# Module for the training of health staff for the mass drug administration of Lymphatic Filariasis and for the Management of Long Term Cases


Training Module developed by:

**UPTD Pelatihan Tenaga Kesehatan Provinsi Nusa Tenggara Timur**

DINAS KESEHATAN KABUPATEN ALOR

*With technical support from*
*GTZ SISKES*





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# PREFACE

Lymphatic filariasis (LF) is a disease that affects over 120 million persons in 80 countries worldwide and more than 1 billion people are at risk of infection. In Indonesia, lymphatic filariasis remains a public health problem in many rural areas of the country. In Indonesia, there are many names for lymphatic filariasis; however the most common is “Kaki Gajah.” Several provinces in Indonesia still have areas which are endemic for lymphatic filariasis which means that there is a prevalence rate above 1%. For example, in Nusa Tenggara Timur province, in some communities in the district of Alor, there are between 2% and 27% of persons infected by LF.

In 2000, in order to overcome the problem of lymphatic filariasis, WHO introduced a global plan for the elimination of the disease: “The Global Elimination of Lymphatic Filariasis as a public health problem by the year 2020.” The global plan begins in 2002 and will eliminate the disease by the year 2020, working through the government health sector, religious groups, community leaders and various national and international organizations within those countries affected by the disease. WHO recommends mass treatment in high endemic areas using two drugs: DEC (Diethylcarbamazine) and Albendazole. These drugs will be given one time per year for the duration of five years. The pharmaceutical company, GlaxoSmithKline (GSK) will provide **free of cost** the appropriate quantity of Albendazole for the entire global program. In addition the cost of DEC per patient is about 44 Rupiah, making the medication relatively inexpensive.

In order to succeed in the elimination program, health professionals must play a vital role in the education of communities, the administration of the drugs, the monitoring of the side effects, the follow-up of those who missed the treatment and assistance to those persons who are long term sufferers of the disease.

This module is designed for health staff at all levels, from district to village level. It will cover the:

- Basic aspects of lymphatic filariasis: Prevalence, cause and transmission
- Clinical signs and symptoms of LF
- Specific treatment and case management for long term (chronic) sufferers,
- Preventive measures
- Conduct of a health promotion campaign and motivation of the community,
- Planning for implementation of the mass treatment in your area, including
    - Distribution of drugs,
    - Management and monitoring for side effects,
    - Follow-up those who missed the treatment for increased coverage,
    - Allocation of health staff before, during and after the treatment is administered.

May this module be a useful guide for you, health professionals, and lead to a better understanding of this disease so that you will be able to work together with the communities in your areas to eliminate this disease and to make a better world for your children.

**Mari! Kita Berantas Filaria untuk Alor Sehat 2010!**

# TRAINERS GUIDE

**Application**
This module is designed to give basic information relating to lymphatic filariasis (LF), its treatment, monitoring of side effects as well as case management for those who have the long term effects of the disease (hydrocele and elephantiasis). It is designed to be used with the three books produced by the Ministry of Health (DepKes) in January 2001:

1) Buku I "Eliminasi Penyakit Kaki Gajah (Filariasis) di Indonesia"
2) Buku II "Pedoman Pengobatan Massal"
3) Buku III « Pedoman Penatalaksanaan Kasus Klinis »

The module itself should take a minimum of two full days and a maximum of three days of approximately six hours of training per day. The participants should include all medical staff present in the Puskesmas, the area Pustus and the village midwives (Polindes). In order to facilitate this training, it is recommended that there be two trainers, preferably one with a medical background. Remember that two or three full days of training requires a lot of concentration. Please make sure that there is sufficient time allocated for discussion and interactive learning. This will increase the quality of your training as well as make it more interesting for the participants.

**Structure of the Module**
The Module is divided into five different sections:

**Part I: Identification, Prevalence, Cause and Transmission of Lymphatic Filariasis (LF)** which will cover the basic aspects of LF

**Part II: The Symptoms of LF** which will outline the acute and chronic symptoms of the disease.

**Part III: Clinical Management for Acute and Chronic Sufferers** looks at the management of those who suffer from lymhadenitis and elephantiasis of the limbs and genitalia.

**Part IV: Prevention of LF** covers how to prevent infection with the disease through prevention of mosquito bites.

**Part V: Mass treatment of LF** will take an in depth look at the mass treatment campaign, the mobilization of the community, the drug distribution system, the methodology of the treatment, the management and monitoring of the side effects of the symptoms and the follow-up of those persons who missed the first round of treatment.

In each section, there are four different parts:

1. Objectives
2. Introduction
3. Learning Activities with Basic Information
4. Knowledge Questions

- The **Objectives** will outline what the participants are going to learn.

- The **Introduction** will outline the importance of this section and explain to the trainer how he might conduct the activities in this section.

- The **Learning Activities** are designed as proposals for introducing the material to the participants. They can be modified according to the level of knowledge in the participants as well as the time allocated for the training. In each of the learning activities sections, there is a section entitled "**Basic Information"** which will outline what information is important to convey during the course of the learning activities. The trainer will also be given references to the three books developed by the DepKes in order to further his knowledge before beginning the training activity.

- Lastly, the **Knowledge Questions** are the same questions that will be asked in the pre-training and post-training tests. The participants should be able to answer these questions at the end of each section.

Symbols used in this module:

☼ This symbol indicates that there is a direction for the trainer.

🕮 This symbol refers to where in the books produced by DepKes the trainer can find more information on the subject.

🕒 Gives the approximate time required to complete the activity.

**Materials needed**

In order to conduct this training, it is recommended that the trainers have:

- Overhead projector (OHP) and transparencies
- Handouts for each participant
- Pre- training and post- training tests for each participant
- Whiteboard and markers / chalk board and chalk
- Flipchart papers and markers
- There may also be medical slides available for use during the training. If using slides, make sure that the team has a slide projector.
- Health education materials developed by DinasKes and GTZ SISKES
- Sample of the two kinds of drugs (DEC and Albendazole) as well as a sample of those drugs used for the management of side effects due to treatment
- Bucket with water and soap
- Equipment to show a VCD if possible (TV, VCD player or computer and InFocus)

**Methods used in this module:**

1. Presentation
2. Small Group discussion
3. Role Play
4. Case Study
5. Question and Answer Forum

**Preparation of the Training**

Before beginning the training activity, make sure that the following checklist has been done:

- □ List of participants has been finalized
- □ Training room is big enough, comfortable and can accommodate all the participants and there are enough chairs to accommodate all who will attend the training

- □ Copies of pre-training and post-training tests are ready in sufficient number
- □ Copies of handouts for all participants are ready
- □ White board is available for use, with the markers and erasers or chalkboard and chalk
- □ Flipchart paper and markers
- □ Snacks, lunch and drinks have been ordered
- □ Receipts are prepared for transportation allowances and per diems
- □ If using an overhead projector or a slide projector, make sure that there is an extension cord, a power outlet nearby, and if necessary a Stavol is also available for use.
- □ Certificates ready for distribution following the participation in this training.

**Recommended planning**

Day 1:

| | |
|---|---|
| 7:30 – 8:30 | Registration of participants |
| 8:00 – 9:00 | Introduction Forum, participants |
| 9:00 – 11:00 | Part I |
| 11:00 – 11:30 | Break / Snack |
| 11:30 – 13:30 | Part II |
| 13:30 – 15:30 | Break / Lunch |
| 15:30 – 17:00 | Part III |

Day 2:

| | |
|---|---|
| 7:30 – 8:30 | Part IV |
| 8:30 – 10:30 | Part V (Learning Activity 1 and 2) |
| 10:30 – 11:00 | Break / Snack |
| 11:00 – 12:30 | Part V (Learning Activity 3 and 4) |
| 12:30 – 14:30 | Break / Lunch |
| 14:30 – 16:30 | Part V (Learning Activity 5 and 6) |
| 16:30 – 17:00 | Closing and presentation of certificates |

**Introduction Forum**

At the beginning of the training, once all of the participants have arrived, prepare for about **30 minutes** to introduce the training and to get to know the participants. Possible points to be covered during this time:

1. It is recommended to **outline the training schedule** for the participants; inform them how many days they will be expected to attend the training and what information will be covered each day.
2. Emphasize the **importance of being on time** each day and that full attendance is required to receive certification for this training session (It is not recommended to provide any certificate for those who have missed the training for more than 50% or failed in the post-training test).
3. Outline the **objectives** of the training and the **methods** which will be used during the three days.
4. Lastly, create a forum for **introduction of the trainers and participants**, perhaps asking each person to introduce themselves to the rest of the group, what they do in the health service and maybe another unrelated question such as favorite color, birthplace, or years in the health service.

