1. **GLOBAL LEPROSY PROGRAM & THE NATIONAL LEPROSY CONTROL PROGRAM ROAD MAP**

**A. The Global Leprosy Work**

The WHO-Western Pacific Regional Office (WPRO) announced in year 2000 the elimination of leprosy in most of its area of responsibility. Thirty seven countries, including the Philippines, and areas with an estimated population of 1.74 billion (2005) are under the responsibility of WPRO. The Philippines, thru the National Leprosy Control Program (NLCP) of the Department of Health (DOH) achieved national leprosy elimination in year 1998. A decade and a half later, the Philippines maintained its status of having eliminated leprosy in the WPRO. In such period the Global Leprosy Program anchored by WHO made a summary of its work:

The main principles of leprosy control, based on **timely detection of new cases and their treatment with effective chemotherapy, will not change over the coming years**. The emphasis will remain on sustaining the provisions for quality patient care that are equitably distributed, affordable and easily accessible. However, there is an **urgent need to bring about decisive and innovative changes to the organization of leprosy control and the working arrangements among all partners**, as well as to influence the attitude of health-care providers, persons affected by leprosy and their families, and the general public. In this regard WHO crafted the “Enhanced Global Strategy of Further Reducing the Disease Burden Due to Leprosy (2011-2015),” which has the following elements:

(1) sustaining political commitment at the national & local government levels, **strengthening routine & referral services within the integrated health systems**;

(2) using the rate of new cases with Grade-2 disabilities among new cases per 100,000 population as a key indicator to monitor progress in addition to the current list of indicators;

(3) implementing **innovative approaches for case-finding** in order to reduce the delay in diagnosis and the occurrence of Grade-2 disabilities among new cases, including examination of household contacts of cases at the time of diagnosis or within a time span close to the same and incorporating special efforts to improve control activities for populations living in difficult-to-access and suburban areas;

(4) Improving quality clinical services for diagnosis and for the management of acute and chronic complications, including prevention of disabilities/impairments, and **enhancing the provision of rehabilitation services through a well organized referral system**;

(5) supporting all initiatives **to promote community-based rehabilitation (CBR)** with special attention given to activities aimed at reducing stigma and discrimination against persons affected by leprosy and their families;

(6) ensuring supply of drugs for MDT free of cost and effective distribution systems in all endemic countries;

(7) establishing and maintaining a **surveillance system to prevent & limit development & transmission of resistance to anti-leprosy drugs**, and promoting development of more effective regimens to treat leprosy & its complications;

(8) Developing **sustainable training strategies at the global and national levels** to ensure availability of leprosy expertise in all endemic countries; and

(9) **exploring the use of chemoprophylaxis as a tool to prevent the occurrence of new leprosy cases** among household contacts; and

(10) fostering supportive working arrangements with all partners.

For a “world without leprosy,” WHO seeks **endorsement and commitment from everyone working towards reducing the disease burden** due to leprosy and its detrimental physical, social and economic consequences.

*GLOBAL LEPROSY PROGRAM & THE NLCP ROAD MAP – continuation*

**B. National Leprosy Control Program (NLCP) Road Map**

The status of leprosy, in the Philippines, has been considered to be not a public threat anymore; prompting the public health sector to triumphantly declare leprosy not a burden in the majority of our communities. In order to sustain the significant progress in reducing the disease burden, NLCP endeavors to scale up participation in the WHO’s call for *“…working towards the common goal of reducing the disease burden due to leprosy and its detrimental physical, social and economic consequences in order to move closer to achieving the common dream of* ***‘world without leprosy’*.**”

An average of 2,000 new leprosy cases has been registered each year at the national level. **Counting 2,000 individuals with leprosy each year, across the country, could still be a matter of concern though, especially to communities where these are being found**. Indeed, a challenge for the local executives and their health program service providers. In the assessment report regarding leprosy control in the Philippines, shows that there are still pockets of new cases detected at the sub-national level. The report showed the following significant indicators, such as:

Considering the Philippine epidemiological status of leprosy, **NLCP crafted its road map anchored on the Department of Health’s National Objectives for Health (2011-2016) – Universal Health Care- Kalusugang Pangkalahatan.** In this regard, NLCP’s strategic direction for the next five years (2013-2018), envisions the empowerment of the primary stakeholders. And the road map’s mission is **to ensure provision of comprehensive, integrated quality leprosy service at all levels of health care with the active participation of persons affected by leprosy**.

Operationally, NLCP’s road map pursues a **“region-specific focusing on priority activities at the local government units (LGUs),”** with the following features:

*GLOBAL LEPROSY PROGRAM & THE NLCP ROAD MAP – continuation*

|  |  |
| --- | --- |
| **CORE STRATEGIES** | **PRIORITY ACTIVITIES** |
| 1. Integration of Leprosy Services | 1.1 Reiteration of AO No. 5 s 2000 thru a Department Order1.2 Harmonize policies & guidelines with LGUs/other GOs/NGOs and other leprosy-interest groups/patients’ organization for integration of leprosy in the health service package. |
| 2. Referral System | 2. Each CHD/Province/Municipalities maintain a roster of referral units & patients needing further treatment & rehabilitation (Public-Private partnership) for posting at DOH Intranet |
| 3. Case detection and diagnosis | 3.1 Initial phase on mentoring of Health Workers on case detection/diagnosis/management3.2 CHDs to conduct intensified scheme thru cluster approach of rapid surveys in Ilocos Sur (CHD 1), Nueva Ecija (CHD3) in Luzon, Davao del Sur (CHD 11)and Lamitan City (ARMM) while the rest of the Regions do simultaneous target mapping3.3 Capability building among government hospitals and private medical centers to participate in NLCP activities3.4 Community Counseling by trained health workers including partner agencies , the academe, non government organizations & inter-faith based organization. (a) Training with NLCP designated core trainors (outsourced to PMHNAP) (b) Dermatologists (outsourced to PDS)3.4.1 Community Health Teams & Patients’ organizations to assist in case finding & advocacy campaign for self-reporting 3.4.2 Contac tracing activities for identified highly endemic regions for the 5 years based on patients contact records. |
| 4. Advocacy and IEC focusing on Stigma discrimination and Reduction | 4.1 prioritize LGU at all levels, from the provincial, municipal, barangay levels4.2 engage peoples organizations, academe, NGO interfaith organizations as partners in highly urbanized cities, work places, schools4.3 tap CHTs and empowered PWL especially in the rural areas as advocates for leprosy materials4.4 information drive using telehealth system and utilizing print media, radio, tv, komiks, reular tv program4.5 emphasis on stigma reduction |
| 5. POD, Self-Care & Rehabilitation | 5.1 Strengthen training on home-based self-care and prevention of deformity thru counseling & advocacy by frontline workers in partnership with People’s Organizations5.2 Reinforce rehabilitation services of Sanitaria and Partner Hospitals5.3 strengthen public health programs, especially in leprosy activities, in retained hospitals  |
| 6. Monitoring, Supervision & Evaluation | 6.1 Program Implementation Assessment and Individual Patient clinical progress by NCCCL for Luzon, Visayas, & Mindanao6.2 Collaborate with Global Leprosy Program for an external evaluator every three (3) years |
| 7. Recording & Reporting (Data Management) | 7.1 Mentoring on data management & analysis of results for program planning thru the National Epidemiological Center7.2 Establish databank from CHD/partner institutions to the national level per patient per Province/City/Municipality/Baranggay  |

In this road map the National Leprosy Control Program aims to:

* reduce by 50% the identified hyper-endemic municipalities by 2018; and
* increase the Treatment Completion Rate (TCR) or Cure Rate:
* MB at 74.8% to 90% by end of 2018; and
* PB at 88% to 95% by the end of 2018.

**II. CLINICAL ASPECT**

**Leprosy as a Disease**

Leprosy is a chronic, mildly communicable disease caused by Mycobacterium leprae *(M. Leprae)*, an acid-fast, rod-shaped bacillus. It mainly affects the skin, the peripheral nerves, the eyes and mucosa of the upper respiratory tract. The mode of transmission of the leprosy bacillus remains uncertain, but most investigators believe that *M. Leprae* is spread from person to person primarily as a nasal droplet infection. It has an average incubation period of three (3) to five (5) years.

**A. Management of Leprosy**

 As the disease continue to spread from an undiagnosed person with leprosy, new cases of leprosy will continue to occur to spread to another person living with PAL or contacts for a long period of time in the same place, They must be detected early and given complete Multi-Drug Therapy (MDT). Some of the new patient will demonstrate evidence of disability after diagnosis. In addition, all patients with nerve function impairment (NFI), both those on treatment & those already cured, will be at risk of developing additional impairments.

**A.1 Diagnosis and Classification**

The diagnosis of leprosy is straightforward in the majority of cases. However, a reasonable degree of certainty is required before making the diagnosis of leprosy. A suspect should not be registered as a case because the diagnosis of leprosy has adverse social consequences. Leprosy is diagnosed by finding at least one of the following cardinal signs:

 **(i) Definite loss of sensation / sensory deficit in a pale (hypo pigmented) or reddish skin patch.**

May be detected by touching the skin lightly (use something like a piece of cotton wool); ask the person to close his/her eyes, then touch the skin in different places, asking the person to point to each place that is touched; if the person cannot feel places within the skin patch, but does point to other places where the skin is normal, the diagnosis of leprosy is confirmed.

 **(ii) A thickened or enlarged peripheral nerve, with loss of sensation and/or weakness of the muscles supplied by that nerve or visible deformities characteristics of the disease.**

Examination of the nervesrequires experience and should be done by staff specifically trained to do it. Nerves which are commonly enlarged include:

* The **great auricular nerve** on the side of the neck, below the ear, is sometimes visibly enlarged: gently feel it to make sure it is the nerve (solid) and not one of the veins in the neck.
* The **ulnar nerve** at the elbow, the **radial cutaneous nerve** and **median nerve** at the wrist, **common peroneal nerve** at the knee and **posterior tibial nerve** at the ankle, should be gently palpated for enlargement. Definite nerve enlargement, **with loss of sensation or muscle weakness, is diagnostic of leprosy.**

*CLINICAL ASPECT – continuation*

Enlarged nerves or signs of nerve damage, such as numbness, tingling or weakness affecting hands or feet may occasionally occur without any obvious skin lesions. In such cases, known as neural leprosy, the disease can only be diagnosed by someone with experience in assessing nerve involvement in leprosy.

