WHO-EM/CBI/060.03/E

Training manual for cluster representatives and health volunteers

Module 3

Communicable diseases

World Health Organization
Regional Office for the Eastern Mediterranean

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Module 3

Introduction

Poverty is the most serious challenge that humankind currently faces. A healthy life, free from starvation and disease, is the right of each and every person. Diseases are one of the main obstacles that stand in the way of community efforts to overcome poverty. The spread of disease increases poverty and poverty accelerates the spread of disease. Improving health status through investment in health improves economic and social outcomes and thus can alleviate vulnerability and offer an exit route out of poverty. Indeed, healthy children are better able to learn and healthy adults are better equipped to work and care for their families. The health sector thus has sufficient grounds to justify its engagement in poverty reduction initiatives, for which it has to develop both the skills and infrastructure necessary to work in partnership with other sectors and the community.

The Regional Office for the Eastern Mediterranean has successfully advocated to Member States the importance of involving communities as active partners in the delivery of comprehensive primary health care. Experience from different countries of the Region implementing community-based initiatives (CBI) programmes has shown that organized and aware communities are able to significantly improve health indicators, especially related to immunization coverage, access to water and sanitation, mother and child health, tuberculosis and malaria control and healthy lifestyles. Community-based initiatives have been so successful in countries that Member States have begun to institutionalize the programme in a sustainable manner as part of the government structure. Community participation in health care programmes is now increasingly being recognized as an innovative and effective approach.

Cluster representatives and health volunteers in CBI-implementing areas of the Region have been assisting in the implementation of priority health programmes at the community level, while maintaining strong linkages with health services and health workers operating in the area. They are trained by specially selected trained nurses and technicians working in the nearest health facility to the CBI site supervised by members of the CBI intersectoral team and related technical programmes at the district level. However, there is a growing need to empower them, not only with the transfer of health messages, but also as partners in health planning and in its implementation. Responding to the challenge, the community-based initiatives programme of the Regional Office produced this training manual for cluster representatives and health volunteers in coordination with the 17 relevant technical units in the Regional Office. Its publication represents a starting point towards the integration of community-based initiatives into all health-related programmes at community level and its use facilitates the ability of health programmes to work closely with communities to involve them in a sustainable way at grass-roots level.

In using this manual health volunteers and cluster representatives will be trained on their specific roles and responsibilities and will be made aware of simple and timely actions to prevent and manage common diseases and health-related issues. It is expected that more extensively trained community representatives and health volunteers will be able to assist the health system in improving the access of the target population to primary health care services and in helping to ensure the provision of timely health services to the entire population. This manual has been successfully field-tested in several countries of the Region and it is

expected that Member States will translate the manual into local languages and use it as a guideline for community involvement in health actions. Countries of the Region can adapt and adopt the material in accordance with their specific needs, culture and local situation. It should be updated periodically to accommodate new health issues and challenges.

The manual comprises four modules.

Module 1. Family health: Birth and emergency planning; Birth spacing; Child health, Nutrition and Dental hygiene

Module 2. Emergencies, environmental health and food safety: Emergency planning, First aid, Healthy environment, Food and chemical safety

Module 3. Communicable diseases: Tuberculosis; AIDS and sexually transmitted infections; Malaria; Childhood diseases and immunization

Module 4. Noncommunicable diseases: Noncommunicable diseases; Prevention of control of blindness; Active and healthy ageing and old age care; Mental health and substance abuse; Tobacco and health

Unit 10
Tuberculosis

Contents

Tuberculosis

Learning objectives

The objectives of this session are to enable cluster representatives and health volunteers to:

- explain what tuberculosis is;
- identify the symptoms of tuberculosis and its mode of transmission;
- understand the importance of early diagnosis and treatment;
- understand the negative implications of defaulting on tuberculosis treatment;
- be aware of the socioeconomic and cultural factors which lead to stigmatization;
- understand the importance of the socioeconomic rehabilitation of tuberculosis patients and possibilities for community intervention in this area.

Expected outcomes

After completion of this session cluster representatives and health volunteers will be able to:

- assist in the identification of patients suspected of having tuberculosis and defaulters;
- participate actively in the treatment of tuberculosis patients;
- mobilize communities to provide moral and social support to tuberculosis patients for their integration into the community.

Introduction

Tuberculosis is an infectious disease, caused by a germ called *Bacillus.* Any organ in the body can have tuberculosis; however, tuberculosis of the lung is the most common. The germ causing tuberculosis rapidly multiplies in the lungs and causes severe damage. If detected and treated early, tuberculosis is completely curable. People who do not receive the correct treatment in time may die from the disease. Tuberculosis infects both the rich and the poor and more people die from tuberculosis than from any other curable infectious disease in the world. If treatment is incomplete, a patient may relapse or he/she may develop a resistance to available medication leading to a chronic type of tuberculosis with a limited possibility of cure. Conditions of malnutrition, poor ventilation and poverty help to spread the disease and it is important that people with tuberculosis are detected. Stigma, particularly among women, prevents efforts to stop tuberculosis. To prevent the spread of the disease it is important that each case of tuberculosis is detected early and treated fully. The importance of community support can not be underestimated as it can assist in the early identification, diagnosis, treatment completion and social rehabilitation of tuberculosis patients.

How tuberculosis is transmitted

Tuberculosis is transmitted when a patient with an active disease coughs or sneezes. The germs of tuberculosis are released into the air, and when a previously healthy person breathes in that air, the germs enter his lungs. The organism causing tuberculosis also lives in the patient's sputum. Throwing infected sputum in the open and disposing of it improperly is a major cause of transmission. Living in small congested places, poor nutrition, poor hygienic conditions and poor socioeconomic status are some of the factors which facilitate the spread of tuberculosis.

Tuberculosis prevention

To prevent the spread of tuberculosis it is important to treat each case. One person with infectious tuberculosis infects between 10 and 15 people in one year. Early identification and diagnosis and complete treatment of patients with tuberculosis of the lungs is the best way to prevent its spread. It is important for the tuberculosis patient to complete a full eight months' course of treatment, the first two months of which must be directly observed. Administering a Bacille Calmette-Guérin (BCG) vaccination soon after birth is also important for preventing some forms of tuberculosis.

Who is at risk?

The people who are most at risk of contracting the disease are those who have prolonged contact with a tuberculosis patient or those with low immunity—people with diabetes, cancer and HIV/AIDS. Others who are most at risk include those who live in poverty, people living in slums and congested and poorly-ventilated places. Drinking unboiled milk from an infected animal may also cause tuberculosis of the intestines.

Strategies for prevention and treatment

The following are key strategies to identify patients with tuberculosis and to provide them with proper care.

- Ensure that every person complaining of chest symptoms, mainly people who have had a cough for more than three weeks, has access to health services and tuberculosis testing.
- Ensure adherence to tuberculosis treatment through direct observation until completion of the full course of treatment. This will minimize treatment default and its consequences.
- Identify defaulters and encourage their enrolment in a treatment programme.
- Reduce the stigma associated with tuberculosis through enhanced community awareness and social rehabilitation.

Identifying suspected cases of tuberculosis

If you suspect a person has tuberculosis look for the following symptoms (Figure 1).

- prolonged cough not relieved by the use of common antibiotics;
- profuse discharge of sputum, which may contain 'fresh' blood;
- fever;
- sweating at night, even when the weather is cold;
- loss of appetite and weight;
- tiredness, even on little exertion.

If an individual is experiencing a cough with one or more of the above symptoms which have persisted for more than two to three weeks, immediately refer the person to a tuberculosis diagnostic centre.

Figure 1. Symptoms of tuberculosis

The importance of completing treatment

It is important for cluster representatives and health volunteers to learn how to identify who is defaulting on treatment, the reasons for defaulting and the ways to restore patients to treatment.

Treatment defaulters

A treatment defaulter is a patient who stops his treatment before its full course. The period of interruption may be a day or longer. It is more serious when treatment is interrupted for longer period (months). In such cases the patient may need to start the full course of treatment from the beginning.

The reasons why people default on their treatment may include:

- lack of awareness regarding the duration and importance of strict adherence to tuberculosis treatment and completion;
- adverse reactions to anti-tuberculosis medicines;
- displacement or moving away from a treatment centre;
- cost of medicines if they are unavailable free of charge;
- a patient may feel better before completing the course and think that they have been successfully treated;
- the belief that the treatment is ineffective;
- stigma.