At the end of this introduction forum, it is a good time to administer the **pre-training test** to all participants. This test should be filled in by each participant, without discussion or assistance from anyone else. Time to take the test should be around 15 minutes.

**Now you are ready to begin-**
**Good luck and remember to encourage discussion and that all questions are important!**

# Part I: Identification, Cause, Prevalence, and Transmission of Lymphatic Filariasis

**LEARNING OBJECTIVES**
To understand the transmission and cause of lymphatic filariasis and its effect on the public health of communities, especially those with a low income.

**Specific Objectives**
At the end of this section, the participants are expected to be able to:

1. Give information about the prevalence of LF in Indonesia and in Alor
2. Explain the cause of LF and the cycle of transmission
3. Identify the prime vector in their villages
4. Know the three different kinds of filariasis
5. Be able to give at least three local names for the disease
6. Communicate the burden of this disease in their area

**INTRODUCTION**
This section will introduce the participants to lymphatic filariasis (LF) and will give information about the prevalence of the disease in their own areas.

Here we will also cover basic information regarding the transmission and the cause of LF. (Note: Make sure that you have a copy of the transmission cycle that is big enough for everyone in the room to see.)

🕒 Total time required for this section is: 2 hours

**LEARNING ACTIVITIES**
Activity 1: Introduction to LF
Activity 2: The Cause and Transmission of Filariasis
Activity 3: The Prevalence of Filariasis (local, national, and global)

## Learning Activity 1: Introduction to LF

**Method**
Presentation format using OHP and/or white board/flipchart and question and answer period.

🕒 Time for this learning activity: 20 minutes

**Basic Information**
📖 Refer to Buku 1

☼ This learning activity is designed to introduce the participants to the disease. It may be that some in the audience have never heard of the disease, or have never seen the disease. This will provide an entry into the two / three days training session. Even if the participants have heard of the disease, it is a useful session to focus their thoughts on this disease.

Trainer may begin the activity by asking the participants to call out their answers to the following questions while the trainer writes out the answer on flipchart paper:

- Have you heard of lymphatic filariasis? What are some names for filariasis in your area?
- Have you ever had filariasis patients come to your health center? What symptoms did they have? How did you treat them?
- Is there filariasis in your area of work? Which villages?
- Where do people living in your community think filariasis comes from?

Some people in the audience may want to give a small expose about their experience treating patients with elephantiasis.

☼ Following this discussion, the trainer may want to show a few slides / overheads / pictures of the disease. For example the following images could be used with the following explanations:

- *Elephantiasis of the leg*: Probably the most common recognizable sign of the disease. This is a chronic effect of the disease lymphatic filariasis.
- *Hydrocele:* Perhaps less often seen, hydrocele or “boa besar” is another common long term effect of the disease LF.
- *Elephantiasis of the arm:* Again, perhaps less commonly associated with the disease, this is another chronic effect of the disease.
- *Mosquito:* LF is a disease transmitted by the mosquito.

The trainer may at this time want to ask again if the participants are familiar with this disease. He may then explain that during the course of the training, we will cover the different aspects of the disease and explain in further detail the pictures that they have just seen.

## Learning Activity 2: The Cause and Transmission of Lymphatic Filariasis

**Method**
Presentation format using OHP and/or white board/flipchart.

🕒 Time for this learning activity: 60 minutes

**Basic Information**
📖 Refer to Buku 1, pages 4 -10 and Buku III, pages 2-3.

☼ Introduction
In order to understand LF, we must first understand how this disease transmits from one person to the next. The following section will outline in detail the cause of the disease as well as the transmission cycle of LF.

☼ The main points about transmission and cause to cover:

- There are three types of LF in Indonesia: *Brugia malayi, Brugia timori* and *Wuchereria bancrofti.*
- LF is transmitted by mosquitoes. There are many mosquitoes which transmit LF; in Indonesia there are 23 species which can transmit the disease. In NTT, mainly anopheles mosquitoes are transmitting LF, such as *Anopheles barbirostris*, *Anopheles subpictus, Anopheles aconitus and the Anopheles vagus* all transmit LF. Anopheline mosquitoes are active only at night when the females seek a blood meal.
- Mosquitoes that transmit LF live in swamp areas, dirty water, rice fields, forests and beach areas.
- Clearly explain the two phases of the transmission cycle: the part that occurs in the *host* (human, cat or monkey) and the part that occurs in the *vector* (mosquito). There is no direct transmission from man to man without a mosquito!

**Figure 1 Anopheles mosquito. Source: WHO**

- People can have microfilaria circulating in their blood, yet not feel sick or show any symptoms of the chronic disease.
- The cause of the illness is the adult worm that grows in the human lymph system. This worm blocks the ability of the lymph system to protect against infections. Adult worms can live around 4 to 6 years and will produce millions of microfilaria during their lifetimes.