 **(iii) The presence of acid-fast bacilli in a slit skin smear (SSS).**

This is done only when clinical diagnosis is doubtful. The main objective is to prevent misclassification and wrong treatment. In most patients, a skin smear is not essential in the diagnosis of leprosy, but in some cases of early MB leprosy it may be the only conclusive sign of the disease. Leprosy skin smear services could be made available in selected units (such as those already doing sputum smears for the diagnosis of TB). The majority of people with leprosy have a negative smear.

If there is no loss of sensation in the skin lesions and no enlarged nerves, but suspicious signs, such as nodules or swellings on the face or earlobes, or infiltration of the skin, it is important to try and get a **skin smear test** done. In these circumstances a positive skin smear confirms the diagnosis of leprosy, while a negative result (in the absence of other cardinal signs) would, in practice, rule out leprosy. An alternative diagnosis should then be considered.

In PB cases (where the skin smear will be negative); loss of sensation is almost always detected. In MB cases, normal sensation may still be present in a proportion of cases, but these patients often have one or more enlarged nerves and a positive skin smear.

Include Visual Presentation referring to these 3 clinical signs

**Classification** in a routine program is therefore a practical step which divides leprosy patients into two treatment groups. A simple clinical rule is now used to divide patients into these two groups. The individual skin lesions are counted (this means that the whole body must be examined, including more private parts, to make an accurate count). Thus:

|  |  |  |
| --- | --- | --- |
| **Characteristics** | **Paucibacillary** **(PB)** | **Multibacillary** **(MB)** |
| Skin Lesions *(Includes: macule – flat lesion**Papule – raised lesion & nodule)* | * 1-5 lesions
* Asymmetrically distributed
* Definite loss of sensation
 | * More than 5 lesions
* Symmetrically distributed
* Loss of sensation
 |
| Nerve Damage*(Resulting in loss of sensation or weakness of muscles supplied by the affected nerve)* | None or one nerve trunk | Many nerve trunks |

*CLINICAL ASPECT – continuation*

Generally, the most difficult cases to diagnose are people with one or two pale patches, without loss of sensation or present other signs of leprosy. In these cases, there are three options:

* **Refer:** know where to refer cases that are difficult to diagnose; discuss cases with colleagues who have experience in managing leprosy;
* **Consider the possibility** of another skin disease and treat appropriately; and
* **Wait 3 – 6 months** and review the skin lesions again; if it really is leprosy, loss of sensation may now be found and MDT can be started.

**Flowchart for Diganosis and Classification:**

 Look for skin lesions compatible with leprosy

**SKIN LESION & SENSORY LOSS**

 & test for sensory loss---------------------------------------------

**LEPROSY**

Diagnose-----------------------------------------------------------------

When skin smears are not available

**MORE THAN FIVE**

**SKIN LESIONS**

**1-5 SKIN LESIONS**

or not dependable---------------------------

**MANY NERVE TRUNKS**

**NONE/ ONE**

**NERVE TRUNK**

Nerve Damage-------------------------------

**MB LEPROSY**

**PB LEPROSY**

Classify-----------------------------------------

When skin smears are available

**SMEAR POSITIVE**

**SMEAR NEGATIVE**

and dependable--------------------------------

Classify--------------------

**MORE THAN**

**FIVE LESIONS**

**1 - 5 LESIONS**

*CLINICAL ASPECT – continuation*

**MB LEPROSY**

**PB LEPROSY**

**A.2 Treatment**

A case of leprosy is a person with clinical signs of leprosy who requires chemotherapy – the Multi-Drug Therapy (MDT). When it is determined that a patient needs to be treated with MDT, the following steps must be taken:

 **Step 1 : Determine which type of MDT is required: PB or MB.**

 **Step 2 : Determine which dose level is required: adult or child.**

 **Step 3 : Before the start of the treatment include family members/treatment partner in**

 **orientation-counseling to indicate: the need for regular treatment; the possibility of complication of leprosy which may need other treatment; and that the health center or clinic is always ready to see them if they have any problems.**

 **Step 4 : Give the first dose of treatment and explain how to take treatment at home. No need to**

 **isolate the patient once treatment has started.**

Below is a classification of leprosy based on the clinical signs and symptoms as guide for prescribing the appropriate MDT regimen:

|  |  |
| --- | --- |
| **ADULT - MB Regimen (15 years old & above)** | **CHILD - MB Regimen (10-14 years old)** |
|  ***Monthly Treatment: Day 1*** Rifamficin 600 mg Clofazimine 300 mg Dapsone 100 mg ***Daily Treatment: Days 2-28*** Clofazimine 50 mg Dapsone 100 mg ***Duration Treatment:***  12 blister packs to be taken monthly within a period of 12 months |  ***Monthly Treatment: Day 1*** Rifamficin 450 mg Clofazimine 150 mg Dapsone 50 mg ***Daily Treatment: Days 2-28*** Clofazimine 50 mg every other day Dapsone 100 mg daily ***Duration Treatment:***  12 blister packs to be taken monthly within a period of 12 months |

|  |  |
| --- | --- |
| **ADULT - PB Regimen (15 years old & above)** | **CHILD - PB Regimen (10-14 years old)** |
|  ***Monthly Treatment: Day 1*** Rifamficin 600 mg Dapsone 100 mg ***Daily Treatment: Days 2-28*** Dapsone 100 mg ***Duration Treatment:*** 6 blister packs to be taken monthly within a period of 6 months |  ***Monthly Treatment: Day 1*** Rifamficin 450 mg Dapsone 50 mg ***Daily Treatment: Days 2-28*** Dapsone 50 mg ***Duration Treatment:***   6 blister packs to be taken monthly within a period of 6 months |

