Republic of Zambia
Ministry of Health

GUIDELINES FOR THE MANAGEMENT OF LEPROSY

Second Edition
March 2020

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Foreword

The Ministry of Health has made tremendous progress in reducing the burden of Leprosy in Zambia. Leprosy cases dropped from approximately 18,000 cases in 1980 to about 1000 cases in 1996. By the year 2000, the incidence rates had fallen to 0.67/10 000 population. Despite having achieved elimination target in the year 2000 (1 leprosy case per 10,000 population) Leprosy remains an important public health problem in Zambia and globally.

Every year we continue to record new cases of leprosy. In some provinces and districts leprosy cases are quite high pausing a threat of a resurgence. Particularly that over sixty percent of the leprosy cases that we are detecting are multibacillary, a form of leprosy that is infectious and easily transmissible from one person to the other.

These guidelines provide a step by step guidance in the detection, management and prevention of leprosy in our health facilities and the community. These guidelines are targeted for health facility managers, health care workers both in public and private facilities and the community. For us to maintain leprosy elimination levels, zero disability due to leprosy and avoid any resurgence of the disease in our country, all health care workers, including community health workers should be re-oriented on leprosy identification, care, treatment and prevention. Health training colleges and medical schools should include leprosy in their curricula. Community awareness about leprosy should be intensified so that we achieve our goal of eradicating leprosy in Zambia.

Leprosy is a notifiable disease, I therefore, urge all health care workers to ensure that leprosy cases are notified and reported to the national level promptly.

Lastly, I welcome these guidelines, developed with the support and active involvement of all stakeholders including civil society organizations. I urge all public and private health institutions, cooperating and implementing partners, and civil society organizations to plan the implementation of leprosy activities based on these guidelines.

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Acknowledgements

The development of these guidelines was a result of the joint efforts of various organizations and institutions. The Ministry of Health extends its gratitude to the World Health Organization (Zambia) for their contribution towards the development of these guidelines.

The Ministry of Health further applauds the Directorate of Public Health for their stewardship and coordination roles, including the following members of the editorial team: Dr. Patrick Saili Lungu(NTLP Manager, MOH), Dr. Lastone Chitembo (WHO TB/HIV NPO), Dr. Rhehab Chimzizi (Senior TB Technical Advisor, USAID), Dr. Monde Muyoyeta (CIDRZ), Ms Charity Habeenzu (ZATULET), Dr. Owen Ngalamika (UTH, MOH), Mr. Graham K Samungole (TB Officer, NTLP, MOH), Mr. Morton Khunga (Chief TB Officer, MOH), Mr. Tindo Liboma (TB Officer, NTLP, MOH), Ms. Clara Kasapo (TB Officer, NTLP, MOH), Mr. Charles Mang'ombe (TB/Leprosy Officer, MOH), Dr. Sulani Nyimbili (Epidemiologist, NTLP, MOH), Mr. Amos Nota (TB Technical Specialist, USAID Eradicate TB Project) and Ms. Judith Mzyece (TB Laboratory Focal Point, NTLP, MOH).

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Abbreviations and Acronyms

BCG	Bacillus Calmette-Guerin
BI	Bacterial index
EHF	Eyes, Hands, Feet
ENL	Erythema nodosum leprosum
gm	gram
HIV/AIDS	Human Immunodeficiency Virus / Acquired Immunodeficiency Syndrome
ILEP	The International Federation of Anti-Leprosy Associations
MB	multibacillary
mg	milligram
MDT	multidrug therapy
PB	paucibacillary
PT	posterior tibial nerve
SDR	single-dose rifampicin
SSS	Slit-skin smear
SWP	Strong, Weak, Paralyzed
TID	three times a day
TB	tuberculosis
VMT	Voluntary Muscle Test
WHO	World Health Organization

1.0 Introduction

Leprosy is an infectious disease caused by mycobacterium leprae (M. leprae), an acid-fast, rod-shaped bacillus. The disease mainly affects the skin, peripheral nerves, mucosa of the upper respiratory tract and the eyes. Leprosy is also known as Hansen's Disease, named after the scientist Dr. Gerhard Armaur Hansen from Norway, who discovered the bacillus in 1873.

In 2008 another species of mycobacterium, Mycobacterium lepromatous was discovered as a cause of a rare form of the disease known as Diffuse Lepromatous Leprosy (DLL). These guidelines, however, only address management of leprosy caused by Mycobacterium leprae.

Untreated Multibacillary (MB) leprosy is the main source of infection and may expel over 100,000,000 bacilli in nasal discharge daily. A susceptible host who inhales the air droplets containing theses bacilli, may develop the disease. Leprosy is curable and treatment in the early stages can prevent disability.

Leprosy is most common in warm, wet areas in the tropics and subtropics. Leprosy is common in Asia, Africa, Central and South America. Ninety percent (90%) of the global leprosy cases are found in developing countries, including Zambia. The disease affects all age groups, sexes, racial groups and social levels. The average incubation period for leprosy is three to five years but can be up to 36 years. The reason for this lengthy incubation period is due to host immunity and slow multiplication of the bacillus .

National level statistics indicate that Zambia has reached the leprosy elimination target according to the World Health Organization (WHO) recommendation of less than one case per ten thousand population implying it is not a public health problem. However, there are still some areas in Zambia with high prevalence of leprosy compounded by poor data recording and surveillance.

2.0 Definitions used in Leprosy

- The **incidence** is the total number of new cases of leprosy that appear in a population during a given period.
- The **incidence rate** is the total number of new cases of leprosy that appear during a given period per 10 000 population.
- **Detection** is the identification, diagnosis and registration of all new cases in a population during a given time period.
- **Detection rate** is the identification, diagnosis and registration of all new cases in a population during a given period per 10,000 population.
- **Prevalence** is the number of all active cases on treatment in a population at a certain point in time.
- **Prevalence rate** is the number of all cases on treatment in a population at a certain point in time per 10 000 population.

3.0 Epidemiology

- Leprosy is most prevalent in tropical countries. Over the past 35 years, global prevalence had increased from 8.4 cases per 10,000 in 1966 to a peak of 12 per 10,000 population in 1985. There has been a steady decline with below 1 case per 10,000 in 2000.

- 107 out of 122 countries considered endemic in 1985 have reached elimination at the country level. At the end of 2000 leprosy was a public health problem only in 15 countries. Leprosy is largely concentrated in 6 countries accounting for 88% cases and these countries are India, Brazil, Nepal, Myanmar Madagascar and Mozambique.

- There were 208,619 new leprosy cases registered globally in 2018 according to World Health Organization official figures from 159 countries from the six WHO Regions. Based on the184,212 cases at the end of 2018, prevalence rate corresponds to approximately 0.2/10, 000.

- In 2019, Zambia registered a total of 208 new cases of leprosy. See table below

Table 1 : New cases of Leprosy by province in 2019

PROVINCE	Quarter 1		Quarter 2		Quarter 3		Quarter 4		Annual Total		Total
	PB	*MB*	*PB*	*MB*	*PB*	*MB*	*PB*	*MB*	*PB*	*MB*	
Western	2	10	0	25	2	7	1	8	5	50	**55**
Central	1	7	0	9	0	6	2	16	3	38	**41**
Northern	1	4	0	8	3	4	1	10	5	26	**31**
Copperbelt	0	1	1	7	5	6	0	1	6	15	**21**
Southern	2	2	2	2	0	5	0	1	4	10	**14**
Luapula	0	2	0	2	0	6	0	1	0	11	**11**
Lusaka	0	0	0	7	0	3	0	1	0	11	**11**
North Western	0	2	0	3	0	4	0	3	0	12	**12**
Eastern	0	1	0	3	0	0	0	2	0	6	**6**
Muchinga	0	0	0	2	0	3	0	1	0	6	**6**
TOTAL	**6**	**29**	**3**	**68**	**10**	**44**	**4**	**44**	**23**	**185**	**208**

3.1 Characteristics of the Bacillus

·Rod shaped, Acid fast Bacilli, (as it retains the red colour after stained with Ziehl Neelsen over a blue background)

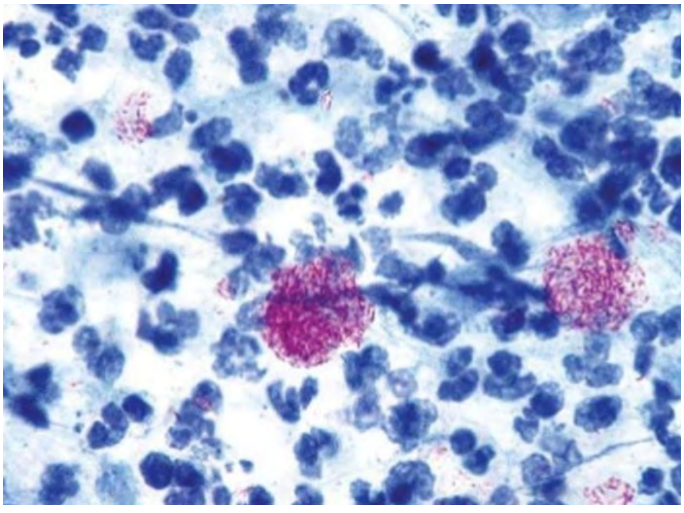

Figure 1: Acid fast bacilli Mycobacterium leprae

- It is an intracellular organism that cannot be cultured and can only grow in the Nine- banded Armadillo(Dasypus novemcinctus) (see Figure 2 below)

Figure 2 : Nine-banded Armadillo

- The bacillus has affinity for the peripheral nerves (Schwann cells)
- Remains suspended in the air for a long time
- Can be killed by sunlight

4.0 Transmission

4.1 Source of infection:

- The infected human being is considered the only source of infection.
- Infection capacity of multibacillary leprosy is 4 -11 times higher than of Paucibacillary leprosy.
- On excretion from nasal secretions, M. Leprae will remain viable in air for longer periods.
- This prolonged survival makes airborne transmission a reasonable possibility.

4.2 Mode of transmission:

- For transmission to occur viable bacilli must leave the body of the patient and enter that of the contact
- Prolonged exposure or close contact are considered necessary for transmission to occur.
- However, in susceptible individuals even short duration of contact may occasionally cause the disease.
- Therefore, it is likely that the respiratory tract and the skin are commonly the route of entry.

