy, at least one month apart. Thereafter they should be given one T.T. a year until they have received a total of five injections. This is one method of preventing tetanus in both the new-born and the mother. Tell pregnant mothers where to obtain the Tetanus Toxoid injections.



## OPV (ORAL POLIO VACCINE)

This is a vaccine that prevents children from developing a serious disease called Polio. Polio is spread from child to child and it begins with fever, headache and sometimes nausea and vomiting.

As Polio progresses the fever and headaches increase. Often children die of polio. Those children who get well may have a shrunken arm or leg and are often so weak that they cannot walk: These children should be referred to the DHQ

Hospital or Teaching Hospital for rehabilitation.

The Polio vaccine is given by mouth. One dose is given at birth. Three more doses, at least a month apart, are given beginning at six weeks of age. Approximately one year after the fourth dose, add one booster dose.

Children of two to five years, who have not yet received OPV, should be given two doses at least one month apart.

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## MEASLES

This is a vaccine that prevents children from developing a disease called measles. This disease spreads very quickly among children and is serious because it makes them very weak, especially if they are under-nourished. The child with measles may develop pneumonia and die. Measles begins with a cough, fever and red watering eyes. After a few days, a light pink rash appears on the face and neck and then spreads over the entire body. This lasts for a number of days.

The measles vaccine is given by in-

jecting one dose. It should be given to babies at 9 to 12 months of age or as soon after as possible, up to the age of five years.

Mothers should be told that the baby may develop a mild fever and a very mild rash after receiving this vaccine. These symptoms are to be expected and show that the vaccine is helping the baby build a special defence against measles. The symptoms will last for only a short period of time.

## 10.2 IMMUNIZATIONS SCHEDULES

An immunization schedule contains the following information:

- What vaccines are to be given
- The desirable age at which to administer the first dose of each vaccine.
- The number of doses required for each vaccine.

- The minimum time interval between successive doses of vaccines.

There is no maximum time interval. Even if a year passes between successive vaccine doses, do not begin the series of multiple doses of DPT, polio or tetanus over again. Administer the next dose as if the minimum time interval had passed.

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There are no contraindications for giving immunizations, but you need to refer to a physician:

- A child who has had a severe reaction to a previous dose, especially if the reaction was shock or a convulsion within 3 days of the injection.
- A sick child whose mother seriously objects to the vaccine. En-

courage her to accept the vaccine, but do not force her. She may only need to be given some counselling and time. If you force her, she may not come back.

- A very sick child requiring hospitalization. Send along a note regarding his immunization status.

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All children, under 2 years of age, who come to the RHC or BHU for any reason, or who are seen in the outreach visits, should be:

- Registered in the proper village register.
- Screened for immunizations, including measles.
- Immunized as needed according to the schedule.

- Followed up until immunization is complete.

All married women 15-44 years who come to the RHC or BHU for any reason, or who are seen in the outreach visits, should be:

- Screened for Tetanus Toxoid immunization.
- Immunized, as needed, with a total of five TT injections.

## UNIT TEN: IMMUNIZATIONS

### VACCINATION SCHEDULE FOR BABIES UNDER 24 MONTHS

TIMING	VACCINES TO BE GIVEN	ROUTE OF ADMINISTRATION	DOSE
AT BIRTH	BCG	INTRADERMAL	0.1 ML
	OPV	ORAL*	*as prescribed
AT 6 WEEKS	DPT I	INTRAMUSCULAR	0.5 ML
	OPV I	ORAL*	*as prescribed
AT 10 WEEKS	DPT II	INTRAMUSCULAR	0.5 ML
	OPV II	ORAL*	*as prescribed
AT 14 WEEKS	DPT III	INTRAMUSCULAR	0.5 ML
	OPV III	ORAL*	*as prescribed
AT 9 MONTHS	MEASLES	SUBCUTANEOUS	0.5 ML
AT 20 MONTHS (BOOSTER)	DPT	INTRAMUSCULAR	0.5 ML
	OPV	ORAL*	*as prescribed

### VACCINATION SCHEDULE FOR UNIMMUNIZED 2-5 YEAR OLDS

TIMING	VACCINES TO BE GIVEN	ROUTE OF ADMINISTRATION	DOSE
FIRST MONTH	DT I	INTRAMUSCULAR	0.5 ML
	OPV I	ORAL*	*as prescribed
SECOND MONTH	DT II	INTRAMUSCULAR	0.5 ML
	OPV II	ORAL*	*as prescribed
AS SOON AS POSSIBLE	MEASLES	SUBCUTANEOUS	0.5 ML
AS SOON AS POSSIBLE	BCG	INTRAMUSCULAR	0.1 ML

### VACCINATION SCHEDULE FOR MARRIED WOMEN (15-44 YEARS)

TIMING	VACCINES TO BE GIVEN	ROUTE OF ADMINISTRATION	DOSE
AS SOON AS POSSIBLE	TT I	INTRAMUSCULAR	0.5 ML
AT LEAST 4 WEEKS LATER	TT II	INTRAMUSCULAR	0.5 ML
6 - 12 MONTHS LATER	TT III	INTRAMUSCULAR	0.5 ML
AT LEAST 12 MONTHS LATER	TT IV	INTRAMUSCULAR	0.5 ML
AT LEAST 12 MONTHS LATER	TT V	INTRAMUSCULAR	0.5 ML

## 10.3 BEFORE THE CLINIC

Because there is a lot of work to be done by the CHWs to spread information about the immunization session in your village, the work should be divided among you. This is important for helping to make sure that everyone in the village has been motivated to bring their children to the immunization session. Here are some suggestions:

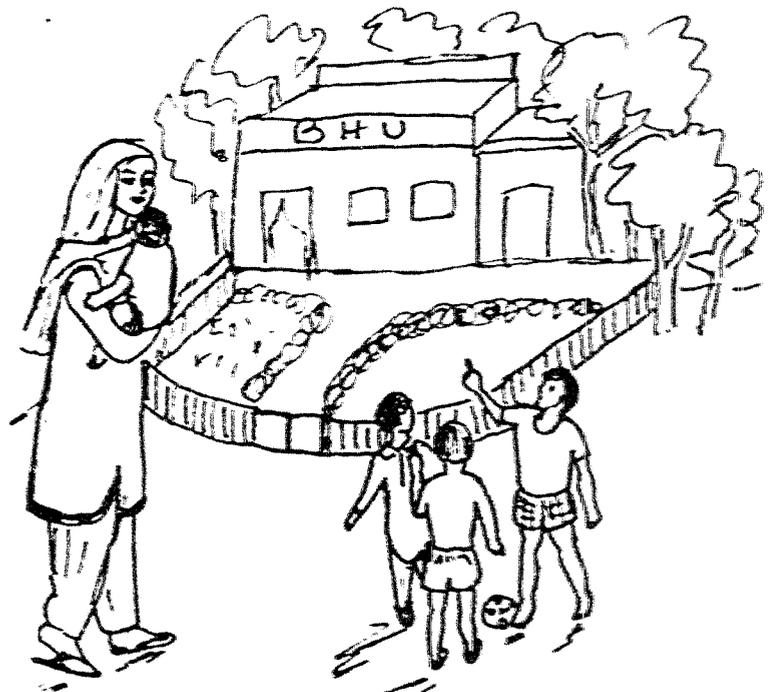
- Visit all homes where there are children under five years of age. The health surveys you carried out in your village can help you identify these families. Inform parents about the benefits of having their children immunized, and encourage them to bring their children to the immunization session. Be sure to tell them when and where the sessions will be located.
- Develop a list of people in your village who can help you influence parents to bring their children for immunization.

Plan ways to obtain their help and decide how they can best help you.

- Ask the headmaster of the school to let you tell the children about immunizations. After talking to them, find out if they have any younger brothers and sisters at home. If they do, the children should be asked to tell their parents about the immunization sessions. In larger villages you may want to ask the older students to help you spread information about immunizations in their own neighbourhood. These older children could be taught to say:

**"IMMUNIZATIONS ARE GOOD FOR CHILDREN BECAUSE THEY HELP PREVENT SOME SERIOUS DISEASES."**

**"THE DATE, TIME AND LOCATION FOR THE IMMUNIZATION SESSION IS....."**



## 10.4 AT THE CLINIC

You should assist with one or more of the following activities at the clinic:

Setting up the clinic.

Registration.

Recording immunizations.

Answering questions.

Cleaning and putting away equipment.

- 3 tables
- 3 chairs
- 3 or more charpaies
- Stove and fuel or arrange to use kitchen fireplace
- 2 glasses
- 2 spoons
- Soap, water and basin for hand washing

### SETTING UP THE CLINIC

The best place to hold the immunization session is in a large room or shaded area. This is because the vaccine must be kept cool and protected from the sunlight. Also a large area is needed to prevent crowding and confusion.

Before the scheduled immunization session you will need to make sure that some furniture and equipment is available. The things that need to be collected are:

On the immunization day there is usually a big pressing crowd. You should organize the session in such a way that the chance of children missing one of the immunizations is minimized. You will also note that children are very curious and will try to observe the activities closely. You can use charpais to separate the waiting area from the immunization area.



## UNIT TEN: IMMUNIZATIONS

### REGISTRATION

Stress the importance of parents keeping the immunization card and bringing the card to the next immunization session.

On the day of the immunization session your help is needed in guiding the children through the session.

First the children need to be registered and the immunization cards filled out. The person registering should ask the parents to keep the cards in a safe place because they will be needed at the next session. After that, help to direct the children to the right place for their immunizations.

### RECORDING IMMUNIZATIONS

Record all vaccines received on children's immunization cards.

### ANSWERING QUESTIONS

One of you will need to explain to each parent that the child may have a little pain around the spot where the immunization was given and that a slight fever may develop. Describe the reaction expected from the BCG vaccine. Be sure that the parents understand that these minor complaints are to be expected and not to be worried.

Tell each mother that if the child develops a little pain or fever, she may give paracetamol according to the following table:

#### PARACETAMOL

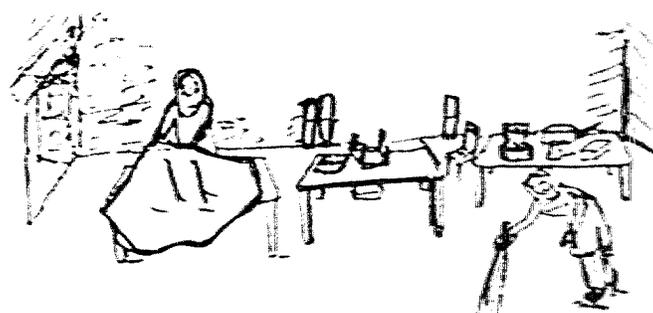
(500 mg. tablets)

AGE	AMOUNT	TIME
Under 6 months	1/8 tab	Twice a day
6 mos to 2 years	1/4 tab	Twice a day
3 - 7 years	1/2 tab	Twice a day

If the symptoms do not go away in two days, or if other symptoms develop, ask the parents to take the child to the BHU.

### CLEANING AND PUTTING AWAY EQUIPMENT

Clean all equipment thoroughly, and store neatly. This will make it much easier for you to set up the next clinic.



## 10.5 AFTER THE CLINIC

After the immunization session, you should try to visit all the homes of the children immunized. A brief visit is important to reassure the mother that mild symptoms are to be expected. If any child is having these mild symptoms, advise the mother to give Paracetamol according to the schedule (page.200)

Prior to the next immunization session, you should prepare a list of the children who were not immunized. You can determine this by comparing the list of the children

attending the immunization session with the health survey form. Visit these homes and, in a casual way, try to find out why the child was not brought for immunization. If the family is resisting having their children immunized, you will need to be patient and listen to their reasons. It will require much skill to motivate these parents. Perhaps it would be helpful to ask someone from the Health Committee, or another respected person, to go to the home with you.