*CLINICAL ASPECT – continuation*

Insert pictures of blister packs

**The** **appropriate dose for children under ten (10) years of age can be decided on the basis of body weight**; such that:

* Rifampicin: 10 mg per kilogram body weight,
* Clofazimine: 1 mg per kilogram per body weight daily and 6 mg per kilogram monthly, and
* Dapsone: 2 mg per kilogram body weight daily.

The standard child blister pack may be broken up so that the appropriate dose is given to children under 10 years of age. Clofazimine can be spaced out as required. Rarely, it may be considered advisable to treat a patient with a high bacillary index (BI) for more than twelve (12) months. This decision may only be taken by specialists at referral units.

**A.2.1 Treatment Completion**

As long as accessibility is not a problem, the **drugs given once a month should be supervised** – in other words, the health worker should make sure that the drugs have actually been taken. The other drugs are taken at home. The supervised dose is most conveniently arranged by having the patient attend to the health center or clinic each month. This monthly visit is also useful for monitoring the regularity of treatment and to identify complications at an early stage.

A patient on PB regimen should take six blister packs within six (6) months, while an MB patient should take twelve blister packs within twelve (12) months. After consuming the prescribed number of blister packs, the patient should be considered as Treatment Completed or Cured.

If PB is reclassified to MB after six blister packs have been taken, continue treatment with MB regimen to complete twelve (12) blister packs within twelve (12) months.

A leprosy patient who has completed treatment should no longer be regarded as a case of leprosy, even if some sequelae of leprosy remain (e.g. ulcers or deformities).

**A.2.2 Defaulters Retrieval Action**

A defaulter is an individual who fails to collect two (2) blister packs during the treatment period. This should be indicated in the Leprosy Treatment Register under “Treatment Outcome”. If a patient returns after defaulting, examine him/her in the same way as you would examine a new patient and record your findings.

*CLINICAL ASPECT – continuation*

And if the returning patient was previously a PB case, count the number of patches to confirm the original classification:

* If the classification is now MB (more than five lesions), register the patient as a return from default, not as a new case, and treat with a full course of MB-MDT (12 blister packs);
* If the classification remains PB, register the patient as a return from default, not as a new case, and give a full course of PB-MDT (6 blister packs); and
* If there are signs of a reaction, manage appropriately.

If the returning patient was previously an MB case:

* Register the patient as a return from default, not as a new case and not as a relapse (a relapse can

 only occur after fully completing the first course of MDT);

* Treat with a full 12 blister pack- course of MB-MDT; and
* Remember that a reaction may mimic a return of the disease.

One who remains very irregular on treatment despite every effort on the part of the health staff, that person may be referred, so that a more experienced person can decide if further treatment is required and if so, how much.

**A.3 Multi-Drug Therapy (MDT)**

MDT is the accepted standard treatment for leprosy and is proven to be safe and effective. It was recommended by WHO in 1981 as a strategy to overcome the problem of Dapsoneresistance, cut transmission and ultimately control leprosy. The drugs are available free of charge to all who need it, and are all taken by mouth. It is a combination of two or more **anti-leprosy drugs that renders the patient non-infectious after the first dose of treatment. Upon completion of the first blister packs** 99.9% of bacilli are killed. Under no circumstance should leprosy be treated by a single drug.

**PB** cases need two drugs for six (6) months. **MB** cases need three drugs for twelve (12) months. Every effort must be made to ensure regularity, so that **PB cases complete their treatment in six (6) months and MB cases in twelve (12) months.**

**Patients with special needs:**

1. MDT is safe for women and their babies during pregnancy and breast-feeding, However, MDT should not be started during the first trimester of pregnancy;
2. MDT can be given to HIV-positive patients who are on anti-retroviral treatment and to patients on treatment for tuberculosis (TB). If a leprosy patient is treated for TB;
3. the MDT regimen should omit Rifampicin as long as the TB regimen contains Rifampicin.