5.0 Diagnosis of Leprosy

The diagnosis of leprosy is based on the presence of at least one of the three cardinal signs:

1. Definite loss of sensation in a pale (hypo pigmented) or reddish skin patch;
2. Thickened or enlarged peripheral nerve with loss of sensation and/or weakness of the muscles supplied by that nerve; or
3. Presence of acid-fast bacilli in a slit-skin smear. (confirmatory test)

5.1 Early symptoms of Leprosy

- Hypo pigmented skin patches

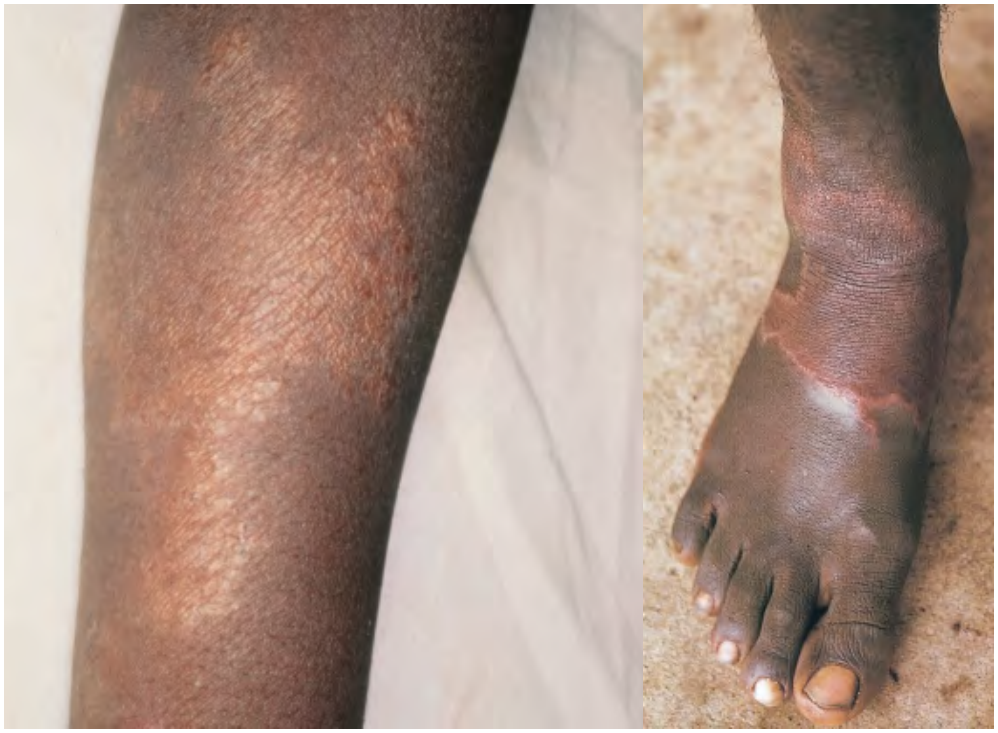

Figure 3 : Hypopigmented skin patches due to M. leprae

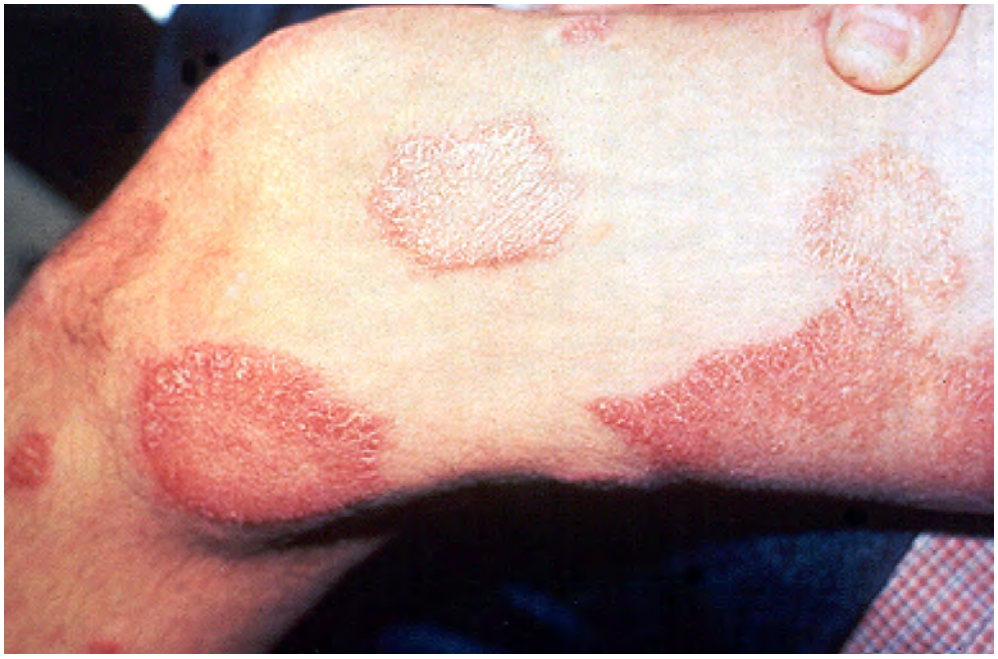

Figure 4 : Skin lesions on the thigh of a person with leprosy

- Numbness in the hands and feet
- Facial palsy
- Weakness in the hands and the feet
- Thickening of the skin especially on the face
- Nodules and plaques

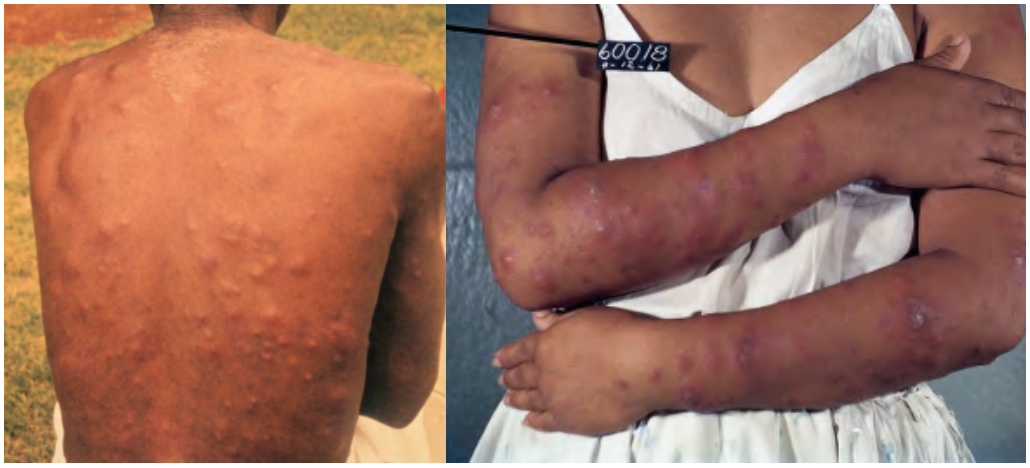

Figure 5 : Nodules and plaques due to M. leprae

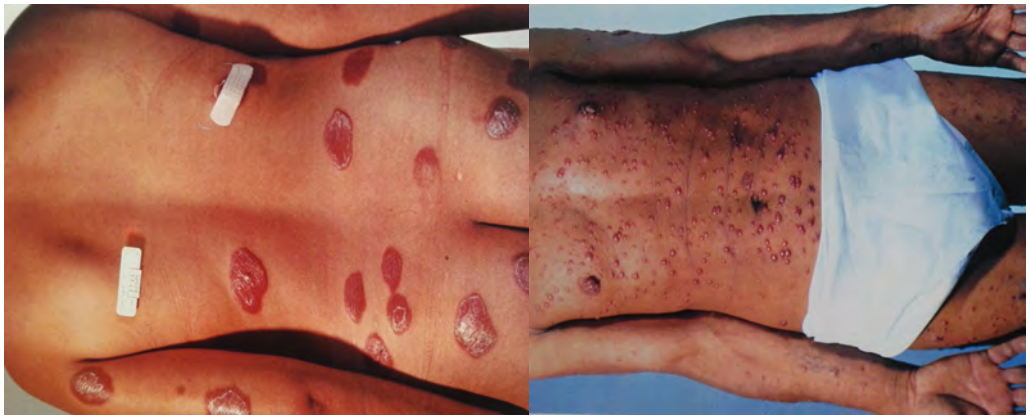

Figure 6 : Sharply demarcated reddish brown plaques and nodules

Figure 7 : Nodules and thickening of facial skin due to M. leprae (01)

Figure 8 : Nodules and skin thickening due to M. leprae (02)

5.2 Nerves commonly affected by Leprosy

- Supraorbital nerve - face.
- Greater auricular - neck.
- Upper radial - lateral upper arm.
- Upper ulna - near elbow medially.
- Superficial radial - near wrist.
- Lateral popliteal - Head of fibula.
- Posterior tibia below internal malleolus.