Treatment adherence

Medicine can cure tuberculosis completely if patients adhere to treatment for the full duration of the treatment course. Medicines have to be continued even if a patient feels better. If the treatment is stopped prematurely, the patient will fail to be cured. This will result in a new form of the disease—drug-resistant tuberculosis, which is incurable and may result in serious consequences for the patient, including death. Also, partially or inadequately treated patients will continue to spread the disease in their communities.

Figure 2. A community health worker directly observing a tuberculosis patient's treatment

Treatment period

DOTS is an effective strategy through which a volunteer or a health worker directly observes the daily intake of anti-tuberculosis medicines to ensure that a patient is regularly taking medicines (Figure 2). The period for treatment lasts for between 6 and 8 months of regular daily intake of anti-tuberculosis medicines. Medicines for tuberculosis are available free of charge from tuberculosis treatment centres.

Why treatment is directly observed

Direct observation of the daily intake of medicines by a patient will reduce the chances of treatment default when his/her health condition begins to improve. Direct observation also helps in the reporting/referral of patients in the development of any adverse effects.

Contacting defaulters

If a patient has defaulted from treatment and you wish to contact him/her, you need to obtain the contact details (address, phone number) from the tuberculosis register. If no contact details are available, attempt to trace the patient through their family or friends. When a patient is found, discuss with him/her why they did not complete their treatment and any possible solutions to the difficulties experienced in completing their treatment. Convince and counsel the patient that tuberculosis is completely curable if the full course of treatment is completed without defaulting.

Treatment supporters

Treatment supporters are volunteers from the community who visit a tuberculosis patient and observe the patient taking his/her daily dose of anti-tuberculosis medicines. The treatment supporter's main role is to ensure that a patient takes tuberculosis medication as scheduled and experiences no side-effects. The patient supporter should provide his services with sympathy and understanding so that he/she gains the patient's trust. It is important that a patient feels comfortable with the treatment supporter to ensure adherence to treatment.

Adverse effects of tuberculosis medication

The adverse effects of medication for tuberculosis include: skin rash and itching; yellow discolouration of skin/eyes (jaundice); vomiting; deafness; dizziness; eyesight problems; burning sensation in feet. If you see any of these symptoms in a patient taking medicines for tuberculosis refer them immediately to a health centre.

Treatment cards

The treatment supporter should arrange regular daily home visits to the patient to watch the patient swallow their daily dose of medicines. The treatment supporter should record the medicine intake on the treatment card. After a few days, the treatment supporter should then take the card to the nearest treatment centre to receive the weekly supply of anti-tuberculosis medicine.

Reducing stigma and discrimination

In certain communities a high degree of stigma is attached with the disease. It is important for cluster representatives and health volunteers to work closely with tuberculosis sufferers and their families to provide the necessary psychological and socioeconomic support. It must be explained to them that tuberculosis is an infectious disease which is completely curable. The patient may be very ill and feel ashamed about having tuberculosis. Such patients must be reassured and the community should be fully aware that the tuberculosis patient becomes non-infectious after two weeks of starting the course of treatment.

Community awareness regarding the importance of social support must be raised through active advocacy by involving key decision-makers in the community, such as political and religious leaders and counsellors, etc. Listening carefully to and encouraging tuberculosis patients and their families is also an effective way of removing stigma.

Health education

Cluster representatives and health volunteers should provide important health education

messages, while discussing the transmission, prevention and treatment of tuberculosis with patients, families and the community.

The following are key health education messages.

- Report all cases of continuous cough of more than 2–3 weeks not responding to antibiotics commonly used to treat chest infections.
- Tuberculosis is a completely curable disease.
- The best way to prevent the spread of tuberculosis is to completely treat tuberculosis patients.
- Tuberculosis patients should take all prescribed medicines daily for the full period of treatment without defaulting.
- Patients have to complete the treatment course even if they feel better after having taken treatment for some time.
- Tuberculosis treatment is available free of charge in designated health facilities.
- A person with tuberculosis should cover his/her mouth and nose when coughing and sneezing.

- Tuberculosis is an opportunistic disease and affects patients with low immunity, such as those with HIV/AIDS.
- An adequate and balanced diet may help to ward off tuberculosis infection.

The role of cluster representatives and health volunteers in preventing tuberculosis

Cluster representatives and health volunteers should perform the following actions to help prevent tuberculosis.

Table 1. Activities by cluster representatives and health volunteers in preventing tuberculosis

Actions	Details
Raise community awareness	Cluster representatives should participate in meetings of the village development committee to discuss various important issues regarding causes, prevention, treatment, stigma and social discrimination. The focus of community mobilization should be to facilitate the access of individuals suspected of having tuberculosis and patients to the available tuberculosis services in the public and private sector and improve treatment outcomes through improved support of tuberculosis patients, including socioeconomic support.
Provide health education	Provide key health education messages to the community regarding tuberculosis. The messages should be in clear and simple language to bring about behavioural change in the knowledge, attitudes and practices of the community concerning tuberculosis. This will lead to removal of stigma attached to the disease and enhance efforts to improve case detection.
Identify and refer people suspected of having tuberculosis	Based on the symptoms, identify people suspected of having tuberculosis and refer individuals to a tuberculosis diagnostic facility. The tuberculosis worker will diagnose tuberculosis by looking for the tuberculosis-causing germs in the sputum under a microscope. After diagnosis, anti-tuberculosis medicines will be given free of charge. 
Support treatment	Directly observe tuberculosis patients for regular intake of tuberculosis medicines by working as a treatment supporter and recording the intake on the patient's treatment card.
Trace, identify and refer defaulters	All people who prematurely interrupt their treatment should be identified and counselled and brought back for treatment completion. Look at the reasons for default and involve family and the community in treatment compliance.
Report adverse effects of tuberculosis medication	Report any adverse effects among those who are undergoing tuberculosis treatment.

Annex 1

Pre- and post-test

The following test should be given to trainees before and after training.

A. From your point of view, what can you offer as a cluster representative or health volunteer to assist in the control of tuberculosis in your community?

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B. Are the following statements True (T) or False (F)?

1. Tuberculosis is a disease caused by an airborne infection, such as influenza. ☐
2. Tuberculosis is not an infectious disease but a hereditary disease. ☐
3. Tuberculosis may cause death if not treated properly. ☐
4. When a patient feels better they can stop their tuberculosis treatment. ☐
5. Tuberculosis is a curable disease. ☐
6. Cluster representatives and health volunteers can provide moral and social support to tuberculosis patients. ☐
7. Tuberculosis treatment is free of charge. ☐

C. What is the major symptom of tuberculosis?

1. gastric troubles. ☐
2. coughing for more than 2 to 3 weeks. ☐
3. skin rash all over the body. ☐
4. all of the above. ☐

D. A patient may default if they:

1. feel better before completing the course. ☐
2. are experiencing stigma. ☐
3. are experiencing a negative reaction or side-effects from the tuberculosis medicine. ☐
4. all of the above. ☐

E. If a patient complains of one of the following side-effects from the medicine, they should stop treatment and be referred to a health centre.

1. skin rash. ☐
2. nausea. ☐
3. red urine. ☐
4. all of the above. ☐

F. For a community representative to contact a tuberculosis defaulter they should:

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Annex 2

Role play

Effective communication is needed to reduce stigma. One effective approach could be the involvement of patients who have been cured of tuberculosis as their messages are likely to be the most effective. They are living proof that tuberculosis can be cured. Their story will encourage other potential tuberculosis sufferers to come forward and be diagnosed and cured.

Characters

Ibrahim is 35 years old; he lives in a small house in a village with his wife and three children. He has a misconception about tuberculosis and was very ashamed to learn that he had contracted the disease.

Tamer is Ibrahim's 10-year-old son.

Samir is one of Ibrahim's colleagues and has some knowledge about the symptoms of tuberculosis.

Dr Ali is a 26-year-old doctor who works in the village's health facility.

Ahmed is a treatment supporter who was formally a tuberculosis patient. Now he is completely cured and helps other tuberculosis patients in his community to follow the correct treatment.

Nahed is 30 years old and is a laboratory worker.

Mona is Ibrahim's wife, she is 32 years old.

Sayed is another tuberculosis patient who has previously defaulted on treatment.

Scene 1 Tuberculosis symptoms

Ibrahim is standing among his family members and is playing with his young son.

Ibrahim coughs extensively.

Tamer: What is wrong with you Papa?

Ibrahim: Don't worry, it's just a common cold, it will go away in a few days.

Tamer: Did you take any medicine for it?

Ibrahim: I took a full course of antibiotics and I'll be all right within a few days.