**Figure 2 Adult LF worm. Source: WHO**

**Figure 3 Microfilaria in the blood. Source: WHO**

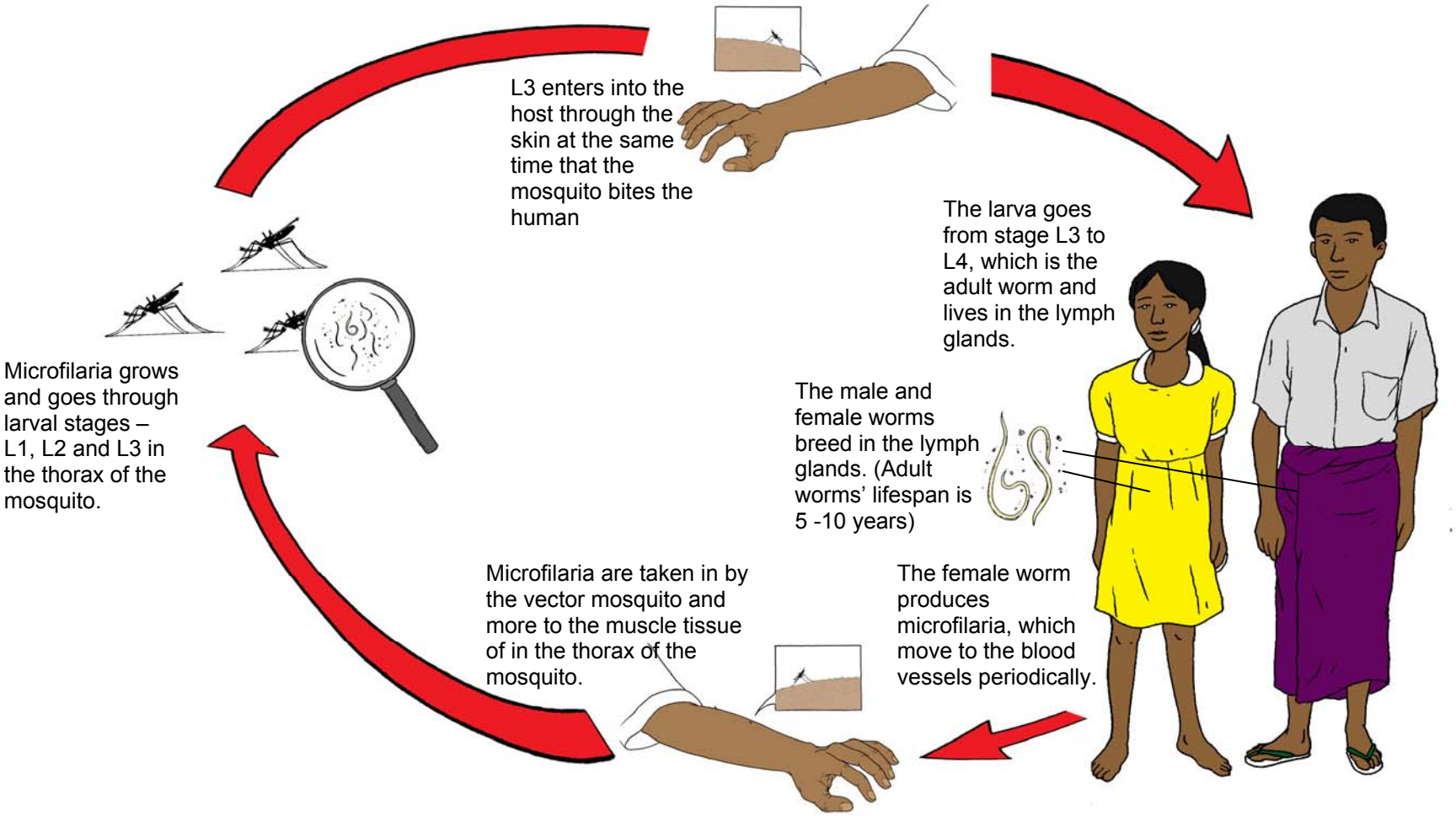



**Figure 4 Transmission Cycle for LF**

**Learning Activity 3: The Prevalence of Filariasis (local, national, and global)**

**Method**
Presentation of the information. It may be necessary to use an OHP to show maps of distribution of the disease.

🕒 Time for this learning activity: 30 minutes

**Basic Information**
📖 Refer to Buku I, pages 12 – 16.

☼ Dissemination of Lymphatic Filariasis

Main points to cover:

- On a global scale, there are over a billion people at risk for infection with LF in 80 countries around the world.
- Worldwide, over 120 million people have already been affected by the disease, with over 40 million persons already seriously incapacitated or disfigured by the disease.

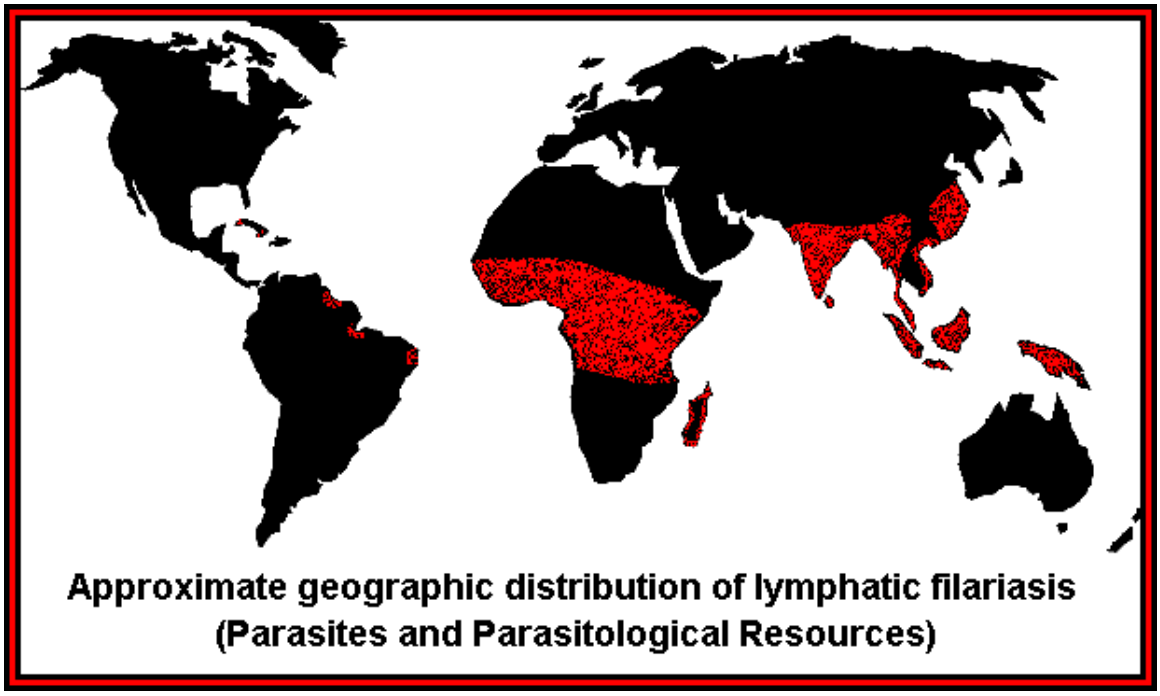



**Figure 5 Global Distribution of LF. Source: website filariasis.org**

- In Indonesia, in a rapid mapping exercise in 2000, 29 provinces reported chronic cases in their areas. The following provinces have high rates of filarial infection: Nusa Tenggara Timur, Kalimantan, Sulawesi Selatan, Sumatra and Papua.
- There is a special type of LF that only exists in NTT: Brugia timori
- In Alor District, there is between 2 and 27% prevalence in some villages. In a study conducted in collaboration with Dinas Kesehatan Kabupaten Alor, GTZ SISKES, Universitas Indonesia, University of Hamburg Berhnard Nocht Institute, it was found in some villages in the Mainang area, prevalence of brugian filariasis up to 27% of those persons tested in the survey.

- In Alor, there are over 1% of persons infected with LF; therefore this area is called endemic for LF. Because Alor is endemic for LF, all persons will be treated in a mass treatment.

**KNOWLEDGE QUESTIONS**

1. What is the vector that transmits lymphatic filariasis?
2. Name four areas where this vector lives.
3. What time of day has the greatest risk for someone to get LF?
4. Where does the adult worm live in the human body?
5. How long can an adult worm live and how many microfilaria can they produce in a lifetime?
6. What is the range of prevalence for LF in the District of Alor?
7. Name three local terms for LF.

# PART II: Symptoms of Lymphatic Filariasis and Social and Economic Effects of LF

**LEARNING OBJECTIVE**
To explain those symptoms which occur with filarial infection – asymptomatic, acute and chronic manifestation – as well as the long term social and economic effects of the the disease.

**Specific Objectives:**
At the end of this section, the participants are expected to be able to:

1. Give information about the acute symptoms of LF infection
2. State when it is the best time to diagnose LF in the blood
3. Explain the cause for the acute symptoms
4. Explain how someone can be infected with filariasis, however show no symptoms
5. Name the main chronic effects of the disease
6. Explain how these effects may affect the lives of those suffering from the disease

**INTRODUCTION**
In this section we will look at the symptoms of filarial infection, both at the beginning of the disease and at the chronic stage. We will also look at the effects that the chronic symptoms may have for someone.

In order to teach this section, it is highly recommended to use either slides and and/or overhead projector in order to show the participants the different stages of disease.

Finally there is a section relating to the social and economic effects of LF.

**LEARNING ACTIVITIES**
Learning Activity 1: Acute and Chronic Symptoms of LF disease
Learning Activity 2: The Social and Economic Effects of Filariasis

🕒 Approximate time for this section: 2 hours

## Learning Activity 1 : Acute and Chronic Symptoms of LF disease

**Method**
The trainer will use a lecture format, and as mentioned above, use visuals such as slides, posters, flipcharts or overhead projector sheets.