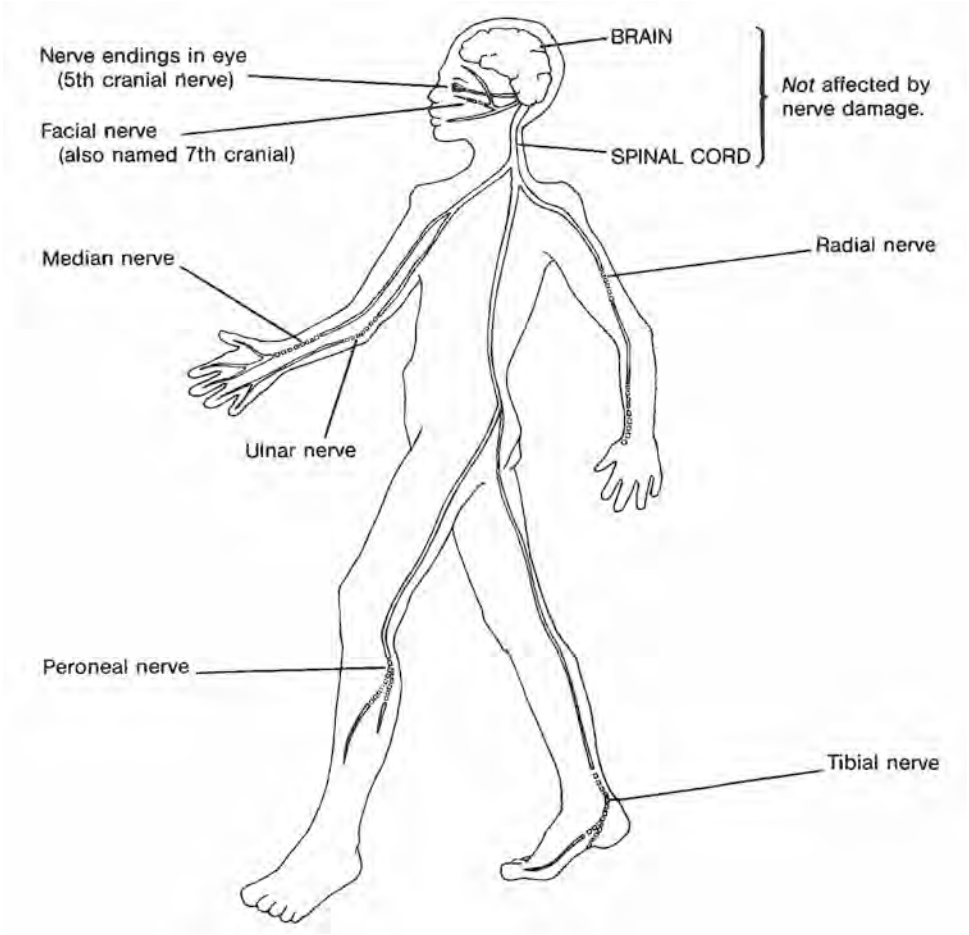

Figure 9 : Main nerves commonly affected by M. leprae

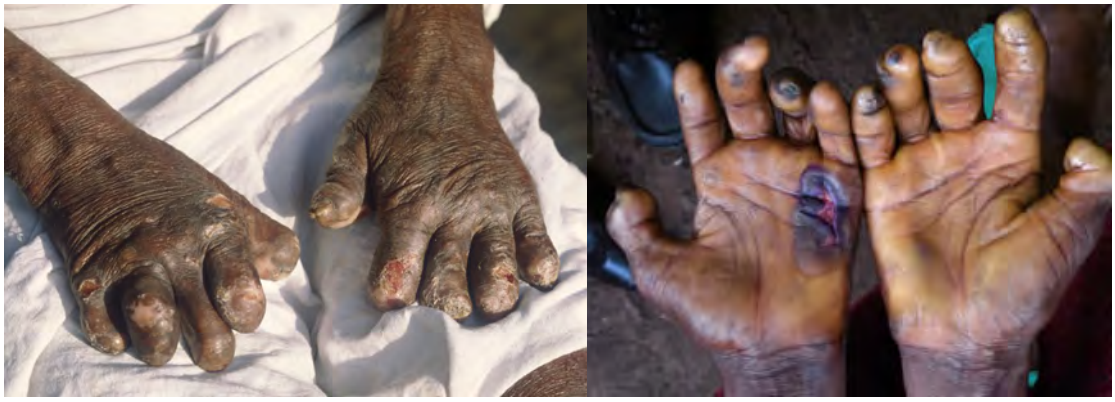

Figure 10 : Hands digit erosion

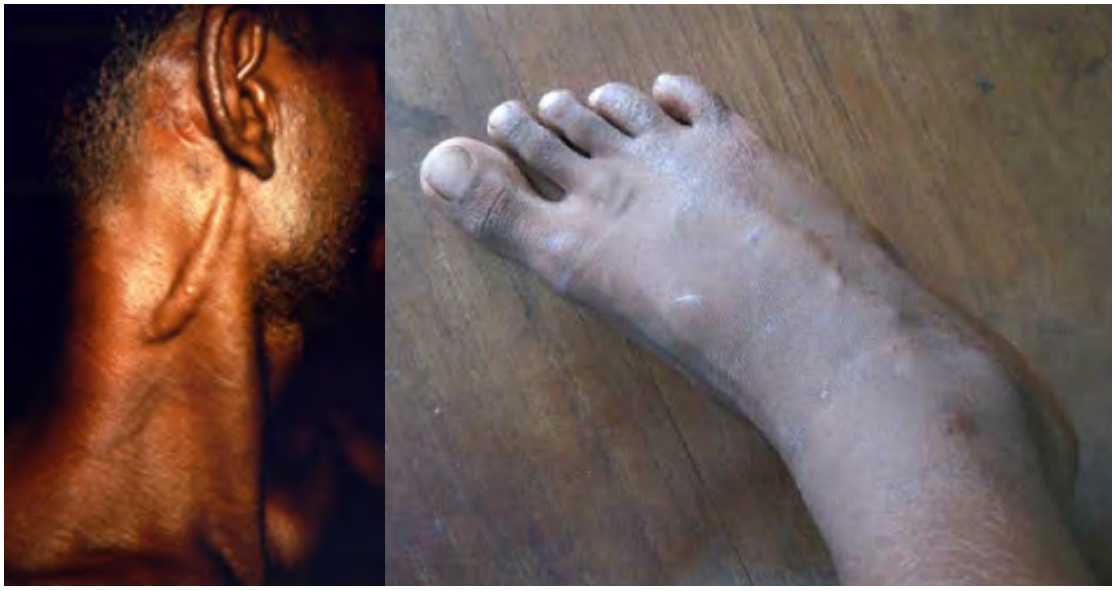

Figure 11 : Enlargement of nerves due to infection with M. leprae

5.3 Classification of Leprosy

The classification of leprosy patients is not due to the difference in the strains of the causative organisms. It can be classified based on number of skin lesions or number of bacilli on skin smears. The range of clinical manifestations depends on the infected individual's immune response to leprosy bacilli. There is only one strain of the mycobacterium leprae.

5.3.1 Importance of classification

- To determine the duration of treatment.
- To determine the prognosis in the disease course and possible complications.
- For research purposes.

5.3.2 Classification

- WHO recommends Leprosy patients to be classified as either Multibacillary (MB) or Paucibacillary (PB).

  If there is doubt about the classification, the patient should be classified as MB and be treated accordingly.

5.3.2.1 Paucibacillary (tuberculoid)
- 5 lesions.
- Lesions are asymmetrically distributed
- Definite loss of sensation on the lesions.
- Only ONE nerve trunk is enlarged.
- Negative Slit Skin Smear (SSS).

5.3.2.2 Multibacillary(lepromatuous)
- More than 5 lesions.
- Lesions are symmetrically distributed.
- Some degree of loss of sensation on the lesions.
- Many nerve trunks are enlarged.
- Positive Slit Skin Smear.

5.4 WHO Disability Grading

5.3.3.1 Hands and feet
- Grade 0: No anaesthesia, no visible deformity or damage
- Grade 1: Anaesthesia present, but no visible deformity or damage
- Grade 2: Visible deformity or damage present

5.3.3.2 Eyes
- Grade 0: No eye problem due to leprosy; no evidence of visual loss
- Grade 1: Eye problem due to leprosy present, but vision not severely affected as a result (vision 6/60 or better; can count fingers at six metres)
- Grade 2: Severe visual impairment (vision worse than 6/60; inability to count fingers at six metres)

5.5 Differential Diagnosis of Leprosy
Below is a list of differential diagnoses for Leprosy. However, the list is not exhaustive:

5.5.1 Macular lesions
- Birth mark
- Vitiligo
- Pityriasis alba
- Pityriasis rotunda
- Tinea versicolar
- Erythema dyschromicum(Ashy dermatosis)
- Localised scleroderma (Morphea)
- Lchtyosis vulgaris
- Post-inflammatory hypopigmentation
- Tinea corporis
- Granuloma multiforme
- Psoriasis
- Lupus vulgaris
- Discoid lupus erythematous 5.5.2 Nodular skin lesions
- Disseminated anergic cutaneous leishmaniasis
- Post kala-azar-dermal leishmaniasis
- Kaposi's sarcoma
- Neurofibromatosis

6.0 Treatment

6.1 Aims of treatment

- To cure the patient (using multi drug therapy)
- To render patient non-infectious and thus control the spread of leprosy
- To prevent the development of multi drug resistant leprosy

Drugs used in leprosy as recommended by WHO are a combination of rifampicin, clofazimine and dapsone (MDT). The duration of treatment for PB leprosy is 6 months and 12 months for MB leprosy.

Rifampicin:

- Bactericidal drug
- A single 600-mg monthly dose is almost as effective as daily rifampicin for treatment purposes
- Given once a month
- The slow multiplication rate of M. leprae (about once in 12 days) justifies the use of rifampicin as monthly therapy
- In this dosage it is almost nontoxic
- Patient must be warned that it will make the urine red for few hours after its intake

Clofazimine/Lamprene:

- Bactericidal and Bacteriostatic
- This is most active when administered daily,
- Is well tolerated and virtually nontoxic in the dosage used for MDT.
- The drug causes brownish-black discolouration and dryness of the skin but although this disappears within a few months after stopping treatment and this should be explained to patients starting the MDT regimen for MB leprosy.
- It also has anti-inflammatory activity and is used to treat type 2 Lepra reaction

Dapsone:

- Bacteriostatic; this is very safe in the dosage used in MDT, usually at a dose of 1-2 mg per kg/day
- Side effects are rare but the main one is allergic reaction, causing itchy skin rashes and exfoliative dermatitis. Therefore, patients known to be allergic to any of the sulpha drugs should not be given dapsone
- In a few cases, there is a feeling of 'heat' or difficulty in sleeping
- A mild haemolytic anaemia is common

6.2 Recommended Treatment Regimens

Table 2 : Recommended leprosy treatment regimens

Age group	Drug	Dosage and frequency	Duration (months)	
			MB	PB
Adult	Rifampicin	600 mg once a month	12	6
	Clofazimine	300 mg once a month and 50 mg daily		
	Dapsone	100 mg daily		
Children (10 14 years)	Rifampicin	450 mg once a month	12	6
	Clofazimine	150 mg once a month and 50 mg daily		
	Dapsone	50 mg daily		
Children <10 years old or <40 kg	Rifampicin	10 mg/kg once month	12	6
	Clofazimine	100 mg once a month, 50 mg twice weekly		
	Dapsone	2 mg/kg daily		

Guidelines for the diagnosis, treatment and prevention of leprosy © World Health Organization 2018

6.3 Treatment for drug-resistant leprosy

The World Health Organization Guidelines Development Group recommends for leprosy patients with rifampicin resistance to be treated using at least two of the following second-line drugs: clarithromycin, minocycline, or a quinolone (ofloxacin, levofloxacin or moxifloxacin), plus clofazimine daily for 6 months, followed by clofazimine plus one of the second-line drugs daily for an additional 18 months.