Tamer: Why don't you see a doctor for your cough, Papa?

Scene 2 Suspected tuberculosis case

Ibrahim is with his neighbours and friends.

Ibrahim coughs extensively.

Samir: How long have you had this cough for?

Ibrahim: About three weeks and I think it's getting worse, in spite of the fact that I took antibiotics. I don't feel like eating at all and lost 5 kg in one week.

Samir: Do you have night fever or sweating?

Ibrahim: Sometimes I have night sweats, even in this cold weather.

Samir: You really should go to the nearest health facility as these symptoms sound like they may be tuberculosis.

Ibrahim: Oh no!!! I'm a very faithful man, I have never had extra-marital relationships.

Samir: Ibrahim, tuberculosis is not a sexually-transmitted infection. It is transmitted through the air like influenza. You have to go to the health centre for a check-up.

Scene 3 Tuberculosis symptoms

Ibrahim is at the health centre undergoing a physical examination.

Ibrahim: Doctor, what is wrong with me?

Dr Ali: How long have you had your cough?

Ibrahim: For about three weeks.

Dr Ali: Do you have any other symptoms?

Ibrahim: Sometimes I cough up thick phlegm and I sweat at night.

Dr Ali: What colour is your phlegm?

Ibrahim: Sometimes it has a reddish tinge.

Dr Ali: Does anyone in your family or any close contacts have the same symptoms?

Ibrahim: My wife started coughing in the last few days. I think she may have a cold.

Dr Ali: Hmmm, I think you'll have to have some tests. Then I can decide.

Ibrahim: Is it a serious disease doctor? Why do I need tests?

Dr Ali: Don't worry, it's just a laboratory examination of your sputum to make sure of the diagnosis.

Ibrahim: I'm worried doctor, one of my friends thought my symptoms may be tuberculosis.

Dr Ali: Don't worry, even if it is tuberculosis, with the right medication you will be cured within a few months. Let's wait for the results and see.

Scene 4 Laboratory technique for diagnosis

Ibrahim is in the laboratory for his sputum to be tested.

Nahed: Please spit into this container and take the other container with you. Tomorrow morning just after you wake up, spit into the container and return it to me.

Ibrahim did as the person in the laboratory told him and returned the next day.

Nahed: Thanks. Now can you please give me a third sample here in this container.

Scene 5 The role of the treatment supporter

Ibrahim is sitting with the doctor.

Ibrahim: Doctor, what did my results show?

Dr Ali: The results show that you do have tuberculosis. You will need to undertake a short course of directly observed treatment and you'll be OK within a couple of months.

Ibrahim: Tuberculosis, oh my God, it's a deadly disease. My grandfather had tuberculosis and died within a few months.

Dr Ali: Don't worry, treatment is now available everywhere and with the DOTS strategy patients are completely cured. But you'll have to take all the prescribed medicines for the full duration of the treatment, daily and under observation.

Ibrahim: I will follow your instructions but what about my family?

Dr Ali: First, we'll have to check your family members for tuberculosis. They should have a sputum smear examination and from today you will start your treatment.

Dr Ali: Is it convenient for you to take the medicines in the health centre? Or would you prefer to go to the treatment supporter in your village, his name is Ahmed and he was a patient who is now completely cured? He is helping other tuberculosis patients in his village and is offering them his experience. Also, he supports them during their course of treatment.

Ibrahim: I know Ahmed, he is my neighbour and we were in the same primary school together, I'd prefer to contact him.

The doctor is speaking to Ahmed on the phone.

Ahmed: Alo.

Dr Ali: Alo, it's Doctor Ali.

Ahmed: How are you doctor? I haven't seen you since I got the last treatment package for Sayed.

Dr Ali: Yeah, how is Sayed? Is he taking all the prescribed medicines, daily, under your supervision?

Ahmed: Yes, he is and is getting better.

Dr Ali: One of your neighbours, Ibrahim, is going to start DOTS treatment, and I would like us all to meet at the primary health care unit. Can you come today?

Ahmed: Sure. I can be there within half an hour. What time would you like me to come?

Ahmed goes to the health centre.

Ahmed: Hi doctor. Hi Ibrahim.

Dr Ali: Hi Ahmed.

Ibrahim: Hi Ahmed.

Doctor Ali: Ibrahim is going to start his treatment course from today and he wants to arrange a time when you can meet every day.

Ibrahim: Ahmed, how long will I have to take this medication?

Ahmed: Six months. You will have a two months' extensive course then four months of the maintenance course.

Ibrahim: So what about my work? When can I return?

Ahmed: After a short period of treatment but we will have to check with Dr Ali first.

Ibrahim: Is there any kind of food that I should avoid?

Ahmed: No.

Ibrahim: As tuberculosis is a droplet infection, am I going to infect all of my close contacts, and how can I prevent this?

Ahmed: If you take all of the prescribed medicine daily after a short period you won't transmit the infection to others, also you should cover your mouth and nose when you sneeze or cough.

Ahmed: At what time can we meet?

Ibrahim: At seven in the morning before going to work if that's convenient for you?

Ahmed: Yes, it is. That's fine.

Scene 6 Reducing stigma and supporting families

Mona and her children are visiting the laboratory for a tuberculosis test.

Mona: Hi, I'm Ibrahim's wife and I am here to be tested for tuberculosis.

Nahed: Hi, welcome.

Mona: Please, is it right that Ibrahim has tuberculosis?

Nahed: Yes, he has but don't worry, tuberculosis is a curable disease and within a few months he will be completely cured, but you have to support and encourage him to complete the full course of treatment.

Mona: I'm not sure that I should stay with him at the moment as he may transmit the infection to me and the children.

Nahed: There is no need for that. You need to support your husband during his transient illness, and don't worry, he won't transmit the infection to you or the children if he takes his treatment regularly. So you shouldn't be worried about being around him or sharing food and things like that.

Scene 7 Contacting defaulters

Ahmed is with Sayed at Sayed's home.

Ahmed: Hi Sayed, how are you?

Sayed: I'm fine.

Ahmed: Why you didn't come yesterday? Are you OK?

Sayed: Now, I feel much better and don't think there is any need for me to keep taking all these medicines especially now that I've stopped coughing.

Ahmed: No, you have to complete the full course of treatment as prescribed by the doctor. If you stop your treatment the disease may return, the attacks could become more serious and we will be unable to prevent them by prescribing the usual medicines.

Sayed: But the medicine gives me gastric pain after taking it.

Ahmed: You can take the medicines with food or drink to eliminate some of these symptoms, but stopping treatment is very dangerous for your health. And you may need to repeat the full course again with more extensive medicines for a longer duration.

Sayed: How many more months will I need to keep taking the medicine?

Ahmed: You've already completed four months of treatment and you are a regular patient. You have only another two months to go. Then you will be totally free of tuberculosis. So finish your treatment course.

Sayed: OK. I'll be on time for my treatment for the next two months.

Scene 8 Contribution to health education activities

Ahmed is speaking to the community about tuberculosis

Ahmed is in the mosque after Friday prayers to provide information about tuberculosis as a public health problem. Ahmed takes the microphone and starts speaking.

Ahmed: Peace be upon you all.

Today, I'm going to say a few things about a very common disease in our community—tuberculosis.

Tuberculosis is transmitted in the same way as influenza. If your body does not have the immunity to overcome the bacteria you may catch infection and this could be converted

to active disease. Its symptoms appear in the form of coughing for more than two to three weeks, night sweating, fever and tiredness. If anybody has been suffering from a cough for more than two weeks he or she should consult a doctor at a health facility.

Tuberculosis is a curable disease, and nobody dies from it if he or she follows the correct treatment, taking all the prescribed medicines daily for the full period of treatment which is approximately 6 months all together. Patients need to complete the full course of treatment even if they feel better after having taken the treatment for some time. Tuberculosis treatment is free of charge. There are many tuberculosis patients in our village and when they adhere to the treatment and are given the full support of the community, everyone can be cured and enjoy a healthy life.

Unit 11

AIDS and sexually transmitted infections

Contents

AIDS and sexually transmitted infections

Learning objectives

The objectives of this session are to enable cluster representatives and health volunteers to:

- list the modes of HIV transmission and methods of prevention;
- understand the importance of positive and non-discriminatory attitudes in reducing the stigma against people with HIV/AIDS.