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## SUMMARY

This chapter provided you with information on six childhood diseases, immunizations against them and your role in the EPI Programme. It specifically highlighted your role in pre-clinic, clinic and post-clinic activities. If you have any questions, make sure you discuss them with your supervisor.

# **UNIT ELEVEN**

## **ORAL REHYDRATION THERAPY**

# INTRODUCTION

This unit discusses a person's normal liquid requirement, plus the meaning and dangers of dehydration. It also teaches you how to assess the severity of the dehydration and how to manage various degrees of dehydration by giving oral rehydration solution and by continuing to give normal feedings. Your role in

oral rehydration therapy is also defined. You can help the family manage mild and moderate cases at home. In cases of severe dehydration you must refer the patient to a health facility.

## 11.1 NORMAL LIQUID REQUIREMENT

The human body is like a plant in terms of fluid requirement. If an adequate amount of fluid is taken, then the person continues to grow and develop as expected. If an insufficient amount of liquid is consumed the body does not function properly. Therefore, it is important to know whether or not the body is getting an adequate amount of liquids.

Liquid is consumed in the form of water and other drinks and is also found in fruits, vegetables and prepared food. The daily intake of

water should be a little more than the body output of evaporation and waste products (urine, stool and sweat). Adults require approximately six to eight glasses of liquid per day.

Children's liquid requirements vary according to their body weight. A general guideline for children over six months of age follows: the minimum daily requirement is the child's weight in kgs x 20 ml.



## 11.2 DEHYDRATION

What happens to the body fluids during diarrhoea and other illnesses?

When a person has diarrhoea, the number of stools per day is increased and the stools are often loose and watery. Therefore, a large amount of water and salt is lost. In other illnesses liquid may be lost in the form of increased urination, sweating or vomiting.

When a greater amount of liquids is lost from the body (output) than the amount consumed in food and drinks (input), the body begins to show signs of not functioning properly. This is called dehydration. The first sign of dehydration is loss of body weight. This is because  $\frac{2}{3}$  of our body weight is made up of water.

The greater the amount of liquid lost from the body, the more serious is the condition of the patient. Water replacement is done on the basis of water loss (dehydration). To determine the amount of water lost, or the severity of the dehydration, certain signs and symptoms are evaluated.

WHO has divided dehydration into three levels: mild, moderate and severe, according to the amount of body weight lost, irritability and

thirst. To find out the normal weight of the child, refer to his growth chart.

- Mild dehydration means that 5% or less of the body weight is lost. For example, a child usually weighing 20 lbs will have lost up to 1 lb. He will weigh between 19 and 20 lbs.
- Moderate dehydration means that 5% to 10% of the body weight is lost. The 20 lb. child now weighs between 18 and 19 lbs.
- Severe dehydration means 10% to 15% of the body weight is lost. The 20 lb. child now weighs between 17 and 18 lbs.

Children who are more than 15% dehydrated will usually develop complications and their chances of recovery will be significantly reduced.

People of any age can be affected by diarrhoea and dehydration. However, most of the serious cases occur in children below the age of three years.

Weighing the child is one way to determine the severity of dehydration. If it is not possible to weigh him, other signs and symptoms are used.

Use the following table to determine the level of dehydration of a child with diarrhoea:

## HOW TO ASSESS DEHYDRATION

EVALUATE CHILD FOR DEGREE OF DEHYDRATION ACCORDING TO TABLE BELOW:

	DEGREE OF DEHYDRATION		
	NONE (no visible sign of dehydration)	MILD TO MODERATE	SEVERE
<b>ASK</b>			
Diarrhoea	Less than 4 liquid stools per day	4 to 10 liquid stools per day	More than 10 liquid stools per day
Thirst	Normal	Greater than normal	Unable to drink
Vomiting	None or a small amount	Some	Very frequent
Urine	Normal	Small amount, dark	No urine for 6 hours
<b>LOOK</b>			
Condition	Well and alert	Unwell, sleepy or irritable	Very sleepy, unconscious, limp, having convulsions
Eyes	Normal	Sunken	Dry and sunken
Tears	Present	Absent	Absent
Mouth and Tongue	Wet	Dry	Very dry
Breathing	Normal	Faster than normal	Very fast and very deep
<b>FEEL</b>			
Skin	Abdominal pinch goes back immediately	A pinch goes back slowly in 1-2 seconds	A pinch goes back very slowly in 2-3 seconds or longer
Pulse	Normal	Faster than normal (more than 110/min.)	Very fast, weak, or you cannot feel it (more than 140/min.)
Fontanelle (in infants)	Normal	Sunken	Very sunken
<b>DECIDE</b>	The patient has <b>NO</b> signs of dehydration.	If the patient has two or more of these signs, he has <b>MILD TO MODERATE</b> dehydration.	If the patient has two or more of these signs, he has <b>SEVERE</b> dehydration.

Now that the condition of the child has been determined, inform the mother about ORT.

### WHAT IS ORT?

ORT stands for Oral Rehydration Therapy. This means replacing water and salt loss by giving special medicine water while continuing to breastfeed or to give small frequent feedings of whatever the child normally eats.

- First teach the mother how to make the medicine water (ORS). She may either make it from an ORS packet or make it at home with what she has in her kitchen.

### TO MAKE ORS AT HOME:

- 1 Boil one litre of water.
- 2 Take salt in a tea spoon, level it with a knife or flat object. Add the level teaspoon of salt to the water, and mix.
- 3 Take eight level teaspoons of sugar. Add these to the boiled water and mix.



Making the ORS is the first step. Next, we must be certain that the child drinks it.

He may not want to, but it is our responsibility to be sure that he does.

Advise the family to give approximately one cup of ORS for each stool passed, or as much as the child will drink.

It is important that the mother, father or other family members feeds the ORS to the child slowly, with a cup and spoon. The sick child may not want to take it from us.