In case of rifampicin plus ofloxacin resistance, a quinolone should not be chosen; therefore, the recommended regimen is clarithromycin, minocycline and clofazimine for 6 months followed by clarithromycin or minocycline plus clofazimine for an additional 18 months. *

Table 3: Recommended Drug Resistant Leprosy regimens

Resistance type	Treatment	
	First 6 months (daily)	Next 18 months (daily)
Rifampicin resistance	Ofloxacin 400 mg* + minocycline 100 mg + clofazimine 50 mg	Ofloxacin 400 mg* OR minocycline 100 mg + clofazimine 50 mg
	Ofloxacin 400 mg* + clarithromycin 500 mg + clofazimine 50 mg	Ofloxacin 400 mg* + clofazimine 50 mg
Rifampicin and ofloxacin resistance	Clarithromycin 500 mg + minocycline 100 mg + clofazimine 50 mg	Clarithromycin 500 mg OR minocycline 100 mg + clofazimine 50 mg

**Guidelines for the diagnosis, treatment and prevention of leprosy© World Health Organization 2018*

**Ofloxacin 400 mg can be replaced by levofloxacin 500 mg OR moxifloxacin 400 mg*

6.4 Reactions in Leprosy

The term reaction is used to describe the appearance of signs and symptoms of acute inflammation in the lesions of a patient with leprosy. It has to be pointed out that reactions is not something peculiar to leprosy, but that it is an immunological response of the body with the following signs of inflammation;-

- Redness.
- Raised temperature.
- Pain.
- Swelling and loss of function.

6.4.1 Types of Reactions;-

There are two types of reactions:

- Reversal reaction - Type 1.
- Erythema Nodosum Leprosum (ENL) – Type 2. ENL is more common in MB Leprosy

NB: It is much more urgent to recognize and treat the lepra reaction so as to prevent nerve damage than to decide which type the reaction is; the treatment of nerve damage is much the same whichever type of reaction is present.

6.4.2 Who can get leprosy Reactions?

- Almost any person with leprosy is at risk of getting a reaction with only one two patches and no nerve involvement.
- 25- 30% leprosy patients experience reactions or nerve damage at one time or another.

6.4.3 Precipitating factors:-

- Inter- current infections (viral, malaria).
- Anaemia.
- Mental and physical stress.
- Puberty.
- Pregnancy.
- Parturition.
- Surgical interventions.

6.4.4 Identification of people at risk:-

- Patient within 6-8 months of starting MDT.
- Pregnant and lactating mothers.
- Adolescents (10-25 years of age).
- Patients with other infections like TB.
- Patients with lesions near or around the eye.

6.4.5 When do reactions occur?

- Before treatment.
- At diagnosis.
- During treatment.
- After treatment has been completed.

6.4.6 Reversal Reaction

6.4.6.1 Recognition of reversal reaction

Site	*Severity*	
	Mild	***Severe***
Skin	• Swelling and redness • burning in patches	• Swelling, redness and pain in patches with fever and generalised body malaise and possible ulceration
Nerves	• No pain, sometimes tingling or burning, • No loss of function. • Duration less than 6 weeks	• Pain and tenderness • Loss of function. • Duration longer than 6 weeks
Skin and nerves together	• Swelling in patches, • Some nerves tenderness • No loss of function. • Duration less than 6 weeks	• Swelling, redness, pain, ulceration of the patches and/or oedema of hands and feet • Pain, tenderness and loss function of the nerve trunks • Duration more than 6 weeks

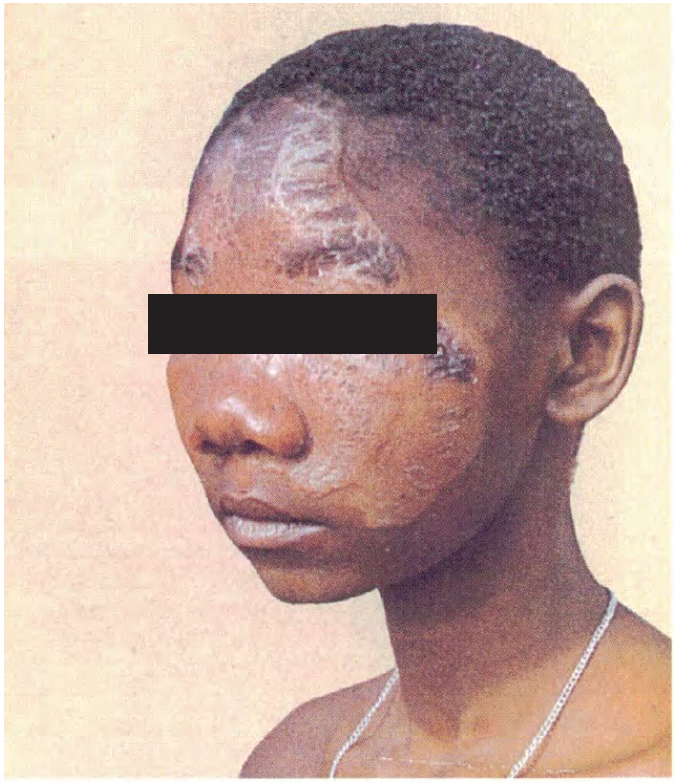

Fig. 136 *Reversal reaction* in a patient with borderline (BT) leprosy

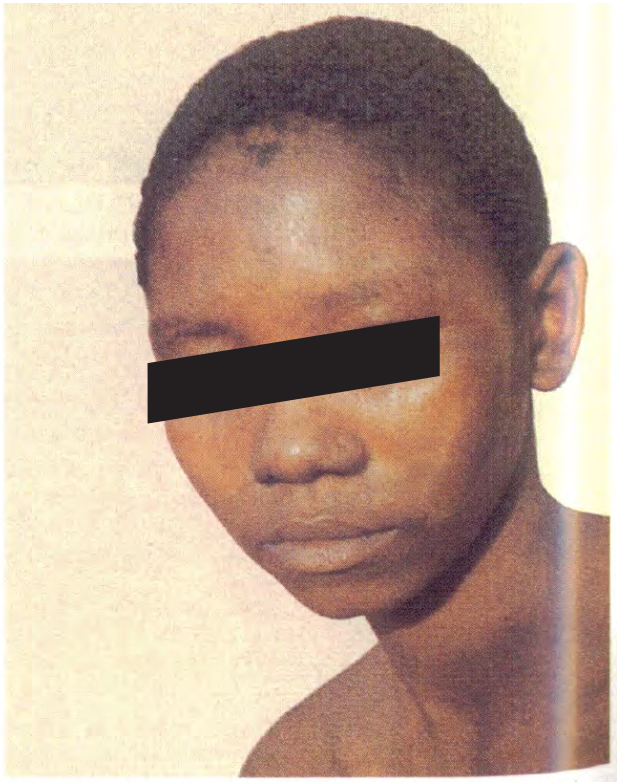

Fig. 137 The same patient (Fig. 136) after treatment with prednisolone

6.4.6.2 Treatment for mild reactions in the field

1. Continue anti-leprosy treatment, do not lower the dosage
2. Give an analgesic (Aspirin, Butazolidine etc.)
3. if there is nerve tenderness, rest the affected limb (sling or splint the arm)
4. See the patient again after 1-2 weeks and tell him to return at once should the reaction become more severe

6.4.6.3 Treatment of severe Reaction

1. Continue anti-leprosy treatment

2. Start treatment with steroids(prednisolone)- no other drugs are effective
   - 40mg daily for 2 weeks
   - 30mg daily for 2 weeks
   - 20mg daily for 2 weeks
   - 15mg daily for 2 weeks
   - 10mg daily for 2 weeks
   - 5mg daily for 2 weeks

3. Severe reaction is an emergency. The patient should be transferred to the specialised centres as soon as possible.

4. If a 'flare-up occurs the dosage may be raised again by one step for a further two weeks.

6.4.7 Erythema nodosum leprosum (ENL)

This reaction occurs in patients with MB Leprosy, and usually starts 6 months or more after the start of anti-leprosy treatment. However, reactions may occur earlier after the start of Anti Leprosy treatment.

6.4.7.1 Cause of the reaction:-

The reaction is caused by an allergic response of the body to leprosy bacilli, particularly when they have been killed and are breaking up. It is not directly due to MDT. This reaction occurs most commonly in areas of the body where leprosy bacilli are present such as the skin, nerves, eyes, testicles and lymph nodes. It can also, however, occur in the joints and kidneys. The signs of this reaction are local inflammation; that is pain, swelling and redness; and general malaise and fever.

6.4.7.2 Recognition of ENL

Site	*Mild*	*Severe*
Skin	• Few crops of red, tender nodules • Few nodules present at one time • Mild fever and malaise • A few nodules may ulcerate	• Many crops of red, tender nodules • Many nodules present at one time • Severe fever and malaise • Many nodules may ulcerate. • Patient very ill
Nerves	• No pain • Tenderness and/or swelling • No loss of function	• Pain and/or tenderness • Swelling and/or loss of function
Eyes	• There are no "Mild" eyes reactions	• Pain • Reduction in vision • Redness around limbus
Testicles	• No pain, tenderness • No swelling	• Pain, tenderness and swelling

6.4.7.3 General principles for treatment of ENL

a) Control acute pain
b) Halt eye damage
c) Bed rest
d) Treatment of specific symptoms appropriately

6.4.7.4 Mild ENL:-

a) Continue anti-leprosy treatment in full dose. If there is tenderness of nerves rest of the affected limb.
b) Analgesia (Aspirin, Panadol) when necessary
c) Chloroquin 250mg TID for 1-2 weeks
d) Stibophen

6.4.7.5 Severe ENL:-

a) Continue anti-leprosy treatment in full dose.
b) Refer the patient to the hospital if the reaction involves nerves or eyes.
c) Corticosteroids as indicated in type one reaction.
d) Lamprene in addition to MDT.
e) Thalidomide: start 200-400mg/day and reduce to 50- 100mg/day after one or two weeks.