Expected outcomes

After completion of this session cluster representatives and health volunteers will be able to:

- improve community awareness of HIV/AIDS transmission and prevention;
- develop positive and non-discriminatory attitudes towards people living with HIV/AIDS and towards those at risk of HIV infection;
- contribute to health education activities to help eliminate stigma related to the disease.

Introduction

The human immunodeficiency virus (HIV) is a virus that infects cells of the human immune system, destroying or impairing their function. When HIV enters the human body, it begins impairing the body's ability to fight other infections and diseases. In the early stages of infection, a person has no symptoms. On average, this period of time extends from between 2 and 7 years, during which time, the individual shows no sign of sickness. The most advanced stage of HIV infection is acquired immunodeficiency syndrome (AIDS). It can take more than 10 years for an HIV-infected person to develop AIDS; and antiretroviral medicines can slow down the process even further. HIV infection, however, can be prevented and community involvement can assist in spreading awareness and in the development of positive attitudes towards the disease at grass-roots level.

Modes of transmission

HIV is transmitted from one person to another through (Figure 1):

Heterosexual or homosexual intercourse if one partner is infected with HIV. The virus is present in bodily fluids. With an exchange of semen or vaginal fluids during sexual intercourse, HIV can pass from an infected partner to an uninfected partner.

Sharing injection equipment (e.g. syringes/needles) that are contaminated with the virus. Injecting drug users who share their syringes/needles and other injecting equipment are considered a high-risk group. Health care providers should be vigilant in ensuring the use of sterile sharp and piercing materials.

Blood transfusion or organ transplantation from a HIV-infected person. Blood or donated organs from a HIV-infected person to an uninfected person will transmit the virus to them.

Mother-to-child transmission during pregnancy, labour or through breastfeeding. The virus can be transmitted from mother to child during pregnancy, labour or breastfeeding.

Figure 1. Modes of HIV transmission

Common misconceptions

Casual daily body contact with people living with HIV/AIDS does not transmit the disease. Examples of casual body contact include: hand shakes; hugging; sharing food or drink; sharing a bed; sharing a bathroom and swimming in pools. HIV cannot be transmitted through mosquitoes or bed bug bites. HIV is not transmitted through kissing (Figure 2).

Figure 2. Activities which do not transmit HIV

How HIV is diagnosed

It is not possible to tell if someone is infected with HIV by their appearance. The only way to determine if someone has HIV is by performing a laboratory test. People suspected of having HIV can be tested for the infection at the nearest facility offering the service. Testing blood for the presence of HIV antibodies is inexpensive.

Stigma and discrimination

Stigma and discrimination are major obstacles to effective prevention, as well as to access to treatment. Stigma and discrimination against people living with HIV can contribute to the spread of the virus as individuals become increasingly reluctant to discover their HIV status, and if they are infected, they continue to transmit the infection to others who are unaware that they have the infection.

Effective prevention

In marriage, if both partners are faithful and they know that their HIV status is negative there is no risk of HIV infection occurring between them. If one partner is infected or is unaware of their HIV status then using a condom during sexual intercourse can protect the other partner from HIV.

When receiving health care it is important to make sure that the health care provider uses disposable or sterilized syringes. If a person receives a blood transfusion or organ transplant, it is important that blood or organs are tested for HIV and that the test results are shown to be negative.

Sharp and piercing equipment and tools, such as syringes, razors and needles, should not be shared with other people. Practices, such as tattooing and the piercing of body parts, must be performed only with sterile equipment.

Preventive treatment for HIV-infected pregnant women with antiretroviral medicines can prevent the transmission of the virus to the fetus during pregnancy. Delivery by caesarean section can also reduce the risk of transmission during labour. After delivery, formula milk should be used instead of breast milk. If this is not possible, women should continue exclusive breastfeeding.

Treating HIV/AIDS

Until now there are no available medicines that can cure and no vaccines that can prevent HIV/AIDS. Although the treatment which is currently available does not cure the disease it is very effective in helping the body to fight it. This treatment is known as antiretroviral treatment or ART. Without ART, HIV infection will progress towards AIDS and cause death.

Behaviour change communication in HIV/AIDS

Behaviour change communication (BCC) is a tool for promoting risk-reducing behavioural change among individuals and communities by disseminating health messages and encouraging the adoption of appropriate health behaviour. In order to reduce their risk and vulnerability to HIV, individuals and communities must be given basic facts about HIV/AIDS, be taught protective skills and provided with access to information and prevention material.

As HIV is primarily linked to taboo behaviours, such as sexual relations and injecting drug use, openness is required in community discussions on sex and sexuality, injecting drug use risk, risk settings and

risk behaviours. The HIV/AIDS epidemic forces societies to confront social, cultural and religious norms. BCC is important in this process. It should create a demand for information and services and should also stimulate action for reducing risk, vulnerability and stigma. Effective BCC should motivate audiences to change their behaviour in positive ways.

The role of cluster representatives and health volunteers in raising community awareness of HIV/AIDS

Cluster representatives can increase a community's knowledge and awareness of HIV/AIDS by providing important messages regarding its transmission and prevention. They should ensure that each message is correctly disseminated and that people have the basic facts in their native language.

Cluster representatives and health volunteers can stimulate community dialogue. Trained community workers should participate in regular meetings of the village development committee to discuss various important aspects of HIV/AIDS. Effective BCC should encourage community dialogue on the underlying factors that contribute to the epidemic, such as risk behaviours, risk settings and the environments that create these conditions, including stigma and socioeconomic, religious and cultural issues. This will complement efforts to improve case detection and will contribute to reductions in risky behaviour and create a demand for information and services for HIV/AIDS. The use of disposable syringes, new blades used by barbers and sterilized instruments used by street dentists and other health care providers should be promoted.

It is important to reduce the levels of stigma and discrimination facing infected individuals. Communication on HIV/AIDS should address stigma and discrimination and attempt to positively influence society's perception of the disease. To do so, cluster representatives should challenge their own attitudes and prejudices. Fear campaigns do not work, rather, they contribute to an environment of stigma and discrimination.

Annex 1

Learning exercise

The materials needed for the working group activity on stigma are: three sets of coloured cards (blue, pink, yellow); two flip charts; glue; pens and markers.

On the blue cards write the following phrases.

1) People will think that I have done something bad.
2) People will think that there's more that I'm hiding.
3) People will stop talking to me.
4) People will be afraid of me.
5) I will be expelled from my school.
6) I will be fired from my job.
7) It is nobody's business.
8) I am ashamed of myself.

On the pink cards write the following phrases.

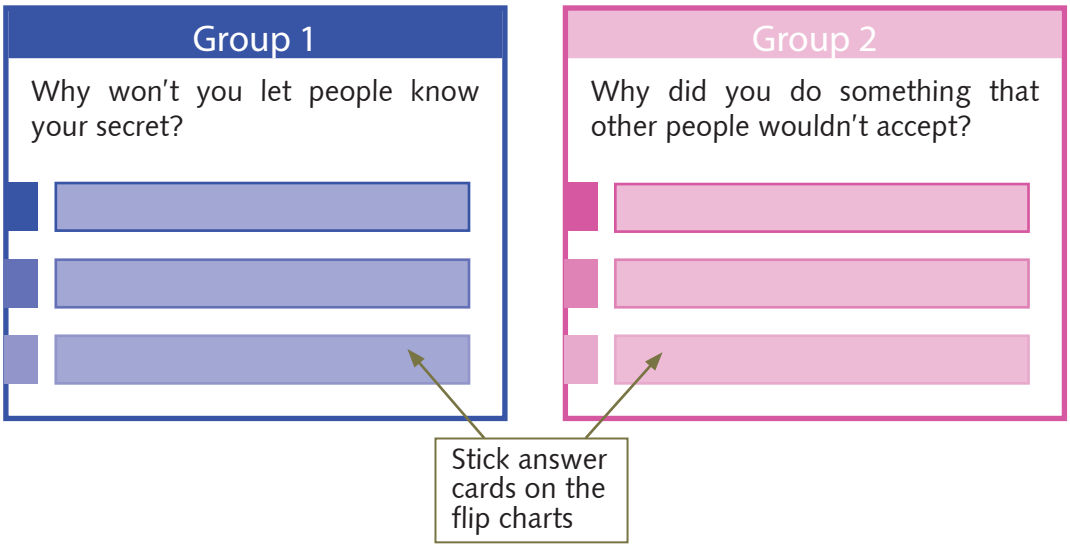
1) I did it but it was not my fault.
2) I did it but so do others and nobody talks about it.
3) I did it but I had no choice.
4) I didn't do anything of my own will, I'm a victim.
5) I didn't do anything at all.
6) If I had known the consequences I wouldn't have done it.
7) It's normal for people do so, however, the consequences for me were different.