🕒 This section will take 45 minutes

**Basic Information**
📖 Refer to Buku III

☼ Introduction:

- After the filarial larva enter into the human body, they congregate in the lymph nodes in the body. There the larvae develop into adult worms, which takes between 3 to 12 months.
- The worms form nests in the lymph area which on average have several worms per nest. A typical patient will have two to three nests and there are normally five females for every one male.
- When the adult worm dies, this also creates problems as the body of the dead worm becomes an obstruction and the lymph system cannot drain itself properly.
- The major part of the persons with LF infection do not show any signs of the disease although one can find microfilaria in their blood: asymptomatic cases. However they can transmit the disease to other persons when a mosquito bites them and transmits LF to the next person!
- ACUTE symptoms include: acute lymphadenitis and lymphangitis, sudden attacks of fever and chills occurring several times per year, acute groin pain, swollen tender lymph glands and oedematous swelling of the leg. Other symptoms, however not very specific signs are headache and general weakness.
- In order to distinguish the difference between a filarial fever and another fever common to tropical areas, attention should be paid to the accompanying symptoms (acute groin pain, swelling, and swollen lymph glands).
- Definitive diagnosis is only made by laboratory tests by detecting microfilaria in the night blood, however this procedure can be costly for large numbers of persons.
- The worms disturb the normal function of the lymph system and after some time, lymphoedema develops (swelling in the legs, arms, breasts and genitals). This begins the CHRONIC symptoms.

☼ Main points to cover regarding acute and chronic symptoms:

- The symptoms of bancroftian and brugian filariasis are similar, with the only difference being that in brugian filariasis, hydroceles and other genital lesions are rarely seen. In addition, chyluria is not seen in brugian filariasis (urogenital tract).

- In *W. bancrofti*,
  - Early stage: gejala limfadenitis dan limfangitis which are light and a high fever.
  - Later stage:
    - Hydrocele: Swelling of the scrotum (See Figure 7)
    - Chyluria: Milk like urine (See Figure 6)
    - Lymphoedema / elephantiasis: affecting the whole leg, the scrotum, the vagina and the breast (See figures 8 and 9).

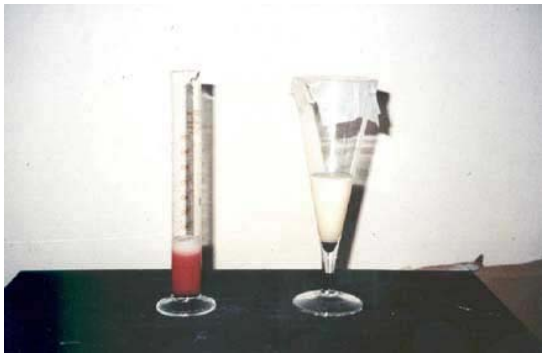


**Figure 6 Chyluria. Source: WHO**

**Figure 7 Hydrocele. Source: GTZ SISKES**

**Figure 8 Elephantiasis of the leg. Source: WHO**

**Figure 9 Swelling of the breast. Source: GTZ SISKES**

- In *B. malayi* and *B. timori,*
  - Early stage: the early stages are more severe and may affect day to day activities.
    - Swollen glands (limfadenitis dan limfangitis) most often in the groin and in the armpit, but may also occur in other places.
    - High fever, headache and general weakness (filarial fever)
    - Abscess formation which when broken, releases lymph fluid, pus or blood.
  - Later stages:
    - Limfedema / elephantiasis occurs in the leg, below the knee or the arm, below the elbow. The swelling is not as severe as in bancroftian filariasis.

☼ Elephantiasis and Secondary Infection

Sufferers of elephantiasis often have lesions or small cuts and scratches (often between the toes) where bacteria can enter into the body. This bacteria account for the majority of acute attacks (fevers and increased swelling). Such superinfections were identified as the major cause to contribute to the worsening of the swellings!

☼ Asymptomatic Infection

Remember that there can also be asymptomatic filarial infection, meaning that someone could be infected however shows no symptoms or may not even test positive in a blood test. (see above)

This can occur when the person has already the microfilaria and adult worm living inside of them, yet they have not yet showed any acute symptoms.

Remember in some endemic areas, up to 2% of children are infected with filaria by the age of 2 years and 26% are infected by the age of 4 years, however it is rare to see any symptoms or signs of the disease in these children.

Because of the asymptomatic infection, it is better to treat everyone in an endemic area, rather than only those who present symptoms of the disease.

☼ Diagnosis

In order to diagnose filariasis, a blood test should be taken. For screening purposes, 20 µl of "finger prick blood" can be dried on a slide, stained and examined under a microscope to see the microfilariae in the blood. This is not a costly test, however, the blood should be collected at night – when the microfilariae peaks between midnight and 2 AM. This creates a disadvantage

in that the health teams and the population must stay awake until this late at night as well as the labor intensive slide preparation.

There is an antigen detection method, which is much simpler and uses finger prick samples collected either at night or during the day. The disadvantage of this test is its cost – approximately 10.000,- Rp. Per test – making it too expensive to test an entire population.

With the mass treatment campaign, it is not necessary to test before treatment. Therefore making it much simpler and more cost-effective.

## Learning Activity 2: The Social and Economic Effects of Filariasis

**Method**
The trainer will use small group discussions and also give a presentation for this section.

🕒 Time for this learning activity: 45 minutes

**Basic Information**
📖 Refer to Buku I, page 9.

☼ Introduction to the Learning Activity

This activity will look at the economic and social effects of the symptoms of LF. As health professionals, these issues are important for us to understand so that we can explain these effects to the communities in our areas and also explain how they can prevent having these effects, through treatment of LF.

☼ Economic effect of Chronic LF cases

People who have chronic filariasis, i.e. elephantiasis, lose money each year due to repeated visits to medical facilities, days unable to work due to fever and fatigue and the loss of income for those members of their families who must care for them.

In a study done in Indonesia (Ascobat Gani, 2000), the following data was collected:

Every time that someone with chronic LF has to come to the medical center, they must pay nearly 20.000 Rupiah for transport costs to the medical center, the drugs, the registration fee and the consultation. These costs do not include the money lost because the person cannot work in the fields while he is sick.

Estimation of the loss of profit for one LF case per year

| Kind of loss | Rupiah |
|---|---|
| 1. Payment for medical consultation | 157.496 |
| 2. Loss of productivity for the LF case | 306.000 |
| 3. Loss of productivity for the caregiver of the LF case | 236.244 |
| 4. Biaya tindakan | 35.640 |
| Total loss of profit per case per year | 735.380 |

This loss of income also represents a loss of income for the community. Filariasis is an economic burden on a community, as well as on an individual.

In China, for example, for every 10.000,- Rupiah spent on the elimination campaign, made in economic benefit 150.000,- Rp. So the time and money that is spent on this campaign will only bring benefits in the future. This may be an important point to use while advocating for support from village leaders. This campaign will improve the economic situation of their villages.

Trainer may want to ask the following for discussion and the answers can be written on a whiteboard / flipchart:

- Why do they think it is important to understand the economic loss for sufferers of LF?
- Do they see the loss of income due to LF in their area? If so, please explain its effect.

☼ Divide the participants in discussion groups of about 5 persons and give about 15 minutes to discuss the following questions. Each group should record the answers on a piece of flipchart paper. Call up 2 to 3 groups to present briefly their results to the larger group.

- What do you think are some of the psychological and social effects of “kaki gajah” or “boa besar”?
- How do people respond/react when seeing someone who has “kaki gajah” and “boa besar?
- What do you think might be some of the psychological, social and biological effects for someone who has hydrocele / “boa besar”?
- How can we, as health professionals, reduce these effects?

In the larger group discussion, the trainer should make sure that the discussion does not become discriminative in any way and should always guide the discussion so that the results are positive towards those suffering from the illness.