6.5 Deformities and their Management

6.5.1 Definitions

Deformity is defined as any deviation from normal appearance of any part/s of the body. It may or may not be accompanied by disability.

Disability means the inability of a person to do normal work.
Disability and deformity primarily result directly or indirectly from function loss of peripheral nerves supplying eyes, hands and/or feet.

6.5.2 Factors associated with deformity

Type of Disease	Deformities/disabilities are commonly found in patients with MB leprosy.
Duration of disease	The longer the disease lasts, the more prone to developing deformities.
Nerve thickening	Nerve thickening has often been associated with deformities due to functional loss of the organ being supplied by that nerve.
Age	Deformities due to Leprosy are more frequent in the 20 to 50-year age-group. However, they may develop in any age-group.
Sex	Deformities are less common in women than in men.
Occupation	Deformities and disabilities are more commonly found among manual workers, since they are more frequently exposed to injuries and infections.

6.5.3 Prevention of Disabilities

The most effective way to prevent disabilities is to prevent primary nerve damage. This implies: -

- Early diagnosis
- Early identification of reactions
- Drug treatment
- Early referral of Patients with reactions to the next level for further management.

6.5.4 Components of minimizing disabilities

- Emphasis on good communication- listening to patients, listening to colleagues and encouragement of patients by staff and staff by their seniors.
- Emphasis on patients role in self-help:-
  - Convince the patient that care is useful
  - Encourage patient to avoid skin cracks and wounds
  - Help patients to understand that minimising of disabilities is totally their responsibility, but the health worker is willing to render support

6.5.5 Care of Eyes

- Patient should avoid eye dryness e.g.
  - Check daily for signs of irritation.
  - Wash the face
  - Think blink
  - Exercise

Prevention of disabilities is teamwork of health workers and the patients. The patient MUST be taught to UNDERSTAND that he plays a major role in preventing disabilities by:

- Thinking before doing an activity
- Taking extra care of the hands and feet
- Inspecting daily on hands and feet for warm spots
- Soaking, oiling and exercising-Voluntary Muscle Testing and Sensory Testing.
- Correct footwear.

7.0 Recording and Reporting

Recording and Reporting is very important in the Leprosy programme for the capturing of operational Data. Accurate Recording and Reporting is important at all health service delivery points and data captured should be transmitted to higher level. Data captured should be used for planning purposes at all levels.

7.1 What should the programme contain?

The purposes of a leprosy control programme are reduction in the incidence of leprosy in the programme area by:

a. Case finding
b. Case holding
c. Case management leading to arrest or cure of the disease.

7.1.1 Case finding:-

a) Number of patients on register at the beginning of the period under review according to age groups, classification and disability proportion.
b) Number of newly registered patients: -
   - New cases
   - Previously treated
   - Transferred in- according to age groups, classification and disability proportion.

7.1.2 Case holding: -

a) Patients transferred out, died and lost from control according age groups, classification and disability proportion.
b) Attendance rate for Lepromatous and Tuberculoid cases.

7.1.3 Case management

a) Patients cured (disease arrested) and discharged.
b) Patients developing complication; reactions
c) Non improvement or worsening of condition (suspected drug resistance)
d) Relapses (reactivation after discharge)
e) Hospital admission
f) Disability prevention and acre; health Education, follow-up, exercises, shoe making programme.

Reasons for Not Attending Appointments and Actions to be Taken

Reasons for missing appointments	*Actions to be taken*
• Patient has moved out of your area	• Record this information in the treatment register
• Patient is taking treatment at another **health centre**	• Record this information in the treatment register
• No confidence in the treatment services	• Improve the quality of services to regain the community and patients' confidence.
• Patient had unpleasant side effects which is attributed to the treatment	• It is important to reassure the patient if it's a minor side effect and refer if it's a major side effect for further investigations and management.
• Non–availability of services	• Make efforts to establish services and inform the community.
• Patient thinks that his/her condition has cleared completely	• Assess the patient and review the records to confirm whether the patient is cured or not. • Assessment of the patient should be done clinically or Slit Skin Smear where possible.

8.0 Myths and Misconceptions of Leprosy

- A curse from God.
- Patients considered to be unclean.
- Patients believed to be practicing witchcraft.
- People believe that Leprosy is incurable.
- People believe that Leprosy can be transmitted by handshake.
- People believe that having sex worsens the disease.

9.0 Prevention of Leprosy

9.1 Prophylaxis

Leprosy is associated with important clinical and social consequences. Zambia as a country has adopted the recommendation to give prophylaxis to contacts of new leprosy patients to curb the further spread of the disease.

The guidelines recommend the use of single-dose rifampicin (SDR) as preventive treatment for adult and child (2 years of age and above) contacts of leprosy patients, after excluding leprosy and tuberculosis (TB) disease and in the absence of other contraindications. Before giving prophylaxis to the contacts, ensure that you try and get consent of the index case to disclose his/her disease to the contacts.

Because Zambia is a high burden country for Mycobacterium Tuberculosis, caution must be exercised. MTB disease must be ruled out before administration of SDR.

Rifampicin is the drug of choice. Recommended dosage schedules for Single Dose Rifampicin (SDR) are given in Table below.

Rifampicin dose for single-dose rifampicin (SDR)

Age/weight	Rifampicin single dose
15 years and above	600 mg
10 – 14 years	450 mg
Children 6 – 9 years (weight ≥20 kg)	300 mg
Children <20 kg (≥2 years)	10 – 15 mg/kg

9.2 Vaccination

BCG at birth is effective at reducing the risk of leprosy; therefore, its use as a preventative measure should be maintained.

10.0 Community Engagement in Leprosy

10.1 Community screening

Trained Community Health Workers (CHWs) are able to identify presumptive leprosy cases in the community and are very important in leprosy control. After identifying a case their next role is to refer. At community level the CHWs are able to detect a presumptive leprosy case when a person has one or more of the following signs and symptoms:

- Presence of pale (lighter than normal skin) or copper coloured skin patches or red patches. These patches are dry, non-itchy or there may be loss of hairs
- Numbness or impairment or loss of sensation on the hands and or feet – with thickening of peripheral nerves
- Weakness and difficulty in normal movement of fingers/thumb/wrist/ toes/ankles or eyelids
- Painless injuries, blisters, burns or ulcers in hands and feet
- Deformities such as clawing of fingers/ thumb, clawing of toes, high stepping gait due to foot -drop or inability to close eyes properly.

10.2 Role of the community in Prevention of Disabilities & Rehabilitation

There are many ways in which the complications of leprosy can be minimized by practicing good self-care at home. People need to be informed clearly about the actions they can take at home that are appropriate for their particular situation. The health worker may be the main source of advice, but others may be recruited to help:

- Family members can help and encourage the person to do what is needed on a regular basis.
- Other people affected by leprosy can show how they have been able to look after themselves at home. Self-care groups have been able to look after themselves at home. Self-care groups have been started in some communities. A number of people with self-care needs meet together regularly to discuss the practicalities of self-care. These groups are often surprisingly supportive and can be very motivating for members.

10.3 Self-Care Groups (SCG)

A short description of Self-Care Groups is given here. In annex 2 a description is given on principles and advantages of a self-care group.

Definition

A self-care group is a group of people affected by leprosy trying to solve their problems due to leprosy.

Objective

The general objective is to prevent or reduce disabilities in their members.

Specific objective

- To enable members to support each other in finding solutions for their own (physical, psychological, or economic) problems related to leprosy
- To encourage group members in using locally available materials for their treatment
- To monitor the participant efficiently and effectively
- To refer promptly for special care (for instance reconstructive surgery, rehabilitation)
- To increase the self-esteem and self-confidence of the members in order to be able to participate more actively in society
- To decrease fear for leprosy among the participants, their family and involved staff

10.4 Community Leprosy Prevention

Without identifying all infectious cases in the community Leprosy will continue to spread among the population. The following can help to reduce the spread of leprosy:

- Demand creation for community to seek early diagnosis and treatment
- Community Health education to raise suspicion of leprosy by the community members
- Community Capacity building on basic facts about leprosy, signs and symptoms, and mode of transmission will improve early diagnosis and treatment.
- Community knowledge that leprosy disease is curable will reduce stigma and discrimination
- Community sensitization on the importance of single dose rifampicin chemoprophylaxis

11.0 Annexes

Annex 1: Documents Used in Leprosy Recording and Reporting.