*CLINICAL ASPECT – continuation*

**A.3.1 MDT Side Effects**

* Gastric irritation, discoloration of the skin and ichthyosis due to Clofazimine
* Dermatitis due to Dapsone
* Body malaise, joint and muscle pains due to Rifampicin
* Psychosis due to Dapsone (rare cases)

**IMPORTANT:**

**Advise routine laboratory examination if necessary before initiation of MDT to serve as baseline after thorough history and good physical examination**

1. **Hold treatment temporarily if jaundice is noticed. Once liver problem is treated, resume MDT.**
2. **i**f Dapsone is not well tolerated, an alternative drugs can be given such as: Rifampicin 600 mg, once a month + moxifloxacin 400 mg once a month + Clofazimine 300 mg once a month, then 50 mg daily in combination for 12 months) – for MB, For PB without Clofazimine. (refer to manual of training CPG)

**Other drugs are available for use if one or more of the standard drugs must be stopped, but serious adverse drug reactions are complex problems and must be managed by a specialist.**

**A.3.2 Contraindications to MDT**

* Cases of severe liver and kidney diseases
* Known severe drug hypersensitivity to any of the MDT drugs
* Severe anemia
* Dapsone should not be given to people with Sulfone sensitivity

**A.3.3 Drug Resistance**

Drug resistance is a potential problem when treatment has been irregular. Although resistance to Dapsone was a serious problem in the past, when leprosy was treated with Dapsone alone, clinically important drug resistance has not been reported with MDT.

Failure to respond to treatment, especially the treatment of a relapse, should lead to suspicion of drug resistance. Because of the seriousness of the development of drug resistance, any suspicious case should be thoroughly investigated at a referral center.

*CLINICAL ASPECT – continuation*

**A.3.4 Post MDT Instructions**

At the time the patients complete the prescribed treatment, the following information should be given:

1. Active-looking lesions maybe seen after treatment, further extension of MDT treatment is strictly discouraged. These lesions will gradually regress. However for MB cases this would indicate leprosy reaction.
2. Hyper-pigmentation will diminish and normal skin color will return within several months.
3. Deformity/disability can still occur even after cure. Disability prevention and management is the responsibility of both the patient and the health worker. Thus, the patient is encouraged to report to the health worker for annual evaluation for five years.
4. If new skin lesions, nerve tenderness and reactivation of existing lesion appear, the patient should report to the health center immediately for evaluation.

**A.3.5 Management and Storage of Blister Packs**

The blister packs are relatively easy to manage. Things to keep in mind are the following:

1. Keep them in a cool, dry place to prevent the coating of the Clofazimine and gelatin capsule of

 Rifampicin from dissolving.

2. Prevent the sharp corners of the blister pack from puncturing the thin aluminum sheet backing. This will cause moisture to enter the blister and result in deterioration of the capsule.

*CLINICAL ASPECT – continuation*

**A.4 Complications of Leprosy**

All patients who have completed treatment should be told about the early signs of reactions and relapse and to report promptly any such events to the rural health unit or clinic. If the patient has Sequelae due to the disease, such as disabilities, he/she should be encouraged to use the available facilities at the rural health unit or at the appropriate referral center.

**A.4.1 Reactions in Leprosy**

**Leprosy reactions** are episodes of sudden increase in the activity of the disease. This is due to an alteration in the immunological status of the patient. A reaction does not mean that the disease is getting worse, nor is the medication ineffective. Neither it is an allergic reaction to the medication. Reaction is the body’s response to the dead bacteria - killed by the body’s resistance or by the medication. **Leprosy reaction is the major cause of nerve damage and disability in leprosy.** During reaction there is increased risk of damage to nerves in the face, hands and feet. Nerve damage can be prevented by treating reactions quickly, promptly and adequately.

**MB cases with nerve damage present at the time of diagnosis are at high risk of further damage and should be examined regularly.** Monitor nerve function on a monthly basis (or at most every two months). Recent nerve function impairment (appearing within the last six months) is the most important sign of a reaction requiring treatment with steroids. **Patients with single skin lesions are unlikely to get reactions**, but most other patients have some risk of getting a reversal reaction; however, **MB cases with a high load of bacilli are at risk of developing an Erythema Nodosum Leprosum (ENL) reaction.**

The dead bacteria remain in the body for a period of time. Sometimes it takes years for the dead bacteria to be completely cleared from the body. **This is why reactions may develop after treatment is completed.** During this time, the body may react against these dead bacteria. Reactions cause redness or swelling of the skin spots already present, and painful nodules. There may be pain and swelling in the hands and feet, and painful nerves in the arms and legs. Fever and muscle aches may also occur. The eyes could be red and painful in some cases. Approximately thirty (30) percent of leprosy cases will have reactions during the course of the disease.

**Other factors that may precipitate reactions:**

* Mental and physical stress
* Pregnancy and lactation
* Surgical procedure
* Injuries
* Inter-current infection lie TB, dental and skin infection
* Anti-bacterial treatment

*CLINICAL ASPECT – continuation*

**A.4.1.1 Types of Leprosy Reaction**

There are two types of reaction:

1. Reversal Reaction (RR or Type 1); and
2. Erythema Nodosum Leprosum (ENL or Type 2).

Both types can occur before the start of treatment, during treatment, or after treatment has been completed. Reactions can be divided into mild or severe:

|  |  |  |
| --- | --- | --- |
| **Type/Classification** | **(Type 1)****Reversal Reaction (RR)** | **(Type 2)****Erythema Nodosum Leprosum (ENL)** |
| **Paucibacillary (PB) and Multibacillary (MB)** | **Multibacillary (MB) Only** |
|  Etiology | Change in delayed type hypersensitivity to M.leprae; there is also an associated increase in specific cell-mediated immunity in those patients undergoing a shift in classification whether slight or marked. | Immune complex disease |
|  Manifestations | Leprosy lesions themselves gradually become swollen and erythematous; (new lesion, nerve enlargement, acute neuritis may also appear); reaction lasts for weeks or months. Fever is rare. | Crops of painful papules developing in a few hours and lasting a few days. Successive crops may occur over many months/years. Fever and pain is present. |
|   Complications | Skin ulceration, paralysis, anesthesia | Neuritis, iritis, orchitis, lymph adenopathy, arthritis, proteinuria, ulcerating lesions |