**KNOWLEDGE QUESTIONS**

1. Name the acute symptoms for filariasis.
2. Explain the differences of chronic symptoms between bancroftian and brugian filariasis.
3. Explain the link between elephantiasis and bacterial super infection.
4. Why does someone without any symptoms of LF have to take the filarial treatment?
5. On average, how much money does a chronic LF sufferer spend in total each time he or she comes to the health center?

# Part III: Symptomatic Case Management for Acute and Chronic Sufferers

**LEARNING OBJECTIVES**
To learn the case management for acute attacks as well as for the long term effects of the disease.

**Specific objectives**
At the end of this section, the participants are expected to be able to:
1. Identify the clinical management of the acute stages
2. Identify the different stages of lymphoedema
3. Explain why washing is important to reduce the chronic effects of LF
4. Give the correct technique and information regarding washing

**INTRODUCTION**
As health professionals, you will of course be faced with the clinical management of LF cases. In this section we will deal with both the acute attacks as well as the chronic effects of the disease. [For the treatment of asymptomatic cases see Part V.]

The chronic effects of LF that we have just discussed are often disabilitating and discouraging for those suffering from these effects – namely lymphoedema. In this section we will look at how we can help people suffering from lymphoedema and how we can improve the quality of their lives through routine washing and good overall hygiene.

It is recommended to have a copy of the different stages of lymphoedema that is large enough to be shown to a group of participants (OHP, flipchart, or slides). In addition, in order to make this section more interactive and practical, it is suggested to have a bucket of water and soap available in order to practice the technique.

Learning activity 1 and 2 can be combined during the same session.

**LEARNING ACTIVITIES**
Learning Activity 1: Symptomatic management of Acute Attacks
Learning Activity 2: Symptomatic management of Chronic Cases

🕒 Time required for this section is about 1.5 hours.

**Learning Activity 1 Clinical management of Acute Attacks**

**Method**

Lecture format.

🕒 Time required is 30 minutes

**Basic Information**

📖 Refer to Buku III page 8

☼ Main points to cover for the symptomatic management of acute attacks:

- Medication necessary for most symptoms: antipyretic, analgesic, antibiotic and antihistaminic.
- For adenolimfangitis, demam berulang, abses, orkitis, epididimitis and funikulitis, the following treatment can be given:
  - Rest
  - Increased fluid intake
  - Treat symptomatically – for itching and fever
  - May give antibiotic and/or anti-fungal cream if necessary
  - Clean the abscess area and do not puncture the abscess

☼ Ensure that the patient has taken DEC and Albendazole during the mass treatment campaign.

**If not,** find out why the patient was unable to participate in the mass treatment – perhaps the mass treatment has not yet occurred in their village, they were in the fields for the day and night during the mass treatment, they were too sick to take the treatment at the time it was administered in the village, etc.

If the patient is able to take the required treatment (the patient is NOT pregnant, under 2 years or very ill) make sure that after you give the treatment (DEC 6mg/kg and 400 mg Albendazole). Give the patient a record to show to the community health worker in his village that he has already had the treatment.

**Only the combined treatment with DEC and Albendazole over a five year period treats the actual cause of the disease – by killing the worms. All other treatments help to relieve other symptoms associated with LF, but will not kill the worms.**

## Learning Activity 2: Clinical Management of Chronic Cases

**Method**
Lecture and group participation and practice

Prepare the necessary material: clean water in a bucket and soap.

🕒 Time required for this session is 60 minutes.

**Basic Information**
📖 Refer to Buku III, pages 8 – 16

☼ Clinical management of chronic cases of elephantiasis

- Because secondary infections lead to increased complications for those persons with lymphoedema, this section will focus on the reduction of secondary infections and the subsequent improvement of the condition of the limb affected by lymphoedema.
- It has been found that the 97% of acute attacks are caused by bacteria entering through lesions in the skin, not by the LF worm (research done by Dr. Gerusa Dreyer). Therefore it is important to minimize as much as possible entry of bacteria through these lesions in the skin. This can be done by proper case management, which is simple and requires no special medication, only clean water and soap.
- The aim of clinical case management is to:
  - To minimize the frequency of acute attacks in the early stadium and for the advance stadium sufferer
  - To prevent elephantiasis
  - To halt the increase in growth of the limb and to reduce in some cases the existing effect
  - To promote quality of life including productivity
- The clinical management is simple and can be done by the sufferer themselves or can be done by a family member, friend or health professional. Emphasize that there is no risk for infection for the person washing the affected leg. (Information taken from “New Hope” brochure.)
  - The legs should be washed carefully with soap and water to remove dirt and germs.
  - Wash the leg until the rinse water stays clean.
  - Someone can help the sufferer if there are places that the sufferer cannot reach.
  - Pay special attention to the areas between the toes and in the folds of the skin. Bacteria like to grow in these places.
  - Other areas should also be washed with soap and water, for example, men should wash their genitals and women should wash their armpits and breasts (especially if they are nursing).
  - Remember to dry the washed area well, and to dry between toes and skin folds.
  - If there are wounds, even small ones, use anti-bacterial cream. Make sure that it is rubbed in well.
  - Wash the other leg (which is not affected) to prevent lymphoedema in that leg as well.
  - Wear comfortable shoes at all times and never wear shoes that are too tight as this may make a sore place which may let bacteria enter the skin and cause an acute attack.
  - Elevate the leg whenever possible.
  - When sleeping, raise the feet slightly above chest level.
  - Do small exercises by moving the foot back and forth and around in a circle.

- When an acute attack occurs, cool the leg with cold clean water and continue until the pain lessens. Keep washing the leg as usual.

☼ After discussing how to wash the leg, it is recommended to take two volunteers from the participants and ask them to demonstrate how to wash the leg correctly. Ask one of them to play the role of the person with lymphoedema and the other to play the role of the health professional. They should act out how the health professional will teach this person to wash their legs, as well as demonstrate the activity. Ask the audience for comments following the activity. The audience should pay attention to quality of the demonstration, relation with the patient and ability to convince the patient of the importance of good hygiene.

Some probing questions:

- Was the health professional convincing in his demonstration? Why or why not?
- Can you add anything to the health professional's explanation?

☼ 🕮 See the tables in Buku III (pages 14-15) to explain the different stages of lymphodema and the recommended medical treatment for each stage.

**KNOWLEDGE QUESTIONS**

1. What is the benefit of washing the area affected by lymphoedema?
2. How should acute attacks be managed?
3. Is the person who washes the leg with lymphoedema at risk for infection with LF?
4. Why is it important to wash between the toes?

# Part IV: Prevention of Lymphatic Filariasis

**LEARNING OBJECTIVES**
To explain how LF can be prevented and how to encourage this prevention in your areas.

**Specific Objectives:**
At the end of this section, the participants are expected to be able to:

1. Name at least three ways to prevent infection with LF on an individual level
2. Name three ways to prevent infection with LF on an environmental level
3. Explain what can be done on a village level to prevent the disease

**INTRODUCTION**
The section will outline the areas where mosquitoes transmitting LF live and what steps could be taken in order to clean up these areas.

Because transmission of filaria occurs through a mosquito, the prevention will be the same as for malaria. In addition to relative costly preventive measures like bed nets, mosquito cream, mosquito coils and mosquito screening for windows, it is good to concentrate as well on less costly measures such as the elimination of the breeding places of mosquitoes – namely swamps and tall grass areas near to houses. This section will allow the participants to see together how they might reduce these breeding places in the areas where they work.

**LEARNING ACTIVITIES**
Learning Activity 1: Prevention of LF infection

🕒 Approximate time for this section: 60 minutes.

## Learning Activity 1: Prevention of LF Infection

**Method**
Because it is highly probable that most of the health professionals will know already about the prevention of mosquito bites, this learning activity will be conducted in a much more interactive manner.

🕒 This section will take 60 minutes.