It is important to remember to wash the cup and spoon very carefully before feeding the ORS to the child. The child should drink as much as was lost in the stools, so that the water lost from the stools is totally replaced. This means that the solution must be given continuously so that the number of glasses of ORS taken by the sick child, equals the number of stools passed.

After you have taught the mother how to make ORS, teach her to give this solution, slowly, the amount prescribed on the following table for mild and moderate degrees of dehydration. **ALL SEVERE CASES MUST BE REFERRED TO A BHU OR RHC.**

In addition to ORS, the mother should continue to breast feed her child and continue his usual diet in small frequent meals.

## UNIT ELEVEN: ORT

### STANDARD TREATMENT FOR ALL LOOSE OR WATERY STOOLS (DIARRHOEA/DYSENTERY) FOR ALL CHILDREN

TREAT CHILD ACCORDING TO THE TABLE BELOW:

DEGREE OF DEHYDRATION	AGE OF CHILD		
	UP TO 4-6 MONTHS (exclusively breastfed)	MORE THAN 4-6 MONTHS (partially breastfed)	
NONE (No visible sign of dehydration)	Breastfeed more often.	Breastfeed more often. Give more fluids such as rice water, lassi and plain water. Continue soft foods such as khichri, yogurt and mashed banana.	
MILD TO MODERATE	0-11 MONTHS First 4-6 hours ORS 200-600 ml or 1/4-1/2 seer.	1-4 YEARS First 4-6 hours ORS 600-800 ml or 1/2-3/4 seer.	5 YEARS & OVER First 4-6 hours ORS 1 to 2 litres or 1 to 2 seers
	<i>10-20 ml ORS per kilogram body weight per hour</i>		
SEVERE	Refer immediately to BHU/RHC	Refer immediately to BHU/RHC	Refer immediately to BHU/RHC
MAINTENANCE	1/2 large cup (100 ml) ORS or other fluids per stool	1 large cup (200 ml) ORS or other fluids per stool	2 large cups ORS or other fluids per stool
	<i>CONTINUE FEEDING THE CHILD OFTEN. IF CHILD WANTS MORE WATER, GIVE IT.</i>		

- Observe parent prepare and feed ORS according to the above table.
- If child vomits, wait 10 minutes and then give small amounts of ORS slowly.
- After 4-6 hours, reassess the child using the assessment chart, then choose the suitable treatment.
- *For Bloody Stools: Refer to BHU/RHC.*

EXPLAIN TO PARENT AND ENSURE THAT PARENT UNDERSTANDS THAT:

- Child should continue to breastfeed often.
- Child should drink more liquids than usual.
- Child should continue eating soft foods like yogurt, khichri, mashed banana, etc. 5 to 7 times a day.
- After diarrhoea stops, child should eat one extra meal each day for two weeks.

FOLLOW-UP THE CHILD DAILY UNTIL RECOVERY, OR REFER THE CHILD TO BHU/RHC IF THE CHILD DOES NOT IMPROVE OR DIARRHOEA LASTS MORE THAN 2-3 DAYS.

## SUMMARY

In this unit you were taught the normal daily liquid requirement of a person. When this requirement is not met a condition known as dehydration occurs, in varying degrees from mild to severe. You were also taught that you can help

families care for mild and moderate dehydration at home, but that you should always refer a severely dehydrated patient to a health facility.

**UNIT TWELVE**  
**ACUTE**  
**RESPIRATORY**  
**INFECTION**

# INTRODUCTION

This unit covers the subject of Acute Respiratory Tract Infection in young children and discusses its three stages: Mild, Moderate and Severe. It gives the proper management guidelines for each stage and it

specifically describes the CHW's role in ARI case management (case finding, treatment, referral and follow through).

## 12.1 WHAT IS ARI?

ARI stands for Acute Respiratory Infection. Any person suffering from one or more of the following conditions will be considered a possible case of ARI - cough, runny or blocked nose, rapid respiratory rate, dif-

ficulty in breathing, wheezing, hoarseness, sore throat, earache or ear discharge.

ARI also includes chest infections like bronchitis or pneumonia.

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## 12.2 CLASSIFICATIONS

All ARI cases need to be evaluated so that appropriate care can be provided immediately.

The severity of the ARI is determined by the symptoms and signs outlined below. If any one of these symptoms or signs is present, the ARI is classified accordingly. These classifications are determined by the number of symptoms as well as by the location of the infection. A mild form of ARI affects the respiratory organs of the neck and above. A moderate form of ARI affects the neck as well as the chest, and a severe form an infection of the lungs. This condition is called pneumonia and is considered serious.

### MILD ARI

- Respiratory rate less than 50/Minute
- Dry non-productive cough
- Congested or runny nose
- Temperature less than 101 F (38.9 C)
- Red throat without pus
- Earache (mild) with or without discharge



**MODERATE ARI**

- Respiratory rate faster than 50/minute
- Temperature 101 - 104 F (38.9-40 C)
- Red throat with pus
- Difficult and abnormal breathing
- Ear discharge, with or without pain, for more than two weeks.
- Severe earache
- Cough with large amounts of sputum
- Mild reduction in physical and mental activities.

**SEVERE ARI**

- Respiratory rate faster than 50/minute.
- Temperature higher than 104 F (40 C)
- Nasal flaring, grunting or chest indrawing while trying to breathe
- Marked inability to drink
- Blue colour, seizures, apnea or change in consciousness
- Marked reduction in mental and physical activities.
- Dehydration
- Cough, with large amounts of sputum



If you have seen someone with pneumonia or if you have ever had it yourself, you know that it usually starts suddenly. One minute the patient has only a cold; in a short time, he becomes very ill, breathes very fast and develops a fever.

Sometimes, in very severe cases of pneumonia, as well as breathing fast, the patient has great difficulty in breathing. He complains of pain on breathing and coughing.

## 12.3 CASE FINDING

CHWs can play a vital role in saving the lives of many children with pneumonia - which is the severe form of ARI. You will be able to help through case finding, treatment, referral and follow-up.