*CLINICAL ASPECT – continuation*

**A.4.1.2 Management of Leprosy Reactions**

|  |  |  |
| --- | --- | --- |
| **Severity** | **Features** | **Management** |
|   Mild | * Mildly swollen lesions
* No nerve trunk involvement
* No ulcerated lesion
* Mild fever
 | * Give only analgesics & advise bed rest
* Do Nerve Function Assessment (NFA) every two (2) weeks
* Continue MDT
 |
|  Severe | Reversal Reaction:* Loss of nerve function – that is, loss of sensation or muscle weakness;
* Pain or tenderness in one or more nerves;
* Silent neuritis;
* A red, swollen skin patch on the face, or overlying another major nerve trunk;
* A skin lesion anywhere that becomes ulcerated; and
* Marked edema of the hands, feet or face.

ENL Reaction:* Pain or tenderness in one or more nerves, with or without loss of nerve function;
* Ulceration of ENL nodules;
* Pain and/ or redness of the eyes, with or without loss of visual acuity;
* Painful swelling of the testes (orchitis) or of the fingers (dactylitis), Nephritis
* Marked arthritis or lymphadenitis
 | * Give Prednisone by following the WHO recommended dosages:
* 40 mg/day during the 1st & 2nd week
* 30 mg/day during the 3rd & 4th week
* 20 mg/day during the 5th & 6th week
* 15 mg/day during the 7th & 8th week
* 10 mg/day during the 9th & 10th week
* 5 mg/day during the 11th & 12th week
* Give clofazimine *(if Prednisone is contraindicated)*
* 300 mg/day 1st month
* 200 mg/day 2nd month
* 100 mg/day 3rd month
* Continue MDT
* Do Nerve Function Assessment (NFA) every

 two (2) weeks* Patients with persistent, recurrent and non-responding reactions must be referred to the Sanitarium, or nearest government hospital for evaluation and management
 |
| **Note:** 1. Prednisone dose can be given as high as 60 mg depending upon the patient’s condition or computed at 1 mg/kg body weight.
2. Tapering of prednisone is done when there is marked improvement in patient’s condition.
3. For recurrent reactions, consider giving Clofazimine with low dose Prednisone (20-25 mg).
 |
| **Contraindications to Prednisone treatment:** |
| Absolute:* Peptic ulcer
* Psychosis or depression
* Acute or chronic bacterial infection
 | Relative:* Hypertension
* Diabetes mellitus
* Acute or chronic bacterial infection
* Glaucoma
* Pregnancy
* Lack of cooperation
* Mature cataract
* Age below fifteen years old
* Age above sixty years old
* Ulceration
 |

*CLINICAL ASPECT – continuation*

**A.4.2 Relapse in Leprosy**

**Relapse is defined as the re-occurrence of the disease at any time after the completion of a full course of treatment.** It is indicated by the appearance of new skin lesions and, in the case of an MB relapse, by evidence on a skin smear of an increase in BI of two or more units. It is difficult to be certain that a relapse has occurred, as new lesions may appear in leprosy reactions and in many programs evidence from smears is not available. If a full course of treatment has been taken properly, relapse is generally rare, although continued vigilance is important.

**Patients who start treatment with a high BI are more likely to suffer a relapse later; most relapses occur long after the treatment was given – sometimes over 10 years later.** Fortunately, the use of a combination of drugs has prevented the development of drug resistance in leprosy, so relapse cases can be treated effectively with the same drug regimen – MDT.

PB relapses are difficult to differentiate from reversal reactions. If there are signs of recent nerve damage, a reaction is very likely. The most useful distinguishing feature is the time that has passed since the person was treated: **if it is less than three years a reaction is most likely, while if it is more than three years, a relapse becomes more likely.**

A reaction may be treated with steroids, while a relapse will not be greatly affected by a course of steroids, so using steroids as a ‘therapeutic trial’ can help clarify the diagnosis. MB relapses should be investigated by using skin smears and histopathology, if at all possible.

*CLINICAL ASPECT – continuation*

**Distinguishing features between Reversal Reaction and Relapse:**

|  |  |  |
| --- | --- | --- |
| **Feature** | **Reversal Reaction** | **Relapse** |
| Onset | Sudden (within a few hours) | * Slow and insidious (weeks

 or months) |
| Time of onset | Generally occurs during chemotherapy or within six months of stopping treatment | * Generally occurs long after chemotherapy is discontinued, after an interval of at least six months
 |
| Old lesions | Some or all of the existing lesions become erythematous, shiny and swollen | * The margins of some may become erythematous
 |
| New lesions | Several new lesions may develop in some cases | * Few
 |
| Ulceration | Sometimes | * Unusual
 |
| Scaling | Lesions desquamate as they subside | * Absent
 |
| Nerve involvement | Common, many nerves may rapidly become painful and tender; disturbances develop rapidly | * A single nerve becomes involved; disturbances develop very slowly.
* Not affected.
 |
| General condition | Fever and malaise very unusual | * Lesions subside, but reappear
 |
| Response to corticosteroids | Excellent | * Corticosteroids are not indicated in relapse
 |
| Drug compliance | May have been good | * Poor
 |

*CLINICAL ASPECT – continuation*

**A.4.3 Unusual Complications in Leprosy**

Most late complications are easily prevented by MDT, so are rarely seen these days, but it is important to refer patients with unusual complications:

***Eye problems***

Leprosy can lead to blindness because of damage to the cornea, or due to damage to the internal structures of the eye. Refer to an eye specialist any patient who has *decreased vision, or has a red or painful eye*.