One or more yellow cards are to be filled out by the participants themselves.

Stigma and discrimination against people living with HIV and those at risk of contracting HIV is a major obstacle against implementation of preventive interventions for HIV as well as for the provision of treatment, care and support. Health volunteers should consider their own attitudes and ensure that they do not adopt a judgemental approach in their work in HIV. The exercise below can assist individuals in understanding stigma based on their own personal experiences.

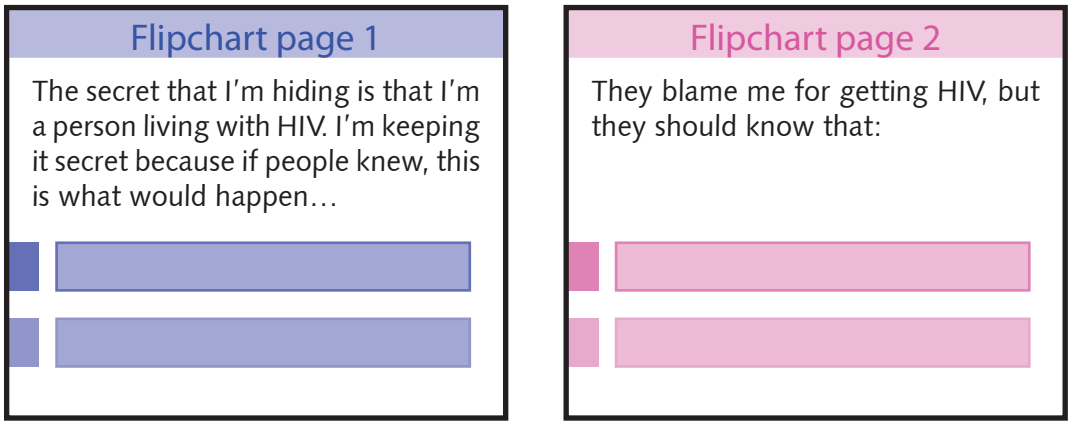
In the plenary session ask participants to think of something about themselves that they have kept secret and either did not tell anyone about or had only told a very small number of people that they most trusted. Tell them that it is not necessary to reveal their secret but that they should keep it in mind while answering the questions in the group work.

Divide the participants into two groups providing each group with one set of cards and one flip chart.



Ask each group to answer the question individually by choosing the most appropriate response from a card displayed on the flip chart. If a participant feels that an appropriate answer does not appear on any of the cards, s/he can write the answer on a blank card.

1. Now write on one flip chart with "The secret that I am hiding is that I'm a person living with HIV. I'm keeping it secret because if people knew, this is what would happen". Ask the participants to choose the answers that apply to HIV from the list of blue cards that they chose in the working group and stick them on the flip chart.
2. On a new page of the flip chart write the phrase "They blame me for getting HIV, but they should know that:" Ask the participants to choose the answers that apply to HIV from the list of pink cards that they chose in the working group and stick them on the flip chart page 2.



3. Discuss with the participants (1) to what extent they agree on the similarities?; and (2) what is their opinion/judgement of a person living with HIV?

Annex 2

Pre- and post-test

The following questionnaire can be used before training to assess people's knowledge of HIV, and after training to assess improvements in their knowledge of HIV. More than one correct answer is possible and people should place a tick in the box next to any answer they feel is correct.

1. HIV can be transmitted through:

a) mosquito bites. ☐
b) having unprotected sex with an infected person. ☐
c) an infected mother to her baby during pregnancy, delivery/breastfeeding. ☐
d) hugging a person infected with HIV. ☐
e) sharing the same toilet with someone who is infected with HIV. ☐
f) sharing needles/syringes. ☐
g) receiving HIV-infected blood through a transfusion. ☐

2. HIV can be prevented through:

a) avoiding swimming in the same pool as a HIV-infected individual. ☐
b) the use of an insecticide-treated bednet. ☐
c) abstaining from sex. ☐
d) being faithful to one uninfected sexual partner. ☐
e) always testing blood for HIV before a blood transfusion is performed. ☐
h) never allowing people with HIV to mix with uninfected people. ☐
i) the use of clean unused needles/syringes for injections. ☐
j) always using a condom if you are unsure of your partner's HIV status. ☐

Tick one box according to whether you agree or disagree with the statements.	Agree	Disagree
People infected with HIV should be isolated and not be allowed to mix with uninfected people.		
People infected with HIV do not pose any danger to others if they mix casually.		
Children infected with HIV have the right to go to school like all children.		
People infected with HIV have committed a terrible mistake and they should be punished for it by being excluded.		
A person infected with HIV has the right to be treated with antiretroviral medicines.		

Unit 12

Malaria control

Contents

Malaria control

Learning objectives

The objectives of this session are to enable cluster representatives and health volunteers to:

- explain what malaria is and how to screen suspected cases and report any increase in the number of suspected cases;
- recognize the symptoms of malaria;
- list the modes of transmission of malaria;
- understand the importance of preventive measures, including the use of insecticide-treated bednets and other environmental measures;
- understand the importance of treatment, the rates of treatment failure and the importance of referring malaria patients to a health facility.

Expected outcomes

After completion of this session cluster representatives and health volunteers will:

- know what malaria is and be able to explain the disease and its symptoms to others;
- be able to raise community awareness of the causes and the prevention of malaria;
- be able to report cases of malaria or increases in the number of individuals with fever in the community to health facilities;
- be able to participate and/or involve the community in disease-prevention efforts, including the promotion of the use of insecticide-treated bednets, the undertaking of environmental measures and the conducting of indoor residual spraying (IRS) campaigns;
- be able to identify suspected cases of malaria and refer cases of treatment failure of suspected and severe malaria cases to health facilities.

Introduction

Malaria is a preventable and curable disease, however, it can cause death if it is not treated in time with effective medicines. One bite from a mosquito is enough to cause malaria, which is especially dangerous for pregnant women and young children and so it is important that they are given priority in using bednets. Malaria is caused by the bite of an infected mosquito called *Anopheles* (Figure 1). Female mosquitoes need blood to produce eggs, and these eggs are laid on stagnant or slow-flowing water and are so small that they can hardly be seen.

Figure 1. *Anopheles* mosquito having a blood meal

Prevention of malaria

Malaria can be prevented by undertaking the following measures.

Controlling the breeding of mosquitoes

The community can participate in controlling mosquito breeding by using sand to fill in pools, ponds, borrow-pits and hoof-prints in and around the village. Pools of water may be caused by leaking taps, spillage of water around pipes and wells or poor drains, but these pools can be eliminated by repair or by improvements to the water supply or drainage system. It is important to remove discarded containers that might collect water and to cover water tanks with mosquito nets or lids. Vegetation and other matter from the banks of streams should also be cleared away as this will speed up the flow of water.

Preventing mosquito bites

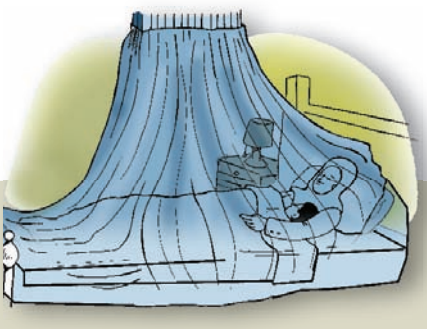
Mosquito bites can be prevented by the following preventive measures.

Insecticide-treated bednets

Sleeping under a bednet provides much greater protection if it is used correctly. The net must not be torn and it must be treated with insecticides that kill mosquitoes, bed bugs and other insects. Malaria mosquitoes usually bite from sunset to sunrise. Mosquito nets should be hung properly to cover the sleeping area and should be low enough to allow netting to be tucked in under the mattress or mat where a person sleeps. Mosquitoes that are trapped inside the net should be killed with insecticide spray or by hand. Torn sections of the net must be repaired.

Other protective measures include:

Screening all windows and doors of bedrooms/sleeping areas. Frequent inspection



is necessary to detect damage to the screens and to make early repairs. Curtains must be treated regularly with a special insecticide and they must be hung in such a way that they cover all openings to a house.

Applying mosquito repellent to the skin. Repellents are useful when used early in the evening. It is not necessary to use them when sleeping under a bednet or inside a screened house. The repellent is usually effective for 5–8 hours after which time it needs to be reapplied.