As a resident of the community you will be able to observe children with runny noses, playing or in the bazaar. If you talk to the mothers about the proper care of these children, you may be able to prevent their colds from developing into moderate or severe cases of ARI. Therefore, a child with a mild case of ARI, with proper assistance and guidance, may recover quickly.

You should always evaluate a child with an ARI and place him in the mild, moderate or severe category. Respiratory rate is a good indicator for determining severity of the child's condition. This is your responsibility in case finding.

**NB** Children who are under-nourished are particularly susceptible to pneumonia, after a bad cold or measles. One of the best ways to protect children from this serious illness is to be sure that they are always given enough of the right kind of foods to eat.



## 12.4 TREATMENT PROTOCOL

What is a treatment protocol? And what are the treatment protocols for mild, moderate and severe ARI?

Protocol generally means rules and regulations.

A treatment protocol is a guideline

(rules) developed by experts in dealing with a certain disease or condition. The ARI treatment protocol is developed by WHO and is based on the severity of the condition as follows:

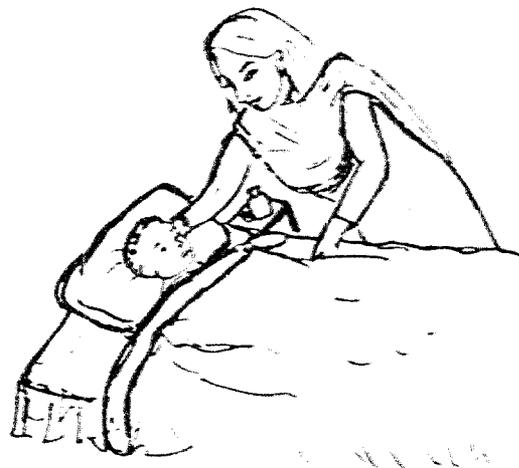
### MILD ARI

Treatment can be initiated by the family:

- Plenty of fluids
- Proper feeding
- Protection from chills
- Keeping air passages clear
- Paracetamol for fever. (Never use aspirin.)

If a child has a mild ARI (respiration less than 50/minute with other symptoms) you can help the mother treat her child with adequate amounts of liquid, food and rest. She may be instructed to give paracetamol if the temperature is above 101 F.

A child needs more liquids when he is sick, so the mother should encourage him to drink plenty of fluids. If the child is being breast fed, this should be continued while giving frequent small servings of food. The child also needs more rest and sleep, so he should sleep in a quiet area of the house. This child can be treated at home by his family as long as his condition remains mild or improves.



## MODERATE ARI

Treatment can be initiated by the family.

- Plenty of fluids
- Proper feeding
- Protection from chills
- Keeping air passages clear
- Paracetamol for fever (Never use aspirin.)

For moderate cases of ARI, all of the above treatment should be started and continued. In addition, the family should be instructed to take the patient to the BHU or RHC. This is because he requires medication, and could go from a moderate to severe condition very quickly. A Medical Officer must see the patient to evaluate and treat him.

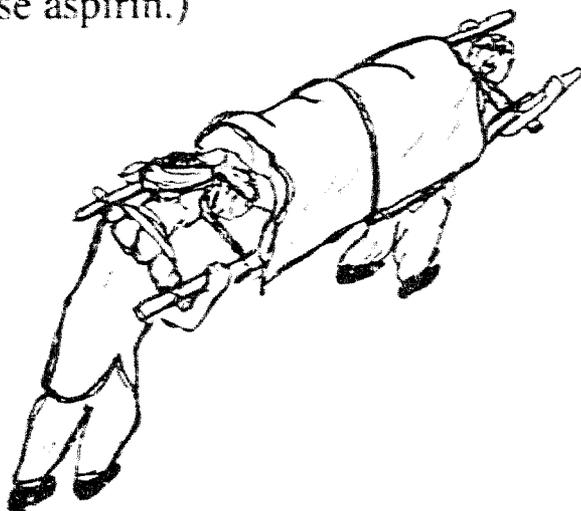
## SEVERE ARI

- Must be referred to a hospital immediately.
- Plenty of fluids
- Proper feeding
- Protection from chills
- Keeping air passages clear
- Paracetamol for fever. (Never use aspirin.)

- The family should be instructed to take the patient to the HOSPITAL immediately, because he needs antibiotics, and may even require oxygen or other treatments which are not available at a RHC. If the patient is not given treatment immediately by a Doctor, he may die.

As a CHW the most important thing you can do when you suspect a patient has pneumonia is to use all your skill and influence to convince the family to take him immediately to the hospital.

After the patient has been given treatment by a doctor there are some other things you and the family can do to make him feel better and to stop him from getting any worse.



- First of all you must be sure that he gets enough to drink. A lot of water is lost when a person has a fever. You must make sure that the water gets put back into his body, or he will have a hard time fighting the disease. Give him good, clean water to drink, or tea.

- Secondly, ensure that the patient has frequent small servings of the right kinds of foods, in order to keep up his strength. During the week following the illness, increase the amount of food given.

If a baby is being breast fed, it is best to continue this. If he is unable to suck, feed him expressed breast milk with a cup and spoon.

- Besides plenty to drink, and enough of the right kinds of food, the pneumonia patient needs to rest in a quiet place and to be kept clean.

- If the patient continues to be very sick, has a lot of trouble breathing or has a high fever, you must send him back to the hospital.

Remember that:

- If the patient seems ill

- If the patient has difficulty breathing

- If the patient has very noisy breathing, or feels very hot to the touch

Immediately send him to the nearest hospital that has a supply of oxygen.

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Moderate and severe cases of ARI must be seen by a Medical Officer. You need to help the family arrange transport for moderate cases to the RHC and severe cases to the hospital.

When you send someone to another place, this is called a referral. In referring a case, you must always send a referral note. A sample of a referral note can be found on page 81. Fill in as much information as you can and send it to the appropriate place.