QUARTERLY LEPROSY STATISTICAL REPORT AND DRUG ORDER FORM.									
Name of Clinic:	District:								
District Population:	Quarter/Year								
Name of Reporting Officer:	Designation								
Date:									
1. Registered by the end of the Previous Quarter.		ADULT		CHILDREN		**Total**			
		MB	PB	MB	PB				
	Total (1)								
2. New Cases detected during this Quarter									
		ADULT		CHILDREN		**Total**			
		MB	PB	MB	PB				
	Total (2)								
New Child cases - Age breakup									
	MB	**PB**	**Total**						
New cases ≤= 5 years of age									
New cases between 6-15 years of age									
New cases by gender									
	Male	**Female**	**Total**	**% Female**					
New cases with grade 2 disabilities									
	Adult	**Children**	**Total**						
% of grade 2 disabilities									
Foreign born cases									
New foreign born cases		**% foreign born cases**							
Retreatment cases									
	ADULT		**CHILDREN**						
	MB	**PB**	**MB**	**PB**	**Total**				
Number of relapses detected									
All other retreatment cases									
3. Removed from Register during the Quarter of Report.	**ADULT**		**CHILDREN**						
	MB	**PB**	**MB**	**PB**	**Total**				
Treatment completed (Cured)									
Died									
Transferred out									
Treatment not completed									
Total (3)									
4. Cases registered for treatment at the end of Quarter (including new and retreatment cases)									
	ADULT		**CHILDREN**						
	MB	**PB**	**MB**	**PB**	**Total**				
Type I and Type II Reactions in leprosy									
	ADULT		**CHILDREN**						
	MB	**PB**	**MB**	**PB**	**Total**				
Number of patients treated for Type 1 (Reversal reaction) during the Quarter									
Number of patients treated for Type 2 (ENL reaction) during the Quarter									
Treatment outcome for patients									
New MB cases who started treatment									
Of them, how many completed treatment within 18 months ?		MB treatment							
Of them, how many were 'lost to follow-up' ?		MB lost to follow up							
New PB cases who started treatment									
Of them, how many completed treatment within 9 months ?		PB treatment							
Of them, how many were 'lost to follow-up' ?		PB lost to follow up							
ANTI-LEPROSY DRUG STOCK DURING THE PERIOD AND ORDER FOR NEXT QUARTER (In Blisters)									
BLISTERS	In Stock	Received	Issued	Balance	Required				
MB (adult)									
PB (adult)									
MB (child)									
PB (child)									

LEPROSY REGISTER

Serial No.	District No.	Name in Full	Sex M/F	Age	Address	Classification MB/PB	Date Start Treatment	Disability grade at start of treatment				Category of Patient			
									E	H	F	New	Relapse after MDT	Transfer In	Treatment Resumed
								L							
								R							
								L							
								R							
								L							
								R							
								L							
								R							
								L							
								R							
								L							
								R							
								L							
								R							
								L							
								R							

TREATMENT RECEIVED															TREATMENT OUTCOME					Disability at end of treatment				Remarks
Year	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Extra	Total MDT	Treatment Completed	Default	Died	Trans Out	Othe r		E	H	F	
																				L				
																				R				
																				L				
																				R				
																				L				
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Annex 2: Principle of Self Care Groups (SCG)

The main principle of the SCG is that members participate in all aspects of the group. They should be encouraged to decide about organizational matters within the group or topics to be discussed. Ideally the facilitator of the group only guides the activities during a meeting.

In a SCG, it is the members who prevent and reduce disabilities, not the facilitator. The members are supposed to practice self-care daily at home by using local materials. They should use the group meetings to control their improvements and to exchange experiences.

Advantages of Self Care Groups

Coming together in a group to approach similar problems brings many advantages:

- The understanding of the members about self-care will increase, because special time is reserved for explanations, discussions and practice
- Better understanding will then contribute to independent and confident management of disabilities by each member at home
- The peer pressure in the group helps them to be serious about practicing self-care at home
- Difficulties can be solved directly; problems can be discussed together, and experiences exchanged.
- Sharing problems may lessen the burden of individual members
- In a relaxed atmosphere of the group, asking and talking will be easier than it might be during limited consultation time with the health worker in the health center. For example, further ideas concerning socio-economic issues can be developed
- Helping and supporting each other gives people a good feeling about themselves and increases self-confidence
- The burden of wound healing is reduced in terms of work, funds and time

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*The functioning of Self Care Groups is described in manuals on SCG. The source chapter is **"Self-Care Groups: A manual for leprosy control programs"** (47 pages, including a DVD containing a 15 minute film about SCG), produced by the Ministry of Health Indonesia and Netherlands Leprosy Relief in 2004.*

Annex 3: Leprosy Appointment Card

Republic of Zambia
Ministry of Health

NATIONAL TB/LEPROSY PROGRAM, ZAMBIA
LEPROSY APPOINTMENT CARD

PATIENT CARD NUMBER:

.....

Name of the patient:

……

Sex: M/F Year of birth (or age):

……

Present address:

……

Permanent address:

……

Occupation;

……

Nationality:

……

Health Facility:

……

District:

……

Province:

……

Type of Leprosy: MB……..... PB…….....
Date of Diagnosis: ……
Date of Treatment Started:
……

Type of Patient

New ☐ Transferred in ☐
Relapse ☐ Treatment resumed ☐

TREATMENT RECEIVED												
Enter date below month of collection												
JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Total MDT

Next appointment date for drug collection												
Enter date												

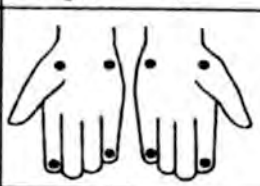
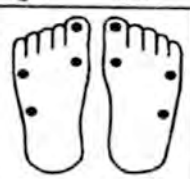
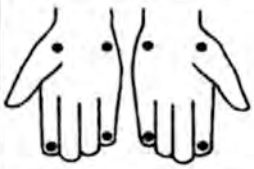
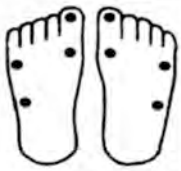
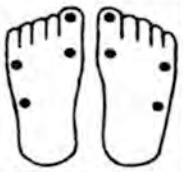
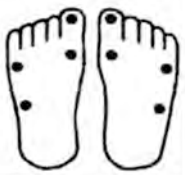
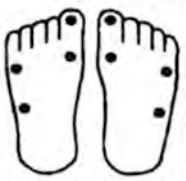
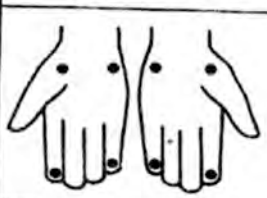
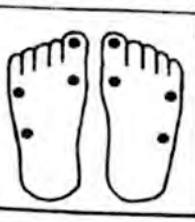
Date of Treatment completed:
……

Annex 4: Follow-up Examinations

Follow-up examinations

Key : S = Strong, W = Weak, P = Paralysed

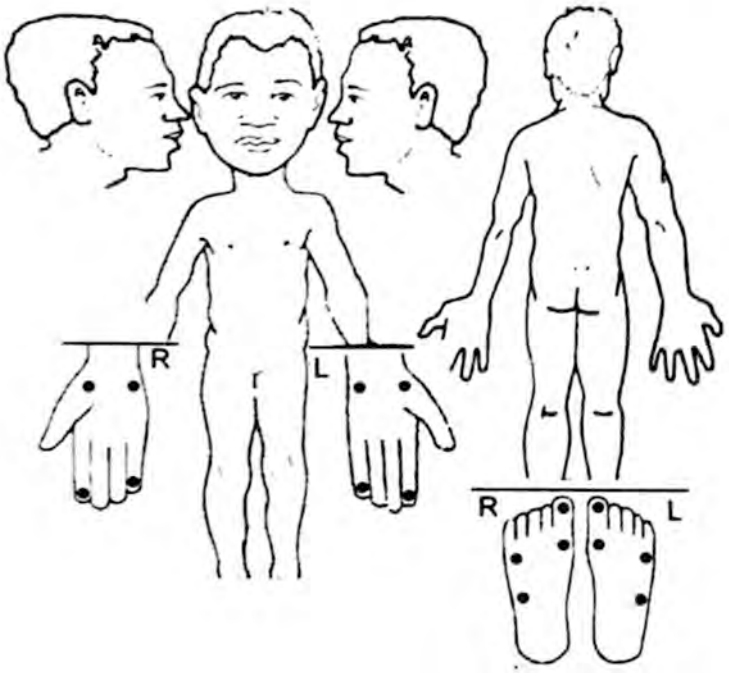
RIGHT SIDE	VMT	LEFT SIDE
	DATE	
	Eyelid Strength	
Yes / No	Blink Normal	Yes / No
	5th Finger in	
	Thumb up (palm upwards)	
	Wrist up	
	Foot up	

DATE	ST PALMS Right Left	SOLES Right Left	Verve function loss <6/12 Yes/No if answering 'yes' circle below
			Yes/No
			Yes/No
			Yes/No
			Yes/No
			Yes/No
			Yes/No

Collected dosages of MDT Enter the date in the box below the month of collection														
Year	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Extra	Total MDT

RFT Assessment

Date _____



R	VMT	L
	eyelid strength or gap mm	
	blin normal	
	5th finger in	
	thumb up	
	wrist up	
	foot up	

R	DISABILITY	L
	eye	
	hand	
	Foot	

R	VISUAL ACTIVITY	L
	EYE SENSATION	

Nerves	median		ulnar		peroneal		tibial	
	R	L	R	L	R	L	R	L
tender								

Summary on RFT

skin _____

nerves _____

eyes _____

hands _____

feet _____

Name examiner :

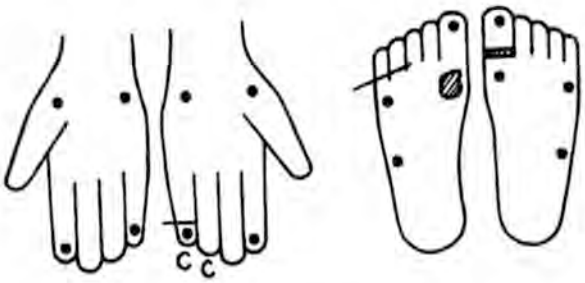
Function :

Signature :

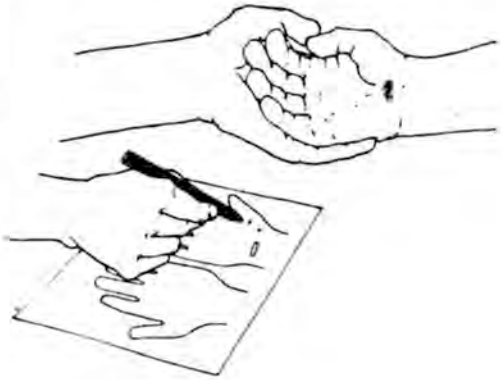
Annex 5: Testing and Recording Sensation, Strength of Hands and Feet

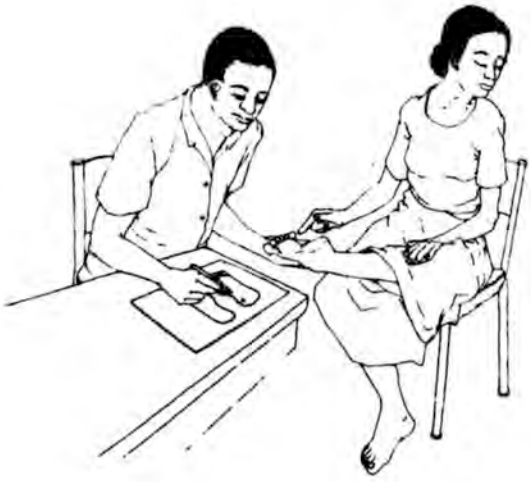
Hand and foot mapping, including sensation test (ST)

1 Mark any wounds, open cracks, clawing of digits and bone loss on the Leprosy Control Patient Record Card (PRC).



2 Support the patient's hand/foot so that fingers/ toes are well supported to prevent joint movement during the test.





3 Explain the test to the patient. Rehearse it with her. Then test.
A book should be held between the patient's eyes and hand so that she cannot see.
Dent the patient's skin in 1-2mm at dot sites using a ballpoint pen - asking the patient to point to the exact site whenever she feels.
The stimuli should be irregular in timing and placing.