**Basic Information**
📖 Refer to Buku I, pages 16-17

☼ The trainer may want to ask the participants to list all of the ways to prevent mosquito bites and then he can write then on a piece of flipchart paper / whiteboard / chalkboard.

Make a distinction which is environmental preventive measures (cleaning up the areas with high grass and standing water, getting rid of containers near houses with standing water, filling swamps) and which is individual prevention (repellent cream, mosquito bed nets, screening on the house).

Remember that prevention of mosquito bites will reduce infection also with malaria!

☼ Divide the group into groups of 3 -5 persons. If this training is done at the Puskesmas level, groups can be made randomly. If this training is conducted at the district capital level, then the groups should be divided according to location (those working in the same Puskesmas and village should be in the same groups).

The group should choose one or two villages in their area and draw up the plan that they would use to do an environmental clean-up of the mosquito breeding areas. The groups should draw a rough map of the area with the major risk areas for mosquito breeding. They should outline who in the village will participate in the activity, how they will conduct the activity and what is needed for this activity. This discussion should take around 20 minutes and they should write their plan out on flipchart paper.

Following the end of the discussion, the trainer can pick two groups at random to present briefly their plan to reduce the breeding places for mosquitoes in their areas. The trainer may want to ask if such activities have been planned in the past. If so, what made them a success? What made them a failure? Realistically, how can these activities take place?

| **KNOWLEDGE QUESTIONS** |
| --- |
| 1. Name three ways to prevent mosquito bites on an individual level.<br>2. Name three ways to prevent mosquito bites on an environmental level. |

# PART V: Mass Treatment Campaign

**LEARNING OBJECTIVES**
To outline the mass treatment campaign for LF and to instruct on the fundamentals of this campaign so that the health professionals will be able to direct this campaign in their area.

**Specific Objectives**
At the end of this section, the participants are expected to be able to:

1. Define the aim of public treatment
2. Conduct a health promotion campaign in your area
3. Explain how to treat for LF in the context of the mass treatment
4. Explain why a mass treatment campaign is more cost effective than treating individual cases
5. Monitor for side effects using this appropriate format
6. Perform the report and registration system

**INTRODUCTION**
According to the WHO Global Strategy for the Elimination of LF, the program has set the goal for elimination by the year 2020. In Indonesia, the goal has been set for the year 2010, along with many other Asian countries. In order to achieve the elimination of this disease, the communities must take two kinds of drugs – DEC and Albendazole – on the same day one time per year for five years. At least 80% of the total population must take this treatment in order to reach the goal of elimination.

This section will outline practically how you, as health professionals, can direct the mass treatment campaign in your area. It will take you through step-by-step the direct components of the campaign and why they are so important. Many of you will have to later teach this section to kaders in your villages.

**LEARNING ACTIVITY**
Learning Activity 1: Why Mass treatment?
Learning Activity 2: Drug distribution system and how to treat for LF
Learning Activity 3: Management and monitoring for Side Effects
Learning Activity 4: Mobilizing communities for treatment
Learning Activity 5: How to evaluate the success of the mass treatment
Learning Activity 6: Planning in your area

🕒 This section should take about one full day

## Learning Activity 1: Why Mass treatment?

**Method**
Presentation, Question and Answer forum, and Discussion

🕒 Time for this section is roughly 30 minutes

**Basic Information**
📖 Buku II

☼ Main points to convey about the strategy:

- The WHO Global strategy for the elimination of LF (ELKAGA in Indonesia) as a public health problem has set the goal for 2020. Within this strategy are two clear aims:

    1. To cut the transmission of LF through mass treatment of at least 80% of the population by giving yearly DEC 6 mg/kg/body weight in combination with Albendazole 400 mg yearly during a five year period. The advantages obtained through this mass treatment are the :
        a) The elimination of both microfilaria and adult worms
        b) At the same time as a positive side effect, five different kinds of intestinal helminths are killed by Albendazole, making the public health benefit for children very substantial (hookworms, ascarisis, trichiuris trichiuria infection, …
        c) Albendazole is given free of cost by GlaxoSmithKline
        d) Low operational cost

    2. To prevent further disability for the acute sufferer and chronic sufferer through clinical case management of lymphoedema. The benefits of this case management were discussed in the previous section.

- Indonesia has designed its own elimination program according to the WHO Guidelines and it will occur in two phases beginning in 2002.

- The elimination campaign will begin in Alor District, as one of five areas chosen for pilot projects by the national program .

- The aim of the mass treatment is to
    a) Decrease the Microfilaria rate (Mf rate) to <1% in order to stop the transmission cycle.
    b) Cut the transmission of LF to children born after the mass treatment has been implemented. No child born at the start of the campaign should risk infection with LF.

- Only three groups are exempted from the mass treatment
    **1.** Pregnant and breastfeeding women,
    **2.** Very sick and/or weak and
    **3.** Children under the age of 2 years.

- **Must have full participation of the communities – at least 80% of the total population must take the two kinds of drugs for five years in order to succeed.**

## Learning Activity 2: Drug distribution and how to treat for LF

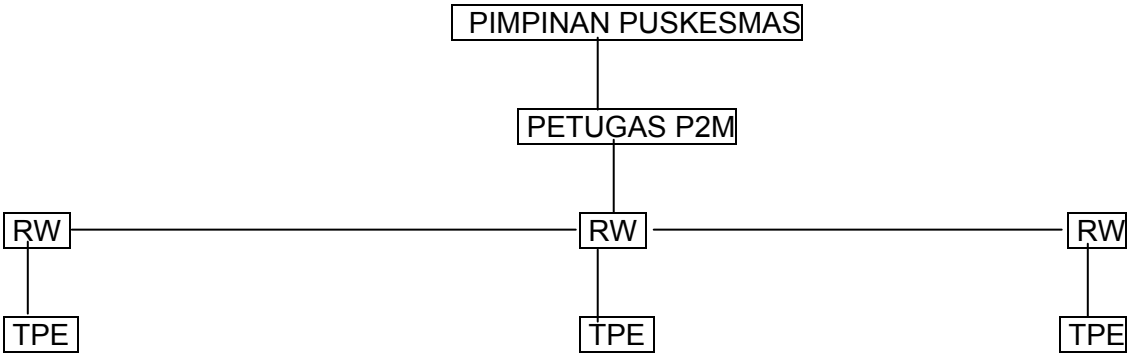
**Method**
The format for this section will be a lecture format followed by question and answer.

🕒 Time for this section should be 90 minutes.

**Basic Information**
📖 Refer to Buku II pages 20 - 24

☼ This section will be very practical and it is very important that all participants understand the process of the distribution of the drugs, the medical materials, the forms as well as the treatment regimen. Following each section, check to make sure that there are no questions before moving on to the next part.

☼ The **distribution network** is set up as follows:




The TPE (Tenaga Pembantu Pengobatan) are at the village level and they will be responsible directly to the health professional in their village. The TPE could be a teacher, kader, religious or community official (someone who can read and write).

The TPE will have around 20 families in their cluster (around 100 persons). They will be responsible for:

a. Education of these families using educational materials given by the Puskesmas.
b. Distribution of the medication
c. Fill out the necessary forms
d. Report to the health professional in the village if there are any side effects and the left over stock
e. Melaksanakan penyuluhan

The TPE will be trained by the health professionals either in their village (midwife) or by the Puskesmas staff. Supervision will be conducted by health staff from the District level.

☼Main points regarding the **distribution of the drugs**:

- ❖ P2M (Communicable Disease Control) from the Dinas Kesehatan Alor will send the appropriate amount of drugs to the Puskesmas for the actual treatment of lymphatic filariasis as well as the symptomatic treatment of potentially occurring side effects.
- ❖ The Puskesmas will send the drugs to TPE.

- ❖ The TPE will distribute the drugs to the people.
- ❖ Note: There should be a drug reception sheet for each level signed by the person sending the drugs and by the person receiving the drugs.