## 12.6 FOLLOW UP

Follow Up means the completion of a task. Therefore, in completing your task of ARI case management, you must know what happens to each of the cases you have identified. Therefore, one or more visits or contacts with the family may be required to decide on the final outcome of the patient. In most cases he will have improved. In some cases he may get worse and require follow up.

And in other cases a patient may die. In cases where a patient dies, a verbal autopsy form needs to be filled out.

Your task of follow up ends under one of the following conditions:

- The patient recovers.
- The patient gets worse and is referred for treatment or further diagnosis.
- The patient dies.

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## SUMMARY

This unit has dealt with a very common disease. ARI is responsible for the suffering and deaths of many children and adults. This unit has

pointed out ways CHWs can help minimize suffering and deaths by following some basic guidelines.

# UNIT THIRTEEN

## MALARIA

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# INTRODUCTION

This unit covers the topic of malaria and the ways it is spread.

It discusses the role of the CHW in preventing the spread of malaria

- by helping the community to reduce mosquito breeding places

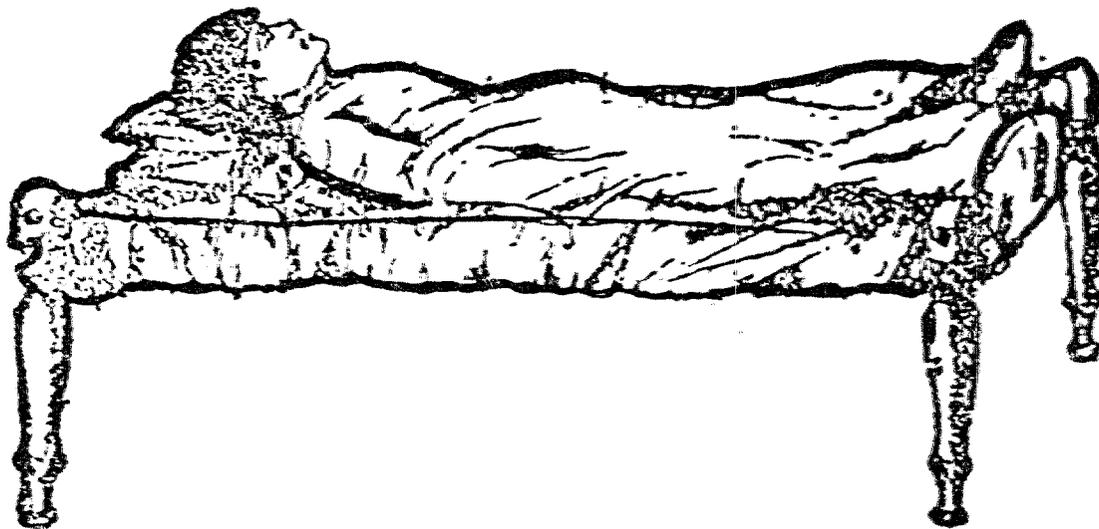
- by using screens and nets to prevent the entry of mosquitoes to sleeping areas.

The role of the CHW, in the presumptive and radical treatment of malaria, is also covered.

## 13.1 SYMPTOMS

Malaria is a disease carried by a certain kind of mosquito called the Anopheles Mosquito. When an infected mosquito bites a healthy human, a parasite (or germ) is introduced into his blood. A few days after the bite the person will experience the following:

- loss of appetite
- headache
- weakness
- nausea
- vomiting
- joint pain
- severe rising fever lasting a few hours
- profuse sweating



## 13.2 PREVENTION

What do people do to prevent this disease?

Some people burn twigs in their sleeping quarters, or in the cattle yards, to make smoke.

Why do you think people do this?

They do this to prevent the mosquito from coming into the quarters and biting them while they are asleep.

Although smoke in the room keeps the mosquitoes out, it can be a dangerous practice. Something in the room may catch on fire, or the concentration of smoke may cause the people in the room to suffocate.

There are other measures that you can encourage the community to follow to help stop the spread of malaria.

One way is to eliminate the mosquitoes' breeding places. Mosquitoes need water to multiply, so encourage people to keep their

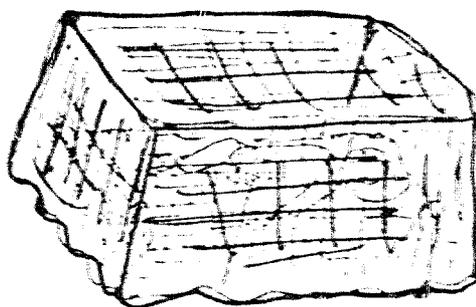
villages free of stagnant water. Water that collects in discarded jugs or other containers is a common breeding place for mosquitoes. Therefore, discarded items that can hold water should be put in a dirt covered refuse pit.

A little oil should be added to pools and marshes to stop the mosquitoes breeding.

Since the mosquitoes that carry malaria usually bite at night, every member of the household should sleep under a mosquito net or in a room that has jali on the windows, to prevent mosquito bites.

Another effective method is to have your houses sprayed annually when the malaria worker comes to your village.

If people are encouraged to follow the above advice, they can protect themselves from this disease.



## STANDARD MANAGEMENT FOR FEVER WITHOUT AN OBVIOUS CAUSE (SUSPECTED MALARIA)

**IF ANYONE HAS HAD FEVER WITHOUT AN OBVIOUS CAUSE, THEN CHW SHOULD DO THE FOLLOWING:**

1. Refer the person to the nearest BHU or RHC for the blood test.
2. May give a one-day "presumptive treatment" ONLY after the patient has had his blood tested and results are awaited.

**TABLE 1. PRESUMPTIVE TREATMENT**

AGE	1-11 MONTHS	1-2 YEARS	3-4 YEARS	5-6 YEARS	7-14 YEARS	OVER 15 YEARS
DOSE	Chloroquine ¼ tab	Chloroquine ½ tab	Chloroquine 1 tab	Chloroquine 2 tabs	Chloroquine 3 tabs	Chloroquine 4 tabs

*Chloroquine 150 mg base*

3. Inform the HT at the BHU or the CDC worker about the person given presumptive treatment.
4. Encourage the family members to find out the result of the blood test and to obtain the appropriate treatment.
5. Follow-up the case for ensuring regularity of medication.
6. After completion of treatment, refer the patient again to BHU/RHC for blood test.
7. Persuade the family member to obtain the result of blood test and check the result.