Compare sensation of the little finger with that over the thumb and sensation of one hand with the other, to see if there is a difference. Compare findings with those shown on any earlier records.

Look for any **CHANGE**. Make sure that the change is real and not due to inaccuracies in testing.

Record : ✓ if the patient feels, ✗ if he does not

Voluntary Muscle Test (VMT) Hand and Foot record

Tests should be in two clear parts

1 **A check of range of movement** to see whether normal, reduced or absent due to muscle paralysis. Black arrows ➥ show movement required.

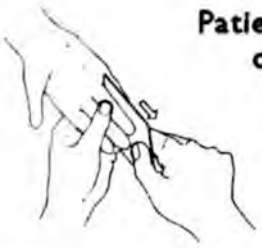
2 If movement is normal, **a test for resistance.** Press gently whilst asking the patient to maintain the position; resisting the pressure as strongly as possible. Then press gradually more firmly and judge whether resistance is normal, reduced or absent. White arrows ⇘ show where resistance is applied.

3 Always compare the right hand or foot with the left.

1 Is movement full?	2 Is resistance full?

Little Finger in . . . a test of ulnar nerve function

Hold these 3 fingers straight



Patient tries to hold a card between ring and little fingers. Assessor pulls card very gently.

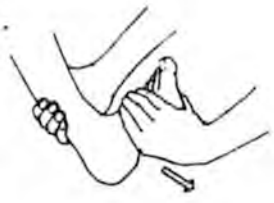
Straight Thumb up . . . a test of median nerve function

Patient moves thumb base fully out and across

Assessor resists at side of thumb (not at front or back)

Wrist up . . . a test of radial nerve function

Foot up . . . a test of peroneal nerve function



Annex 6: Testing and Recording of the Eyes

Blink Record

Observe the patient's blink as you talk with him while he is not thinking about his eyes. If he knows you are examining his eyes he may stop blinking.
Watch for these problems:

1 Lashes turned in and touching the eye

2 Patient never or rarely blinking in one or both eyes

3 Incomplete closure during blink (observe from the side and see if upper and lower lashes meet).

4 Redness and injury affecting the lower part of the eye not covered during blink.

5 Lower lid hanging away from the eye. Overflowing tears.

Record **Yes** or **No** beside **Blink Normal**. If answering **No**, list any problems seen and any patient complaints such as tearing, pain, burning sensation or vision loss, under **COMMENTS**

Eye Sensation Record

If blink is normal do not test sensation.
If lid closure or blink frequency are abnormal test sensation as shown.
Record by comment whether: normal/reduced/absent.

1 The assessor should wash hands before testing, then make a point out of a wisp of cotton wool and explain the test to the patient.

2 The patient should look to the opposite side and upwards as illustrated, covering other eye.

3 The assessor should:
- approach from the side
- touch the edge of the cornea, and
- observe and record whether the patients reaction (i.e. his eye sensation) is: normal, reduced or absent.

Vision Record

- Test sensation with good light falling on the assessor.
- Ask the patient to cover one eye, and then count the numbers of fingers that the assessor holds up.
- Test at 6 metres. If the patient cannot see at 6 metres, retest at 3 metres.

Record vision under COMMENTS e.g.

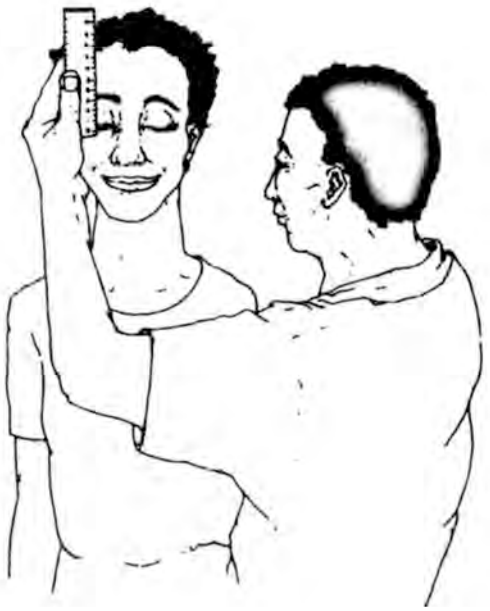
DATE	COMMENTS
25/6/92	*Vision counting fingers : Right eye - 3 metres , Left eye - 0 metres.*

WHO disability grading (eye):
Grade 2 = the patient cannot count fingers at 6 metres.

Voluntary Muscle Test (VMT) Lid Record

The assessor should test and record the strength of the action illustrated on the right. Lid gap is recorded in mm. on light closure to test facial nerve function.

- The patient is asked to close the eyes lightly as in sleep.
- The assessor measures and records any gap in mm
- If closure is normal he records "0 mm".



Annex 7: Self Care of Eyes with blink problems

1 AVOID INJURY THROUGHOUT THE DAY

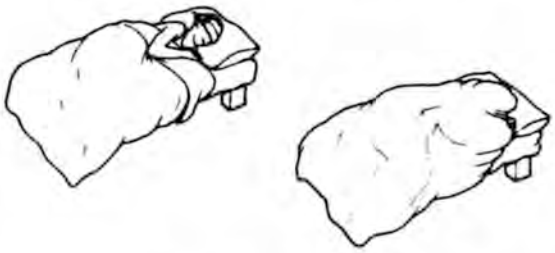
a) Blink consciously
Try to close with effort regularly

b) Think when the dust blows or when winnowing
Make 'think-and-blink' a habit

c) Protect your eyes from wind/dryness sun and heat

d) Keep your eyes clean and free from flies

e) Cover your eyes at night



2 FOLLOW THIS DAILY ROUTINE

a) Inspect once or twice daily for dirt and redness:
- using a mirror
- ask someone (relative) to inspect

b) Remove foreign bodies by repeated 'think-and-blink' or very gently with a clean cloth

3 HEAL WOUNDS QUICKLY

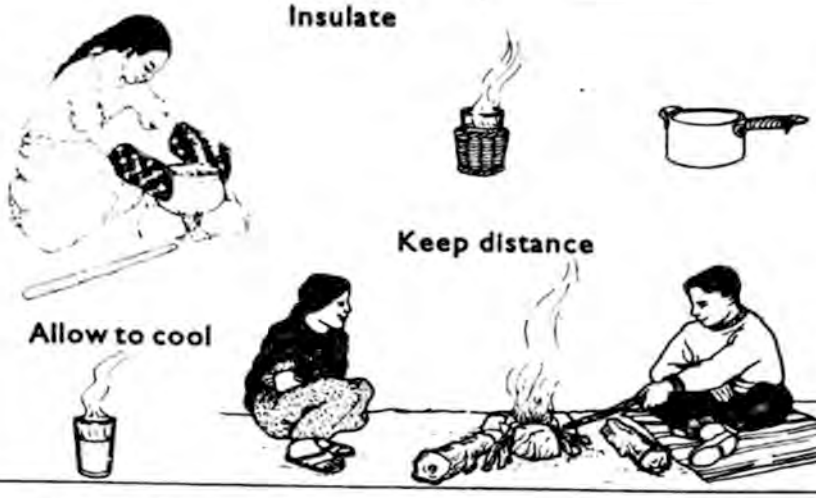
In case of irritation, vision change and/or injury:
a) Report to a health visitor

b) Apply any prescribed ointment without touching the eye with the tube

Annex 8: Self Care of Hands without feeling (01)

I AVOID INJURY THROUGHOUT THE DAY

Be aware of where feeling is present and lost

RECOGNISE DANGER	AVOID
a) Beware of hot objects 	Insulate  Keep distance Allow to cool
b) Beware of pressure build-up 	Change jobs often  Cushion tool handles  Stop for rests 
c) Beware of sharp or rough objects 	Smooth them  Keep distance  Use tough gloves 

Annex 8: Self Care of Hands without feeling (02)

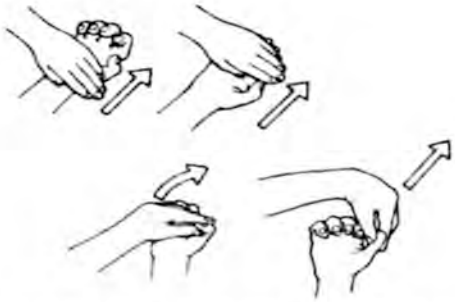
2 FOLLOW THIS DAILY ROUTINE

a) Inspect for:
- signs of injury
- hard skin

b) Soak

c) Rub off hard skin at:
- crack edges
- old wound sites

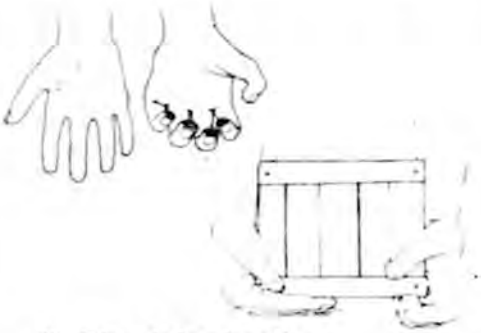
d) Excercise



e) Oil well

3 HEAL WOUNDS QUICKLY - AVOID RECURRENCE

a) Work out the wound cause



b) Plan how to avoid recurrence

c) Clean, Cover, Rest } the wound

d) Check for healing

e) If no improvement, replan care and report to health staff

Annex 9: Self Care of Feet Without Feeling (01)

1 AVOID INJURY THROUGHOUT THE DAY

Remember
most sole wounds are:
- at walking pressure sites
- caused by walking too much