***Facial and other deformities***

The sunken nose, loss of eyebrows and the so-called ‘leonine’ face, which used to be characteristic of untreated MB leprosy, are cosmetic problems leading to severe stigma and discrimination. Fortunately, these are now rare. Plastic surgery is needed to correct these lesions.

***Internal medical conditions***

Chronic untreated leprosy (fortunately no longer seen) and chronic ENL reactions (still a serious complication in a small proportion of patients) may lead to internal medical complications. Such patients need referral to appropriate specialists.

***Psycho-social problems***

Psycho-social problems are related to widely-held beliefs and prejudices concerning leprosy and its underlying causes, not just to the problem of disability. **People with leprosy often develop self-stigma, low self-esteem and depression, as a result of rejection and hostility of family and community members.** Such negative attitudes are found also among staff in the health services, including doctors. These need to be addressed urgently. People with psycho-social problems may need to be referred for counselling or other help.

*CLINICAL ASPECT – continuation*

**A.5 Rehabilitation, Prevention and Management of Disabilities**

Leprosy is a disease of importance to the public health mainly because of the disability it causes. Disability is traditionally regarded as a result of impairment the loss of a function due to blindness, deafness, intellectual delay, physical difficulty or mental illness. Disability is also caused by society’s barriers which block and exclude non-disabled people.

The UN convention on the Rights of Persons with Disabilities (2006) recognizes that disability is an evolving concept resulting from the interaction between persons with impairments and attitudinal and environment barriers that hinder their full and effective participation in society on an equal basis with others.

**A.5.1 Leprosy Impairments & Deformities – Risks and Effects**

Leprosy results in a wide range of impairments, the most important of which is damage to peripheral nerves. Damage to peripheral nerves causes loss of sensory, motor and autonomic nerve function to the affected region, leading in turn to deformity, secondary deformity resulting from repeated trauma to as well as dryness and cracking of the skin, and inability to perform important activities of daily living. These consequences of nerve damage have an impact on the quality of life of those affected by the disease and also generate stigma.

The longer the delay between the appearance of the first symptoms of leprosy and the start of treatment, the more likely it is for nerve damage to occur. For this reason, every effort should be made to inform the public that the early diagnosis and treatment of leprosy prevents the occurrence of long-term complications.

**It is important to realize that significant nerve damage also occurs *during* *MDT and after* the patient has completed the full course of MDT; the risk declines steadily over the following three years.** MB cases with impaired nerve function at diagnosis are at much higher risk of nerve damage than other patients and therefore should be monitored more closely.

Recent nerve damage (present for less than six months) can usually be reversed by steroids. But, in many cases, **no further recovery can be expected if the damage occurred long ago**. These people need to learn how to minimize any adverse effects and how to prevent any worsening of the damage.

*CLINICAL ASPECT – continuation*

**Common Problems in Leprosy-related Disabilities:**

There are five common, physical problems affecting everyday life, faced by people who have had leprosy and, of course, many have to cope with more than one of these problems:

**(1) Problems with eye closure**

Lack of muscle strength to close the eye means that the cornea is constantly at risk of exposure. Damage from this exposure leads to ulceration of the cornea. These ulcers heal, but healed ulcers interfere with vision, leading eventually to blindness.

**(2) Loss of sensation in the hand**

Numbness is usually accompanied by loss of sweating and thereforeextreme dryness of the skin. Together, these lead to recurrent injury, cracking and ulceration. These, in turn, lead to chronic infection, stiffness and loss of tissue, making the hand more and more disabled.

**(3) Weakness and deformity of the hand**

Muscle weakness is a disability by itself, but over time, it often leads to the formation of contractures and fixed deformity.

**(4) Loss of sensation and ulceration of the foot**

The same problems of dryness, recurrent injury (especially from walking), cracking and ulceration occur in the insensitive foot. Late complications include chronic infection (osteomyelitis), sometimes necessitating amputation.

**(5) Weakness and deformity of the foot**

Muscle weakness affecting the toes is quite common, but it does not usually affect walking. A foot-drop leads to problems with walking.

*CLINICAL ASPECT – continuation*

**A.5.2 Prevention and Management of Nerve Damage**

Disabilities in leprosy are caused by damage to the peripheral nerves which are not detected by routine physical examination. The best ways to prevent disabilities are: *early diagnosis and prompt treatment with MDT and early recognition of signs of reactions and neuritis and symptoms of nerve involvement and prompt treatment with Prednisone.*

In the management of nerve damage, the following are essential:

(a) **A careful record of sensory and motor loss should be taken at regular intervals**, and again when justified by new pain or other change. This is one of the best monitors of the progress or regress of the disease as a whole. It also should form the basis of any type of intervention.