## 13.3 TREATMENT

Malaria is a very serious disease. Treatment should be started as early as possible to avoid complications and suffering. Recognizing this, the Malaria Control Programme recommends two types of treatment:

- Presumptive
- Radical

One of these two types of treatments is used, depending on whether the treatment is started before or after the diagnosis is confirmed by blood smears. If the treatment is started before the blood smear results are available, it is called presumptive treatment. If it is started after a positive blood smear is reported, it is called radical treatment, and will depend on the type of malaria found on the blood smear examination.

Encourage anyone suffering from symptoms of malaria to have their blood tested. The blood test will tell whether or not the person really is suffering from malaria.

### PRESUMPTIVE TREATMENT

As a CHW, you may give a one-day-only presumptive treatment to a suspected malaria case. **THIS MAY ONLY BE STARTED AFTER THE PATIENT HAS HAD HIS BLOOD TESTED.** All treatment dosages are determined by age. (See table, Page 225)

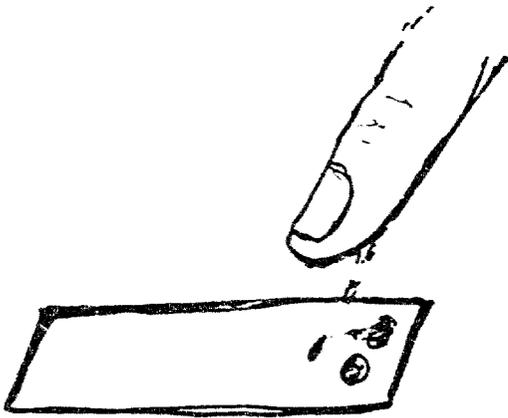
For example, an adult is to take 4 tablets all at one time, with a glass of milk. A child 5 years of age is to take 2 tablets at one time, with a glass of milk.

When giving this medicine to a baby, it will have to be crushed and mixed with a little sugar and water. Teach the mother to break the tablet, and demonstrate to her how the tablet can be crushed using two spoons.

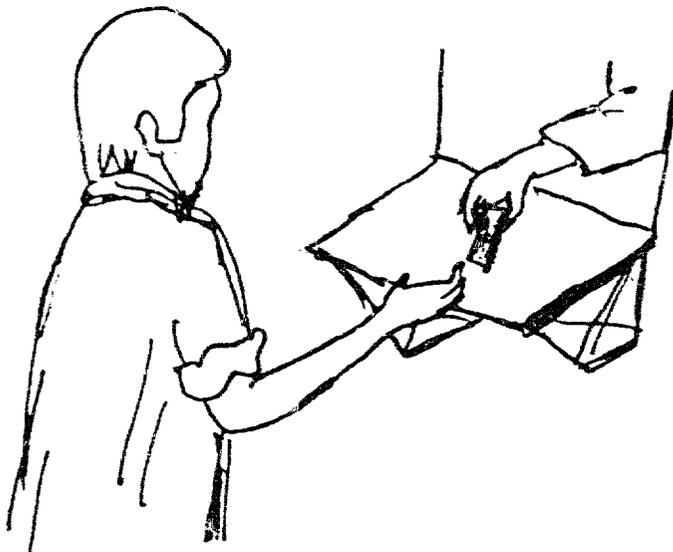
Record the name of the person to whom you have given presumptive treatment for malaria. Inform the HT at the BHU, or the CDC worker who visits your village. This important information is used by the Department of Health for controlling the spread of malaria.

## RADICAL TREATMENT

If the malaria producing organisms are seen in the blood, then radical treatment is required.



This can be obtained only at a RHC or BHU after the blood test result comes back. Therefore, encourage the family members of a sick person to go to the RHC or BHU to find out the result of the blood test and to obtain the appropriate treatment.



## FOLLOW UP

All positive malaria patients should have a blood slide taken soon after completing the radical treatment. All falciparum malaria cases are to be followed up with a blood slide monthly for one year. As a CHW, you should keep a list of all malaria cases and falciparum malaria cases. Follow up these patients to make sure they go for a blood slide when required.

## SUMMARY

In this unit you learnt about malaria, and how to prevent and treat it. You were also briefed on your role in giving presumptive treatment, and in referring suspected cases to a RHC for a blood test. The follow up of all confirmed malaria cases was also

covered. You have, therefore, a very important role to play in the diagnosis and follow up of malaria patients.

**UNIT FOURTEEN**  
**TUBERCULOSIS**

# INTRODUCTION

This unit deals with a communicable disease known as "TB" that develops over a long time. This unit describes the symptoms that patients feel and show. Anyone with suspected TB should have a chest x-ray and sputum test to establish a definite diagnosis. How TB is spread from

one person to another is described. This is followed by a description of the long term treatment using a combination of three medicines. Finally the CHW's role in helping TB sufferers and their families is discussed.

## 14.1 THE DISEASE

Tuberculosis is a communicable disease that develops over a long period of time. It is highly infectious and is caused by bacteria. It is one of the major disease problems in Pakistan.

Children under five, and older adults, are at great risk of developing this disease, as are those with lowered resistance due to malnutrition, diabetes and cardiac disease.

Tuberculosis can affect most parts of the body, including the lymph nodes, lungs, kidneys, bones, joints and intestines. However, the most common site is the lung (pulmonary tuberculosis).

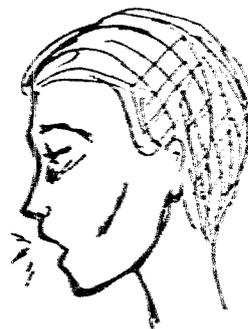
The initial infection, when organisms first enter the body, often goes unnoticed, because the symptoms are mild and the lesions heal easily. However, when a person's resistance is low, the infection may flare up again. The initial infection may have a serious outcome in infants, adolescents, young adults and those who are malnourished.