☼ For each 1.000 persons, there should be the following drugs / materials delivered:

| | |
|---|---|
| DEC 100 mg | : 2750 tablet |
| Albendazole 400 mg | : 1100 tablet |
| | |
| Paracetamol | : 1800 tablet |
| CTM | : 1800 tablet |
| Ampisilin | : 1800 tablet |
| Tetracyclin zalf 2% | : 20 tubes |
| | |
| Kartu Pengobatan Keluarga | : 200 cards |
| Tally Sheets | : 1 per TPE |

☼ Medical material required:

Weight scales
Medical equipment (stethoscope, tensiometer, etc.)

☼ Treatment regimen to be used in Kabupaten Alor:
Due to the possibility that there may not be scales available in each village or that the scales may not work properly, it is recommended to use the following table based on age.

| **Age** | **DEC (100 mg)** | **Albendazole (400 mg)** |
|---|---|---|
| 2 – 6 years (preschool) | 1 tablet | 1 tablet |
| 7 – 12 years (SD) | 2 tablet | 1 tablet |
| 13 – adult (SMP + ) | 3 tablet | 1 tablet |

☼ Implementation of the treatment. Ideally the drug should be distributed on the same day to the whole population in the village!. The implementation of the treatment will depend on each village for example the treatment could be given after church on Sunday, after mosque on Friday, to the children in school on a certain day, house to house visits, village meeting, etc. Every village should decide a joint strategy for the mass treatment!

During the mass treatment the following procedure should be carried out with each patient:

1. Fill the treatment card
2. Measure the weight OR take the age
3. Give the correct dosage based on the treatment regimen
4. The person should take the medication immediately in front of the health professional or member of the TPE.
5. Record the number of medicine consumed on the tally sheet

☼ Filling the treatment card:

- One per family , to be kept by TPE and later given to the Polindes or Pustu (if there is no Polindes)
- Remember that this card is for five year's usage (see Annex 2)
- The tally sheet that is filled in by each TPE should be given to the Kepala Desa.

☼ Drug distribution points:

Together with the health professional, each village may decide how and when it wants to conduct the mass treatment. However, here are some suggestions:

- House to house distribution – the TPE will go from house to house giving the drugs to every eligible member of the household
- Booth distribution – or several central places where the population will come to within the day to get the drugs
- Special population groups – TNI groups, schools, patients in the hospital, office buildings, etc.
- Community gathering places – after church services, mosque, markets, bus terminals, etc.

Remember two points:

1. Advise the community not to take the drugs on an empty stomach and remind them about possible side reactions to the treatment and where they should go for assistance and;
2. The community member should take the drug in front of the health professional or TPE.

## Learning Activity 3: Management and Monitoring for Side Effects

**Method**
The method for this section will be a lecture format.

🕒 The time necessary will be approximately 45 minutes.

**Basic Information**

☼ Important points to remember about side effects:

- **Most persons will not have any side effects to the treatment given**.

- However, some will experience some side effects due to the death of the worms inside of their bodies.
- People with brugian filariasis will have stronger side effects due to the fact that the drugs work faster in killing the worms.
- Side effects are related to the microfilarial load: the higher the mf load, the greater the frequency and severity of the side effects.
- Side effects are the strongest in both bancroftian and brugian filariasis in the first week after treatment.
- Possible side effects include: headache, fever, itching, general weakness, swelling, pain in the groin area and nausea.
- These side effects can be treated symptomatically by a health professional.

- **IT IS STRONGLY REQUIRED THAT IN EACH VILLAGE THERE IS A HEALTH PROFESSIONAL (MIDWIFE, NURSE OR DOCTOR) STAYING ON SITE IN THE VILLAGE, WITH THE REQUIRED DRUGS, FOR UP TO ONE WEEK FOLLOWING THE MASS TREATMENT.**

- Remember that people might be afraid by the side effects, therefore it is important to remind the person that the medication is working and that the side effects can be treated and will pass within a few days. In addition, remind the person that their intestinal worms have been treated!
- The recommended Dexametheson in the DepKes Buku should ONLY be given by a doctor through the Puskesmas.
- Kaders and bidan desa could be left with a small supply of drugs (Paracetamol and CTM) to treat the side effects of the treatment so that the villagers do not have to go to the Puskesmas.

☼ Treatment regimen for management of side effects:

| | |
|---|---|
| Fever | Paracetamol |
| Swelling | Paracetamol |
| Headache | Paracetamol |
| Joint pain | Paracetamol |
| Groin pain | Paracetamol |
| Vomiting | CTM |
| Dizziness | CTM |
| Nausea | CTM |

| Age | Paracetamol (500 mg) | CTM (4 mg) |
|---|---|---|
| 2 – 4 years | ¼ tablet x 3 | ¼ tablet x 3 |
| 5 – 15 years | ½ tablet x 3 | ½ tablet x 3 |
| 16 – adult | 1 tablet x 3 | 1 tablet x 3 |

☼ Each TPE will be required to do house to house visits in the week after the treatment in order to monitor for side effects.

- The TPE will refer the person to the health professional on site in the village.
- Severe reactions should be referred to the health center or to the hospital.
- During the visits on Day 5,6,7, the TPE will fill out the required form, asking the person about their side effects and the severity of those side effects (see Annex #6).
- These forms, once completed, should be given to the P2M person at the Puskesmas.

**Learning Activity 4: Advocacy and mobilizing communities for treatment**

**Method**
This session will be both done through lecture/presentation as well as small group work.

🕒 Time for this activity should be around 45 minutes.

**Basic Information**
📖 Buku II pages 15

☼ Mobilizing the communities is **KEY** to the success of this campaign. Health professionals play an integral role in this socialization.

☼ Because the elimination of lymphatic filariasis calls for the mass administration of two drugs for a period of five years to thousands of persons, the mobilization of every community is essential to the success of this campaign. People must be willing to accept the pills given by the TPE, and they must be willing to swallow these pills. This requires a kind of behavioural result on the part of nearly every household member – **to take the pills offered and swallow them in front of the TPE.**

This behaviour is required for the success of the campaign. How do we then achieve this? In order to accept certain behaviour, a person must go through the following steps:

1. **Hear** about the new behaviour, in our case, to take the two drugs for the elimination of LF;
2. Then the person must become **informed** about the activity;
3. After that, we may become **convinced** that the activity (taking the two drugs) is worthwhile and something that we want to do;
4. Then we can take **action**, or take the two drugs;
5. And finally, we await that **re-confirmation** that our activity was indeed a good one and if so;
6. Then we will **maintain** this behaviour, meaning that next year, we will readily accept the take the drugs again.

In order to convince people in the village communities and cities to take the required drugs, we must follow the 6 steps listed above. This can be done through health professionals themselves working together with the community leaders and kaders. Health professionals must involve the local community in the health education campaign and the drug distribution, as they are the persons who can best advise the health professionals about the particularities in their villages.

☼ Interactive activity – group question and answer.

The trainer may want to ask the participants:

1.) How they would conduct a health promotion campaign in their villages. Questions to add may be: is this feasible? Why or why not? How can we make it feasible?

2.) Can the participants name some key points that are important to convey to the communities before beginning the mass treatment. List these points on white board, chalkboard or flipchart paper.

3.) Who should be involved in such an activity?

☼ Make sure that the following points are covered in the discussion:

- □ What is LF?
- □ Transmission and Cause
- □ The international and Indonesian campaign for the elimination of LF
- □ Who will be taking the medication? Who will NOT take the medication?
- □ The side effects from the treatment
- □ Benefit of elimination of LF from their village in five years and protection for their children
- □ Benefit from Albendazole – kills 5 kinds of intestinal worms which means that there children will grow faster, stronger, do better in school and sleep better.
- □ Where can the community get the DEC / Albendazole and the drugs for potential side effects?
- □ When will the treatment begin?
- □ Where do I go if I have side effects from the treatment?
- □ Why does everybody need to participate in the campaign?