Burning mosquito coils. The coils, when burnt, produce a repellent smell. The coils are not very expensive and like the repellents are especially useful early in the evening when people may be sitting outdoors.

Killing mosquitoes. Spray rooms with insecticides before going to bed, this is known as area spraying (Figure 2). Participate in activities carried out by health services, such as spraying the inside walls of houses with insecticides that kill mosquitoes, known as indoor residual spraying (Figure 3).

Dealing with suspected cases of malaria

Malaria can be suspected if there is a high fever or a history of fever for a period of 2–3 days. In this case, individuals should be referred to the nearest health facility. If there is fever in young children and pregnant women it is especially important that they are referred to a health facility. All individuals who do not improve within 48 hours of starting treatment or those whose condition is serious should be referred to a health facility.

Some of the symptoms to look out for when diagnosing malaria include (Figure 4):

- changes in behaviour (convulsions, unconsciousness, sleepiness, confusion, inability to walk, sit, speak or recognize relatives);
- repeated vomiting; inability to retain oral medication, inability to eat or drink;
- passage of small quantities of urine or no urine, or passage of dark urine;
- severe diarrhoea;

Figure 2. **Area spraying**

Figure 3. **Indoor residual spraying**

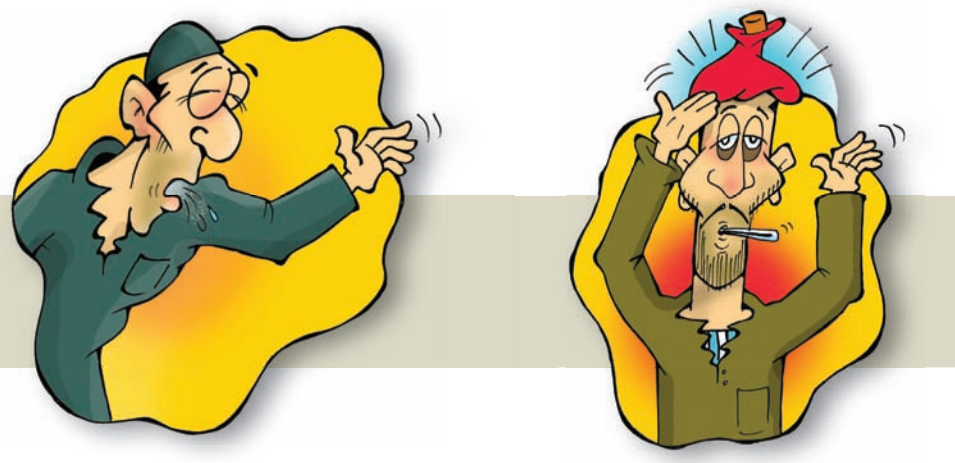


Figure 4. **Some symptoms of malaria**

- unexplained heavy bleeding from nose, gums or other sites;
- high fever;
- severe dehydration (loose skin and sunken eyes);
- yellow discolouration of eyes (jaundice);
- paleness of palms, tongue, etc.

Malaria treatment

If a patient has not received treatment for malaria in the past 14 days, you must provide standard malaria treatment. Go through the following steps:

1) Fill in the necessary forms.
2) Observe medicine intake by patient.
3) If the patient lives far away (as is the case with nomadic people), special arrangements may be made.
4) Use standard treatment for malaria in your country/area (check with health staff) and consider the following points.
   - The number of tablets you need to give depends on the weight of the patient.
   - Small children need smaller doses.
   - If the patient can not be weighted, you can still work out the number of tablets they should be given according to the patient's age. Table 1 provides information to calculate the correct dose.
   - Correct treatment schedules and dosages must be followed. With a lower dose, a patient will not be cured, similarly, a higher dose may be very detrimental to a person's health.

If possible, observe the patient's medicine intake and follow up with them. It is important to watch the patient swallow tablets on all the days of their treatment. This is to make sure that the patient takes the tablets properly and does not vomit. Always make sure the patient drinks enough water in order to be able to swallow the tablets. Tablets should not be taken on an empty stomach as this is likely to cause vomiting and abdominal pain, especially among children, and crying children will not swallow medicine—they will spit it out. If a child is crying, take a few minutes to let them calm down before you give the medicine. If a patient vomits within 30 minutes of taking

Table 1: Calculation of dosage of anti-malarial medicines

Dosage chart Artesunate 50 mg and sulfadoxine 500 mg + pyrimethamine 25 mg				
	Day 1: Take SP and Artesunate		Day 2	Day 3
Age	SP	Artesunate	Artesunate	Artesunate
5–11 months	●	●	●	●
1–6 years	●	●	●	●
7–13 years	● ●	● ●	● ●	● ●
Above 13 years	● ● ● ●	● ● ● ●	● ● ● ●	● ● ● ●

Note: Table 1 provides an example of first-line treatment. This dose is only applicable for artesunate 50 mg tablets and sulfadoxine + pyrimethamine 500 mg + 25 mg tablets.

the medicine, let the person rest a little and try to give them the medicine once again. If a patient vomits repeatedly refer them to a clinic or hospital.

If a patient has a high fever they may be given paracetamol. The number of tablets given depends on the amount of paracetamol in each tablet (100 mg or 500 mg), and the age of the patient (see Table 2). Paracetamol is used to lower temperature but it cannot cure malaria. You can also lower a patient's temperature by fanning them and by sponging them down with tepid (slightly warm) water. These methods are particularly important for young children as they will reduce the child's temperature even if you do not have any paracetamol.

What to do if observation is impossible

It may be impossible to observe the whole course of treatment if a patient lives at any distance. In this case, it is very important to make sure that the patient (or parent) knows how to take (or give) the medicine correctly.

1) Watch the patient swallow the first dose and make sure that the correct number of tablets is taken.
2) Check that the patient does not vomit after taking the medicine.
3) Give the patient the correct number of tablets (to take home) for day 2 and day 3.
4) Explain that it is very important to take the full dosage for day 2 and day 3, otherwise malaria will return.
5) Explain that it is dangerous to take all of the tablets at once. The tablets should be kept out of the reach of children.

Treatment failure

If there is no improvement in the patient within 48 hours of taking the first dose of treatment the patient should be taken to the nearest clinic or hospital immediately. If you think a patient has severe malaria you should give the first dose of standard malaria treatment (see Table 3). Attempt to get the

Table 2. Appropriate dosage of paracetamol according to age

Age	Weight	100 mg tablets	500 mg tablets
0–2 months	0–4 kg	½ tablet × 3	
2 months–11 months	4–8 kg	¾ to 1½ tablets × 3	
1–5 years	8–15 kg	1½ tablets to 3 tablets × 3	¼ to ½ tablet ×3
5–15 years	15–35 kg		½ to 1½ tablets ×3
>15 years	>35 kg		2 tablets ×3

patient to take the medicine, but do not force it into the patient's throat if he or she cannot swallow. You can use an artesunate suppository/rectal capsule if it is available. Refer the patient to the nearest clinic or hospital as soon as possible. Do not wait, even during the night, as this is a matter of life and death. Reduce the fever by giving paracetamol (see Table 2). Remove most of the patient's clothing and moisten the body with tepid (slightly warm) water, using a sponge or cloth. Get someone to fan the patient continuously (including during the journey to the clinic or hospital). Protect the patient from direct sunlight.

Malaria prevention in pregnancy

Prevention is better than cure. Always advise pregnant women to sleep under an insecticide-treated mosquito net. Pregnant women in the first three months of pregnancy (first trimester) with malaria must be immediately referred to the nearest health facility. Treatment during the second and third trimester of pregnancy is the same as for other adults.

The role of cluster representatives and health volunteers

Table 3 gives directions for cluster representatives and health volunteers for malaria control and lists actions which should be undertaken in terms of malaria prevention and treatment.