Only by:
- walking less and/or
- using more protective shoe insoles

can you lessen risk of such injury

a) Learn how far you can walk without sole injury

b) Buy footwear with well cushioned insoles, hard undersoles and no nails or rough edges that would hurt your feet *

c) Avoid long walks

d) Keep feet well away from the fire
Non feeling skin burns easily

e) Avoid sitting cross-legged
risk of ankle bone injury

Annex 9: Self Care of Feet Without Feeling (02)

2 FOLLOW THIS DAILY ROUTINE

a) Inspect for:
- signs of injury
- hard skin

b) Soak

c) Rub off hard skin at:
- crack edges
- old wound sites

d) Oil well

e) Excercise

3 HEAL WOUNDS QUICKLY - AVOID RECURRENCE

a) Inspect to find wounds early
Work out cause and plan how to avoid recurrence

b) Clean and cover the wound

c) Rest the wound
Avoid pressure on it, imagine wound pain

d) Check for healing

e) If no improvement, replan care and report to health staff

CARE OF DROPPED FOOT

a) Use a footdrop support

b) Excercise

Annex 10: Protective Footwear

IMPLEMENTATION TASKS	SUPERVISON TASKS check the following:
Task 1 : Identify patients with sole sensory loss	Identification
Task 2 : Advise patients what footwear to buy and where to obtain it acording to managers guidelines	Availability Suitability
Task 3 : Train patients to understand : - what makes footwear protective - the importance of using protective footwear whenever walking or standing - possible sources - safe repair without nails or wire	Patients' usage of suitable footwear Repairs safe
Task 4 : Monitor usage, state of wear, sole wound recurrence Identify causes of non-usage (e.g. the footwear has become known as 'leprosy footwear', or is inappropriate for work), of poor wear or delay in obtaining footwear. Report footwear problems to supervisor. If sole wounds recur discuss with the patient any possibilities of improved insole cushioning and/or less walking	Monitor footwear usage, durability, safe repair. Solve problems or report to manager.

Possible sources of protective footwear include the following :

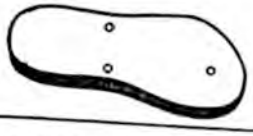
a) Sports footwear that incorporates good insole cushioning

b) Modified shop sandals Straps lengthened and soft insole added

c) Footwear can be deepened by 1 cm and a soft insole added by : local shoe makers, factories, hospital-workshop

d) Heel strap added to house slippers

Note. Soft slipper sole, with straps removed and the holes plugged with the same material, can be used as insoling material.



Use of protective, cushioned footwear by the majority needing it is the priority. Patients should be encouraged to buy their own unless destitute, using suitable local shop footwear. Where this is not available it may be necessary to organise distribution of footwear for sale to patients, through district leprosy supervisors. Where special shoe workshops exist, their staff can focus attention on modifying footwear for patients whose wounds recur with the simpler footwear.

1 Registration Data

Name and address of health facility:

……

Patient registration number: ……

Date of registration: ……

2 Personal Data

Name of the patient:

……

Sex: Male / Female Year of birth (or age): …… Place of birth:……..

Present address Permanent address Nationality:

……
Number of years of residence at present address:

……

Telephone number: ……

Occupation: ……
Marital status: Single/married/widow
Mode of detection: Contact survey/other surveys/voluntary/referred/ others (specify)

……
Previous treatment details (Specify drug regimen, duration and year of previous treatment):

……
Patient Status: New/relapse after PB MDT/relapse after MB MDT/transferred in/readmission after DDS monotherapy/treatment after default
Contact History (Any known leprosy patient within the family) – Yes / No
Details of household contacts
Serial number

1 ……

2 ……

3 ……

4 ……

5 ……

6 ……

3 Disease Status (Initial) – Leprosy

Presenting symptoms	Patch/es, visible impairment, reactions, other (specify)
Duration of presenting symptoms (in months & years)	

Numbers of skin patches	One		2 – 5		>5						
Reactions – please encircle (Yes/ No); If yes, please encircle (Type 1 / Type 2)											
Nerve status		Ulnar		Median		Radial		LPN		PT	
		R	L	R	L	R	L	R	L	R	L
	Thickening/ Pain/ Tenderness										

WHO disability grading (At the time of diagnosis)		Eye	Hand	Foot
	Right			
	Left			

WHO grading for the eyes:

Grade	Criteria
0	No severe visual impairment (can count fingers at 6 meters; visual acuity. 6:60). No visible impairments. Normal blink reflex.
1	Loss of blink reflex and/or inability to hold the eyelids closed against moderate force to open them. No severe visual impairment (can count fingers at 6 meters – visual acuity. 6:60).
2	Visible impairments to the eye, severe visual impairment (cannot count fingers at 6 meters – visual acuity, 6:60) and/or any other visible damage to the eye (regardless of cause).

WHO disability grading for the hands:

Grade	Criteria
0	Touch is felt on the palm of the hand; no muscle weakness or visible impairment.
1	At least 2 points on the hand where touch is not felt and/or muscle weakness is present on testing, but there is no visible impairment.
2	Visible impairment of the hand if it has occurred since the onset of loss of sensation and/or loss of muscle function due to leprosy

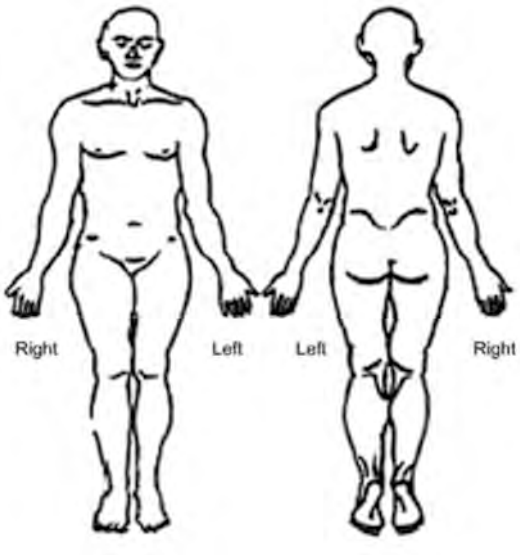
WHO disability grading for the feet:

Grade	Criteria
0	Awareness of sensation on the soles of feet; no muscle weakness or visible impairment.
1	At least 2 points on the foot where touch is not felt and/or muscle weakness is present (on testing) but there is no high stepping gait when the patient walks and there is no other visible impairment.
2	Visible impairment of the foot if it has occurred since the onset of loss of sensation and / or loss of muscle function due to leprosy. High stepping gait when the patient walks (obvious foot drop).

EHF Score (At the time of diagnosis)	

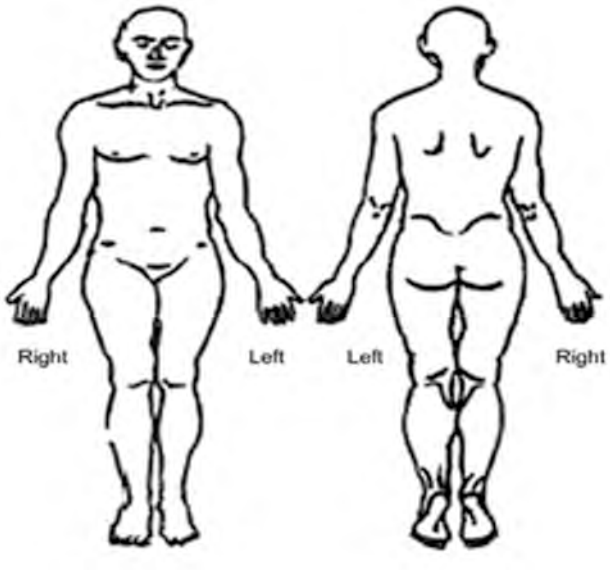
EHF Score is the sum of all the individual disability grades for the two eyes, two hands and two feet. Since the disability grade can be scored as either 0, 1 or 2, it follows that the EHF score ranges from 0 to 12. A score of 12 would indicate grade-2 disability of both eyes, both hands and both feet.

Body charting at start of treatment



Date of charting: .....

Body charting at completion of treatment



Date of charting: .....

4 Details of Other Conditions:

Medical History: (Mention Yes / No)

Diabetes	Hepatitis	Tuberculosis	HIV/AIDS	Any other disease: .....

Other conditions:

Pregnant	Drug allergy

General Physical Examination:

.....

.....

.....

.....

Body weight: .....

5 Treatment Details

Drug regimen prescribed (tick the appropriate column)	PB MDT	MB MDT	Any other regimen (specify)

Treatment Monthly Attendance (Schedule of Monthly Supervised Doses)

Dose	1	2	3	4	5	6
Date						
Dose	7	8	9	10	11	12
Date						

Date of treatment completion	
Outcome of treatment	(default, died, transferred out, change of classification)

6 Bacteriological Examination (Slit skin smear)

Date	
Number of sites taken	
Highest BI at any one site	
Average BI	

7 Assessment of Disability & Nerve Function

Voluntary Muscle Test

RIGHT							LEFT					
						← Date →						
						Vision (0,1,2)						
						Light closure lid gap in mm. Blink present / absent						
						Little finger out						
						Thumb up Wrist extension Foot up						
						Disability grade hands						
						Disability grade feet						
						Disability grade eyes						
On date												
Max. (WHO) Disability Grade												
EHF score												

Muscle power:	Score of vision: counting fingers at 6 meters
S = Strong W = Weak P = Paralysis W = Weak	0 = Normal 1 = Blurring vision 2 = Unable to count fingers

Sensory Testing

Date Assessor	PALM		SOLE		COMMENTS
	RIGHT 	LEFT 	RIGHT 	LEFT 	
	RIGHT 	LEFT 	RIGHT 	LEFT 	
	RIGHT 	LEFT 	RIGHT 	LEFT 	

Key: (Put these marks/icons on the site where lesion is seen)
U Sensation Present within 3 cm **S** Contracture ⬭ Scar/Callus ⊗ Wound ✝ Shortening Level
£ Anaesthesia \ Crack

8 Notes
Record reactions (indicate Type 1 or Type 2); complications; relapse, etc

Date	Notes (signs & symptoms; diagnosis; treatment details)

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