☼ In the planning, the health professionals will train the TPEto use the educational materials (flipchart, brochure and poster) and will help them to plan the socialization in their villages. The health professionals may also participate in the activities at the village level. The materials which are available for the awareness activities are:

- ➢ VCD film – this may serve to attract people's attention
- ➢ Spanduk – this may serve to attract people's attention
- ➢ Flipchart – provides more in depth information appropriate for those with a primary education
- ➢ Brochure – contains the same information that is in the flipchart, but can be taken home and reviewed with the other family members
- ➢ Poster – reminds people about the mass treatment and also reminds them when the campaign will take place in their village
- ➢ Sticker – could be given after treatment to each household

## Learning Activity 5: How to evaluate the success of the mass treatment

### Method

🕒 Time for this activity should be around 30 minutes.

### Basic Information

📖 See Annexes for information about reporting

☼ Introduction

Remember that this is a **five year** campaign and therefore 80% coverage rate for each year is essential. By regular evaluation, health professionals and TPE can work together to improve with each year health education and promotion, drug distribution and monitoring of the side effects of the treatment.

It is recommended that a Puskesmas staff or the Bidan desa lead the evaluation in the village with the kaders, teachers and village leaders. Some suggestions for discussion include:

- Look at the coverage rate of the treatment in the village and discuss why the coverage is high/low and how come?
- What could be improved for next year?
- Were all of the materials, drugs, etc. in the village on time?
- Did people understand about the treatment? The side effects?

☼ In addition to evaluating the success of the campaign at the village level, it is also necessary for the Dinas Kesehatan to evaluate the success of the campaign at the District level. This will be done through supervision of the activity, as well as through the submission of forms to the Puskesmas and to the Dinas Kesehatan P2M.

## Learning Activity 6: Planning the mass treatment campaign in your area

**Method**
This session will be both done through small group work.

🕒 Time for this activity should be around 60 minutes.

**Basic Information**
📖 Buku II

☼ Trainer will want to break up the participants into Puskesmas / village areas, or if the training is done at the Puskesmas level, then the entire group may decide to do the planning together.

The groups should discuss the following:

- Number of villages in their area
- The population in these villages
- The number of kaders available in each village
- The timing for the campaign: socialization, training of the kaders, teachers and community leaders, distribution of the drugs, monitoring for side effects, follow-up of missed cases.
- Who will do what? Delegation of tasks.
- Materials needed for each stage – drugs, educational materials, etc.
- Evaluation of operations

☼ Trainer may want to assist in the planning process, or simply let the group do it by themselves. At the end of about 45 minutes of planning, the group should present their plan to the trainers and there should be a discussion about the planning.

**KNOWLEDGE QUESTIONS**

1. Explain why the mass treatment will be conducted.
2. Explain how to treat for the mass treatment.
3. What kind of side effects can we expect from this treatment? And how should they be treated?
4. Why is it important to conduct a health promotion campaign at the village level? Who should be involved in this campaign?

# ANNEXES

**Annex 1 Drug Dosage of Public Filaria Treatment**

**By Age:**

| Age | DEC 100 mg | Albendazole 400 mg |
|---|---|---|
| 2 – 6 years<br>Not yet going to school | 1 tablet | 1 tablet |
| 7 – 12 years<br>Primary school (SD) | 2 tablet | 1 tablet |
| 13 – adult<br>Junior high (SMP+) | 3 tablet | 1 tablet |

## Annex 2 Family Card for the Lymphatic Filariasis Elimination Program

Name of Head of Household:
Address
Village:
Health center and sub-district::

| No | Name | Age in first year | | # of DEC/year | | | | | Albendazole 400mg | Date/Month/Year | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | M | F | | | | | | | 1 | 2 | 3 | 4 | 5 |
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Notes:

**Annex 3 Summary Registration of Filariasis Mass Treatment**

**TALLY SHEET FOR MASS DRUG ADMINISTRATION OF LF IN ALOR**

Village:_____ Health centre:_____
Total HH:_____ Date of treatment:_____/_____/_____
Total population:_____
Total number of family treatment:_____
Family cards are located where:_____

| | |
|---|---|
| Pregnant women | Out of the village |
| Nursing women | Refuse |
| Children < 2 years | Already took the treatment |
| Severely sick or weak | |

Reported by

(_____)

**Annex 4: Report of Mass Treatment**

Province :
District :
Year :

| No | Puskesmas | Mf Rate before treatment | | Number of | | # population >2 years old | Period of Treatment | population treated | | Reaction to the treatment | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Year | % | HH | TPE | | | # | % | # | % |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 1 | | | | | | | | | | | |
| 2 | | | | | | | | | | | |
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| 18 | | | | | | | | | | | |

Kalabahi,_____
Head of Dinas Kesehatan Kabupaten Alor

(_____)

**Annex 5**

The Report of Mass Treatment Realization

District :
Puskesmas :
Year :

| No | Villages/ Sub villages | Mf Rate before treatment | | Number of | | # population >2 years old | Period of Treatment | population treated | | Reaction to the treatment | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Year | % | HH | TPE | | | # | % | # | % |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 1 | | | | | | | | | | | |
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| 18 | | | | | | | | | | | |

……..,……
Head of the Health Centre……
(_____)

**Annex 6**

**TALLY SHEET FOR MONITORING OF SIDE EFFECTS OF LF TREATMENT IN ALOR**

Village:_____ Health centre:_____
Date of treatment:_____/_____/_____

| | |
|---|---|
| Headache | Diarrhea |
| Dizzy | Pain in the joints |
| Weakness | Swelling |
| Queasy / Vomiting / Stomach ache | Itching |
| Pain in the groin | Fever |
| Worm are passed | Red spots on the skin |
| Number of persons who report to TPE about side effects | |

Date, ……..
Reported by,

_____

**Annex 7**

PEMERINTAH KABUPATEN ALOR
DINAS KESEHATAN
Jl. Prof W.Z Yohanes Telp. (0386) 21052 Kalabahi 85811

Receipt of
MATERIAL DEMAND

Send to :

Order by :

Date :

Items detailed as follows

| No | Description | Unit | Total | Other Information (remarks) |
|---|---|---|---|---|
| | | | | |

Accepted by,

Kalabahi,___
Given by

(_____)

(_____)

Witnessed by,

(_____)

**Annex 8**

## Pre and Post Training Knowledge test

Name: _____

Kab./PKM/Pustu/Polindes: _____

Please check one: Pre or Post Training

Date: _____

**Questions:**

Please answer the following questions:

1) What vector transmits lymphatic filariasis?

2) Name four areas where this vector lives.

3) What time has the greatest risk for someone to get LF?

4) Where does the adult worm live in the human body?

5) How long can an adult worm live in the human body and how many microfilaria can they produce in a lifetime?

6) What is the range of prevalence for LF in the District of Alor?

7) Name three local terms for LF.

8) Name the symptoms of an acute attack.

9) Explain the differences of chronic symptoms between bancroftian and brugian filariasis.

10) Explain the link between elephantiasis and bacterial superinfection.

11) Why does someone without any symptoms of LF have to take the filarial treatment?

12) On average, how much money does a chronic LF sufferer spend in total each time he or she comes to the health center?

13) What is the benefit of washing the area affected by lymphoedema?

14) How should acute attacks be managed?

15) Is the person who washes the leg with lymphoedema at risk for infection?

16) Why is it important to wash between the toes?

17) Name three ways to prevent mosquito bites on an individual level.

18) Name three ways to prevent mosquito bites on an environmental level.

19) Explain why the mass treatment will be conducted.

20) Explain how to treat for the mass treatment.

21) What kind of side effects can we expect from this treatment? And how should they be treated?

22) Why is it important to conduct a health promotion campaign at the village level? Who should be involved in this campaign?

***Terima Kasih***

NOTES