Table 3. The role of cluster representatives and health volunteers in malaria control

	Actions
Prevention (community organization and mobilization in larva control activities)	Build and increase community awareness of prevention of malaria Identify and map the source of breeding sites
	Establish and strengthen intersectoral collaboration with all relevant sectors
	Identify (and assist in the registration) of high-risk groups
	Organize community involvement and participate in the distribution of insecticide-treated bednets when it is necessary
	Follow up with the community to ensure correct usage of insecticide treated bednets
	Increase community acceptance and participation (including contact with local leaders) in indoor residual spraying wherever and whenever is necessary
	Organize logistic support for spraying campaign by the community
	Organize community participation and participate in environmental management and vector control activities
	In areas where intermittent prophylactic treatment is a strategy: identify all pregnant women, conduct registration, make referrals and follow up to make sure that they receive two (or three in areas with high level of HIV prevalence) complete doses of sulfadoxine pyrimethamine
	Identify newcomers to endemic areas and make sure that they are using insecticide-treated bednets and appropriate prophylaxis

Table 3. The role of cluster representatives and health volunteers in malaria control *(Continued)*

	Actions
Treatment	Identify suspected cases of malaria and refer them to the nearest health facility
	In areas where home management of malaria is a strategy: treat cases after diagnosis with rapid diagnostic tests. However, in hyperendemic (South Sudan and southen Somalia), children under-5 years of age can be treated based on clinical diagnosis. Suspected cases of uncomplicated malaria should be treted according to national medicines policy.
	In areas where home management of malaria is a strategy: Identify suspected cases of severe malaria, conduct pre-referral treatment (with first line drug, if patient can swallow or with artesunate suppository if patient cannot swallow) and refer them immediately to the nearest health facility
	Follow up treated cases and make sure that they complete the whole course. Identify and refer cases of treatment failure to the nearest health facility
	Organize community participation to equip existing health facilities to act as malaria diagnosis and treatment facility posts
	Assist the government in encouraging the private sector to use malaria medication according to the national medicines policy
	Support, coordinate and facilitate mobile team actions
	Identify unusual increases in the number of individuals with fever and report to health and other responsible authorities
	Participate in the control of malaria epidemics

Annex 1

Pre- and post-test

The following test should be given to trainees before and after training.

Put a tick or a cross in the appropriate box depending on whether you agree or disagree with the statement.

	Agree (True)	Disagree (False)
1. Malaria is a curable disease but it cannot be prevented.		
2. Children under-5 years of age are not at risk of contracting malaria.		
3. Malaria is transmitted by a mosquito after it becomes infected with the malaria parasite.		
4. Malaria mosquitoes usually bite during the day.		
5. Insecticide-treated mosquito bednets provide better protection than ordinary nets.		
6. Repellents are usually effective for 5–8 hours and then they need to be reapplied again.		
7. The treatment of malaria is especially important for children and pregnant women.		

Put a tick in the box next to the statement you believe to be the correct answer.

A. What would you do for a patient who had not improved within 48 hours of starting treatment?

1. Prescribe antibiotics. ☐
2. Refer them immediately to the nearest health facility. ☐
3. Suggest they use herbal medicine. ☐
4. Ask them to wait for one week. ☐

B. How would you lower a patient's temperature?

1. Place the patient in cold water. ☐
2. Sponge the patient with tepid water. ☐
3. Prescribe paracetamol according to weight. ☐
4. Do both the actions described in b and c. ☐

C. Malaria mosquitoes may breed in:

1. stagnant or slow-flowing water. ☐
2. swamps, rice fields. ☐
3. small ponds, pools, borrow-pits or canals. ☐
4. all of the above. ☐

D. What would you do if a patient is showing signs of severe malaria?

1. Try to give the first dose of standard treatment. ☐
2. If a patient is unable to swallow give them an artesunate suppository. ☐
3. Refer the patient immediately to the nearest health facility. ☐
4. All of the above. ☐

Unit 13

Childhood diseases and immunization

Contents

Childhood diseases and immunization

Learning objectives

The objectives of this session are to enable cluster representatives and health volunteers to:

- list vaccine preventable diseases;
- explain or outline the importance of immunization in the prevention of diseases;
- outline the schedule of routine immunizations for children and pregnant women;
- list the steps to assure the use of safe injections;
- keep a registry of the target population, newborn babies, defaulters, etc.

Expected outcomes

After completion of this session cluster representatives and health volunteers will be able to:

- enhance the community's awareness of diseases that could be prevented through vaccination;
- support the planning, implementation and evaluation of routine immunizations;
- build community support to enhance immunization coverage among children and pregnant women;
- establish linkages with the health staff responsible for vaccination for enhanced utilization of immunization services;
- assist in community-based surveillance through reporting vaccine preventable diseases.

Introduction

Millions of children die from diseases that could have been easily prevented with vaccines. Children who are immunized are protected from these dangerous diseases, which often lead to disability and death. Vaccines are free of charge and all children should be immunized in the first year of their life. Community participation in immunization programmes has been shown to result in higher coverage, and hence, to reduce the number of cases of childhood diseases.

Childhood immunization

Immunizations protect children against some of the most dangerous diseases of childhood. Vaccines work by building up the child's defences against the disease. Vaccine preventable diseases include: tuberculosis; polio; measles; whooping cough; diphtheria; tetanus; and hepatitis B.

Vaccines are injected or are taken by mouth. Immunizations are useful only when given before the onset of disease. A child who is not immunized can get dangerous life-threatening diseases such as polio, measles, tetanus, diphtheria, whooping cough and hepatitis B. Some children infected with these diseases may die while those who survive may be permanently disabled or their growth may be affected. They may die later from malnutrition or other diseases. All children, including those with physical disabilities, need to be immunized. Following is a brief description of the most common childhood illnesses.

Tuberculosis is an infection which most commonly affects the lungs and is transmitted through air when an infected person coughs or sneezes.

Polio is an infectious disease transmitted through use of water or food contaminated by the polio virus from the faeces of an infected person. It results in permanent paralysis of the limbs.

Measles is a serious disease which rapidly spreads and may cause death. The signs of measles are fever, skin rash, cough, a runny nose or red eyes. Measles also causes diarrhoea, malnutrition, poor mental development and hearing and visual impairments.

Tetanus is a dangerous disease caused by tetanus germs which enter the body through dirty cuts and wounds. Tetanus causes fits and convulsions and is often deadly.

Hepatitis B. Children if infected with hepatitis B might harbour the infection for a long time in their body. Such children may get cancer of the liver later in their lives.

Diptheria is an infectious disease that spreads from person to person in airborne droplets; main symptoms of the disease include sore throat, loss of appetite and a slight fever. Within two to three days a bluish-white membrane or grey membrane forms in the throat and the tonsil. The patient may either recover or develop severe weakness and die within 6 to 10 days.

Whooping cough. Pertussis or whooping cough is a bacterial infection that spreads from person to person by sneezing and coughing. At first, the infected child appears to have a common cold with runny nose, watery eyes, sneezing, fever and mild cough. The cough gradually worsens, and involves many bursts of rapid coughing. At the end of these bursts the child takes in air with a high-pitched whoop. A child may turn blue because s/he is not receiving enough oxygen during a long burst of coughing. Complications are most likely in

young infants; the most common and deadly complication is bacterial pneumonia.

Children should be immunized early in life as most childhood diseases occur during the first year of life. It is essential that infants complete the full number of immunizations, otherwise the vaccines may not work fully. Immunizations are more effective if they are given at the ages specified (see Table 1). National immunization schedules differ in various countries according to the disease pattern in the country. In some countries, *Haemophilus influenzae* type B (HiB) vaccination is given. HiB germs cause dangerous diseases, such as pneumonia and meningitis, in children.

Immunizing children with minor illnesses

It is always safe to immunize a child with a minor illness. The parents must be told that they can immunize their children if they have fever, cough, cold or diarrhoea and some other minor conditions. A child who has a disability or is malnourished must also be immunized. After an injection, the child may develop a fever or a small sore. This is normal and should not be worried about. However, if a child develops high fever after immunization, s/he should be taken to the nearest health centre.

Immunization of pregnant women

All pregnant women must be immunized for protection against tetanus. When mothers give birth in unhygienic conditions, both the mother and the child are at risk of getting tetanus, a major killer of newborn infants. If a pregnant woman is not immunized against tetanus and tetanus germs enter her body, she will also be at risk.

Tetanus bacteria grow in dirty cuts. These germs can grow if the umbilical cord is cut with an unclean knife or anything carrying these germs. New blades or instruments should be used to cut the cord. If a woman is vaccinated with five properly spaced doses of tetanus vaccine, according to the following schedule, she will be protected throughout her life from tetanus (see Table 2). Her baby will also be protected for the first few weeks of his/her life, until s/he reaches two months old and is immunized with the first dose of tetanus as part of DPT or other combination vaccine.

Two doses of tetanus immunization with a minimum interval of four weeks will protect the pregnant women for the duration of her present pregnancy. After delivery, a third dose should be given as soon as possible. This should be followed by two other doses with a one-year interval.