### SYMPTOMS

- Persistent low grade fever, particularly during evening hours
- Persistent cough lasting more than a month
- Tiredness
- Blood-streaked sputum
- Lack of appetite
- Increased pulse rate, more than 90 per minute
- Night sweats
- Chest pain
- Weight loss

### DIAGNOSIS

- A person seen to be suffering from the above symptoms.
- A chest X-ray and examination by a Medical Officer.
- A sputum test.



## HOW IT IS SPREAD

Untreated infected persons spread the disease by droplets from coughing and sneezing. Therefore, close or frequent contact with an infected person will infect a healthy person.

Tuberculosis develops slowly; it takes about 4 to 12 weeks to develop a primary lesion i.e., the first localization of the organism in the tissue. A full-blown case usually takes a year or two to develop, or less in the high risk group.

Untreated cases of tuberculosis or those inadequately treated, may be sputum positive (i.e., infectious) for years. Therefore, it is very important to get diagnosed cases treated early and continuously, until the full treatment course is completed.

## TREATMENT

For those with a positive sputum test or a positive chest x-ray, the standard three drug treatment regime will be prescribed. This treatment plan is given in Table.... page.....Treatment has to be of long duration, about 12 months. It takes two months of continuous and full treatment for a per-

son to become sputum negative. When a person's sputum is negative, it means that he can no longer transmit the disease even though he may not yet be completely cured. He may develop symptoms again, and become sick if he does not continue his treatment. If the treatment produces any adverse reactions (see Table.page 235) the patient should be referred back to the centre where he is receiving treatment, for re-evaluation.

For children 1 to 9 years of age, and for under-weight children over 9 years of age, an individualized treatment plan is developed at the center.

In addition to treating the patient, close contacts should be referred to the tuberculosis control clinic to determine their status. Contacts are those individuals who share in the day to day living of a diagnosed case. This includes family members and those who frequently come into the home.

## **UNIT FOURTEEN: TUBERCULOSIS**

### **STANDARD MANAGEMENT FOR A LONG LASTING COUGH (SUSPECTED TUBERCULOSIS)**

**IF ANYONE HAS HAD A COUGH FOR MORE THAN TWO WEEKS,  
THE CHW SHOULD DO THE FOLLOWING:**

- 1.** Refer the person to the nearest RHC for diagnosis.
- 2.** Make follow-up visit to the patient's home to know the diagnosis.
- 3.** If the person tests positive, find out drugs and dosages prescribed by the doctor.
- 4.** Advise the patient/parents to take/give medicines regularly.
- 5.** Screen family members or close contact for history of prolonged cough, low grade fever, or weight loss. Refer the suspect also to the nearest diagnostic centre.
- 6.** Explain preventive measures to patient and family.
- 7.** Follow the treatment plan for 12 months.

## 14.2 YOUR ROLE

CHWs have a crucial role to play in helping the tuberculosis sufferer and his family, as well as in controlling the further spread of the disease.

Specific activities for the management and control of TB are given as follows:

### FOR DIAGNOSED CASES

- Explain to the patient and his family that this is a communicable disease which requires only simple measures to control its spread i.e:
- Covering the mouth and nose with a handkerchief while sneezing and coughing.
- Washing the handkerchief with soap and water and drying it in the sun.
- Spitting the mucus into an earthen pot and burning the contents with leaves and papers.

- Explain the dangers of not taking the medications regularly for the full 12 months.
- Explain that you, or one of the other health workers, will visit periodically to assess the progress until the treatment plan is completed.
- Explain the reason for visiting the tuberculosis control clinic as per the Medical Officer's recommendations.
- Screen family members for tuberculosis.
- Find out what drugs and dosages have been prescribed.
- Make sure the patient is taking the prescribed dose daily (see Table page.233 )
- Advise the patient or family to go to the tuberculosis control clinic for replenishment of drugs one week before the medication is finished.
- Watch for possible adverse reactions to the medications.



## UNIT FOURTEEN: TUBERCULOSIS

### FOR SUSPECTED CASES

Encourage everyone with a chronic cough to take their sputum to the tuberculosis control clinic or RHC to be tested. These people should be advised to obtain a small container with a tight cover, and to clean it well with soap and water. They should then cough deeply and bring up some mucus from the lungs (not saliva from the mouth), spitting it into the container. They should then take the container to the centre, where the laboratory technicians will prepare a slide and look at it under the microscope. The sputum is positive if TB bacilli are seen. If the slide is negative, this does not necessarily mean that the person is free of the disease. He still needs to be sent for a chest X-ray which will show if he has any infection on the lungs.



### FOR THOSE DEVELOPING ADVERSE REACTIONS

Refer those developing adverse reactions to the TB control clinic. Adverse reactions to medication include:

- Weakness and numbness of the legs
- Jaundice
- Skin rash or anaemia
- Dizziness or ringing in the ears

### FOR DRUG RESISTANT CASES

Refer to the Health Technician supervising you, any patient who has persistent symptoms despite treatment, especially continued weight loss and cough.

### PREVENTION

Arrange to have BCG vaccine given to all children and infants who have not been infected. Assist in the examination of school children for BCG scars, and arrange for BCG vaccination for those without the scar.

## SUMMARY

This unit discussed TB and how it develops over a long period of time causing people to lose their appetites, lose weight, cough and suffer generally. This disease spreads quickly in the family if it is not treated early and fully. The CHW's role in the identification of possible cases and in the diagnosis, treatment, follow-up and referral is discussed. A three drug treatment is available for this illness. After 2-3 months of treatment, the patient is no longer infec-

tious, but he must continue treatment for one full year in order to be completely cured. Therefore, the CHW must regularly visit each TB patient for a full year to make sure he is continuing his treatment. Only by following up each patient can you be sure of his full recovery and of preventing him from being a source of infection to others. In this way you help both the individual patient and the community as a whole.