Table 1. General immunization schedule for infants

Age	Immunization to be given
At birth	BCG, polio, hepatitis B
Two months	DPT, polio, hepatitis B and Hib in some countries
Four months	DPT, polio, and Hib in some countries
Six months	DPT, polio, hepatitis B and Hib in some countries
12 months	measles

Injections and syringes that are not properly sterilized after use can transmit dangerous diseases (Figure 1). Sharing of needles is dangerous and should be avoided. Insist on using a new syringe and a needle each time an injection is given. This will protect from deadly diseases.

The role of cluster representatives and health volunteers

The role of cluster representatives and health volunteers in promoting community action for enhancing immunization coverage is highlighted in Table 3.

Table 2. Immunization schedule for pregnant women

Dose	Immunization to be given
First dose	As soon as the woman is pregnant
Second dose	One month after the first dose
Third dose	Six months after the second dose
Fourth dose	One year after the third dose
Fifth dose	One year after the fourth dose

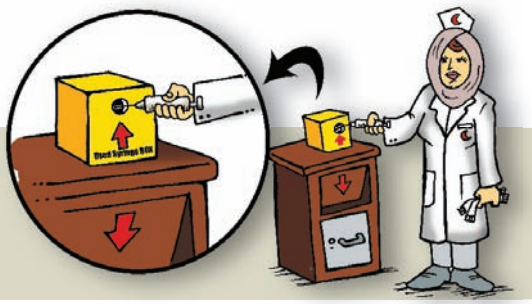


Figure 1. Using a safety box to safely dispose of used needles

Table 3. Community action for enhancing immunization coverage

Actions	Details
Community awareness and advocacy	During meetings of the village development committee the importance of immunization for children and pregnant women should be highlighted, involving community, religious leaders and health workers; advocacy, through: disseminating key information and motivational messages regarding the benefits of vaccination; alleviating misconceptions about the side-effects of immunization.
Plan immunization sessions with local health workers and the community	To improve vaccination coverage and to ensure that no child or pregnant woman who is due for vacccination is left out, collaborate with the health worker and the community on convenient schedules for vaccination sessions—routine or outreach. Plan together: Collect information about the number of children under one year of age, newborn infants and all pregnant women in the community. Select a convenient day and time, and place such as a local school or mosque or community centre.
Identify all eligible children and pregnant women	Identify, register and refer newborn infants, unimmunized or partially immunized children under one year of age and infants who have recently arrived in the locality. Identify, register and refer all pregnant women in the locality for tetanus immunization.
Identify defaulters/ left outs	Involve the community and families in finding defaulters and left outs, through home visits: Maintain records of children who are defaulters/drop outs. Coordinate with the local health worker for a catch-up vaccination. Motivate parents and inform them that their children have to complete the full series of immunizations before their first birthday, in order to be fully protected. Check the vaccination cards and inform the parents about their next vaccination schedule.
Tackle refusals/ concerns and respond to misconceptions and rumours	Combat rumours, misconceptions and negative attitudes towards vaccination through timely and proactive interventions to enhance awareness and advocacy by: identifying cases of refusals. holding community meetings and community discussions involving local influential community and religious leaders. making individual home visits and conducting interpersonal communication.

Table 3. Community action for enhancing immunization coverage *(continued)*

Assist in immunization sessions/outreach activities	Provide active support to outreach immunization sessions by making arrangements for a vaccination session. Publicize the immunization activity utilizing local advertising strategies, such as making local announcements after discussions with the local community. Register all unimmunized children under one year of age and pregnant women. Motivate parents and communities so that every one participates. Provide space and comfortable waiting areas.
Explore community resources, build linkages	Develop and maintain strong linkages and partnership with health workers providing vaccination services. Mobilize community resources to facilitate the vaccinating staff, through: provision of refreshments, and/or lodging; the sharing of transport and resources, such as thermos flasks for vaccines.
Report childhood diseases (community-based surveillance)	Educate communities and parents on basic signs of childhood diseases and motivate them to seek medical care and report. Report all suspected cases of polio, measles, diphtheria, whooping cough and tetanus to the nearest health facility.
Monitor performance/ coverage	Estimate and discuss coverage of vaccination among the children and pregnant women in meetings of the village development committees. Highlight and share issues of poor coverage with health workers and the community. Seek local solutions and solicit community support for improvement in coverage status.

Annex 1

Group activity

Instructions for the group

1) Request that between 5 and 10 participants (depending on the size of the group) move to the far corner of the room and tell them that they represent people who live in a remote village without a health facility. Request that they remain standing and ask some of them quickly to state some of the reasons why their children do not get vaccinated. Explain that their children are examples of one type of "left-out": they are hard to reach and have difficult geographic access to facilities. Ask some of them quickly for some possible solutions (e.g., extend outreach services, repair the broken bridge across the river, etc.) and write their responses on a flip chart.
2) Now turn to the other participants. Starting with the nearest participant, request that he or she call out the number 1. The next person calls out 2 and the next person calls out 3. The next person counts out 1, and so on, until everyone has called out a 1, 2, or a 3. Request that all those who called out 1 stand up and remain standing. Explain that their children live in a large village which is easy to reach, but they have never begun a vaccination programme. They represent a second kind of "left out." Ask some of them to state quickly some of the reasons why their children do not go for vaccination (e.g., social inaccessibility as a result of caste or tribe, unempowered poor, migrants, border populations, low value placed on health, unkind treatment by the health worker, vaccines not available on the day they go to the facility, etc.). Ask some of them to quickly suggest some possible solutions (e.g., counselling by community agents, better tracking to locate these children, etc.) and write their responses on a flip chart.
3) Explain that the participants who remain seated have children who go for vaccination. Now ask the participants with number 2 to stand and remain standing. Explain that their children started the vaccination schedule but have not completed it and no longer go to the facility. Explain that their children are "drop-outs." Ask some of them to state quickly some of the reasons why their children dropped out. (e.g., lack of information on the vaccination schedule, vaccines not available on the day they go to facility, etc.) Ask some of them quickly for some possible solutions (e.g., counselling by change agents, better tracking to locate the children) and write their responses on a flip chart.
4) Ask the participants who are still seated why their children started and continue to go for vaccination. (e.g., they value health, there are no barriers in use of the health system or in the community for them to overcome, etc.). Write their responses on a flip chart.

Participants may share ideas and discuss the following issues.

- How to reach 100% EPI coverage in localities.
- How to ensure registration of all newborn infants, pregnant women and children under 5 years of age.
- How they can contribute to tracing defaulters and catching up on them.
- What are the messages to be used by the volunteer to promote immunization?
- How to plan for an outreach immunization strategy (when static centres are not feasible).

Annex 2

Post-test

1) Cite five childhood diseases targeted by an immunization programme in your country?
2) Describe at least three of these diseases.
3) What is the best way to prevent the five diseases you cited in question 1?
4) How many immunization doses are needed to protect children against each of the diseases you have cited and at what ages should these doses be given?
5) To prevent neonatal tetanus, efforts should focus on:
   - immunization of pregnant women;
   - ensuring clean delivery;
   - imunization of pregnant women and ensuring clean delivery;
   - immunization of all women of childbearing age;
   - immunization of all women of childbearing age and ensuring clean delivery. (classify from more to less effective strategy).
6) To prevent vertical transmission of hepatitis B (from the mother to the newborn infant), WHO recommends that hepatitis B vaccine be given to the newborn infant as soon as possible after birth and not later than 24 hours after birth. In the locality you are serving, more than 80% of deliveries are at home. How can you assist in getting the highest possible immunization coverage with hepatitis B vaccine administered during the 24 hours after birth?
7) The local health authorities are not happy with the performance of the routine immunization programme because of low coverage and high left-out and drop-out rates among both infants and mothers. Cite at least three reasons that can explain these rates.
8) Local authorities decided to conduct an immunization week to catch-up on defaulters and raise awareness about the immunization programme. They requested your help in developing a community mobilization plan involving key persons in the community. In two paragraphs maximum, cite the main activities that are needed and key persons.
9) You are holding a meeting with parents on immunization and you are requested to respond to the following questions asked by parents.
   - Childhood diseases are a normal part of a child's development, so why prevent them?
   - Why receive a measles vaccination? After all, measles is common and children recover from it?
   - It is too dangerous to receive more than one vaccination in a day?
   - It is too dangerous to vaccinate a sick child?
   - Can vaccines cause diseases?
   - If my baby has diarrhoea (or fever), should I bring him to the clinic?
   - My husband (or mother) says that childhood diseases are from God and so giving vaccines to prevent them is like trying to play God.
   - My baby gets sick after some vaccinations, so should I stop bringing him for vaccinations?