(b) **Quiet progressive sensory or motor loss is usually a sign of progressive disease.** It may indicate ineffectiveness of the drugs or lack of patient compliance and should be treated by a better program of anti-leprosy medication.

(c) **Acute and painful swelling of nerves may be a sign of acute inflammation and is often a manifestation of ENL reaction or reversal reaction and of the need to intervene with anti-inflammatory medication.** If repeated mapping of sensory and motor loss shows that the damage is spreading in spite of treatment by corticosteroids, then it may be necessary to operate to relieve pressure.

The components of prevention of impairments in leprosy program include measurement of impairment, detection and treatment of reactions, self-care, footwear and eye-care services.

**A.5.2.1 Nerve Function Assessment Procedures**

In the course of the disease, damage to the peripheral nerve may occur. However, early damage may not be detected thru routine physical examination, this can be achieved by doing a Nerve Function Assessment (NFA). In presence of nerve damage, the NFA can determine the severity of the nerve damage and the response of the disability to the intervention being done.

*CLINICAL ASPECT – continuation*

**A.5.2.1.a Sensory Testing**

**Sensation** is an important protective function of the body that guards against harmful stimuli and injury. The sensory fibers of the nerve trunks carry messages to the brain about sensation (touch, pressure, temperature and pain). Evaluating the skin and corneal sensation will alert us to the presence and extent of damage to the nerve supplying the area.

Examine carefully for any disability, recording the full results of the examination in the Patient Record Card for future reference. Thus:

***Eyes***

* Check the Visual Acuity of each eye separately, using a Snellen chart; if no chart is available, ask the person to count fingers at 6 meters; if the person cannot read the top line of the chart, or count fingers at 6 meters, they are visually impaired and have grade 2 disability in that eye.
* Look for an inability to close one or both eyes (lagophthalmos) and check for normal strength of eye closure.
* Look for any redness of the eye.

***Sensation in hands and feet***

Check the sensation in the palms of the hands and the soles of the feet, using a ballpoint pen:

* Explain the test to the patient.
* Ask them to close or cover their eyes.
* Touch the skin very lightly with the ballpoint.
* Ask the patient to point to the place you touched.
* Test a minimum of four points on each hand and foot.
* Note any areas where the pen is not felt.

**Note:** *In the palm of the hand, the side with the little finger is supplied by the* ***ulnar nerve.*** *The part with the thumb, index and middle fingers is supplied by the* ***median nerve.*** *The sole of the foot is supplied by the* ***posterior tibial nerve.***

**A.5.2.1.b Voluntary Muscle Testing (VMT)**

When motor nerves are affected, the specific muscles they innervate will become weak and, if neglected, paralyzed. Weak or paralyzed muscle causes various deformities (e.g. clawing, foot drop). Thus, we need to check the strength of the key muscles supplied by commonly involved nerves to determine if there is any impairment. The following key movements are tested to check for motor nerve function:

|  |  |
| --- | --- |
| **Nerve** | **Key Movement** |
| Facial | Tight eye closure |
| Ulnar | Little finger out |
| Median | Thumb up |
| Radial | Wrist up |
| Common Peroneal | Foot up |

*CLINICAL ASPECT – continuation*

The following are general guidelines for muscle testing:

1. Explain the procedure and its purpose to the patient.
2. Position him/her comfortably with the part to be tested well supported and stabilized.
3. Demonstrate the *complete range of motion* (ROM) the patient is expected to do. Each nerve has a key motion that tests its motor function.
4. Ask the patient to perform the complete range of motion.
5. If he can complete the full range of motion, full resistance should be applied.

 6. Grade the muscle tested according to *voluntary muscle testing* (VMT) grading scale.

|  |
| --- |
| **Voluntary Muscle Testing Grading Scale and the Corresponding Intervention** |
| **MUSCLE SWP****SCALE** | **RESISTANCE** | **INTERVENTION** |
| **Strong** | **Full** | **Means normal muscle.** No intervention |
| **Weak** | **Reduced** | **Means that muscle can move, but it is definitely weak.**Monitor patient for possible NFI If < 12 months: Prednisonetreatment and rest/splinting. |
| **Paralyzed** | **None** | **Means that the muscle cannot move at all.**If > 12 months:Range of Motion (ROM) exercises to prevent joint stiffness |

*CLINICAL ASPECT – continuation*

**A.5.2.1.c Disability Grading in Leprosy**

Every new case of leprosy must be assigned a Disability Grade, which shows the condition of the patient at diagnosis. The grade is 0, 1 or 2. Each eye, each hand and each foot is given its own grade, so the person actually has six grades, but the highest grade given is used as the Disability Grade for that patient.

**Grade 0** means **no disability found.**

**Grade 1** meansthat **loss of sensation** has been noted in the eye, hand or foot. Loss of sensation in the hand or foot means that one of the main peripheral nerve trunks has been damaged by leprosy and this is more common later in the disease than at diagnosis. It should not be confused with the loss of sensation in a skin patch, which is caused by local damageto the small nerves in the skin, and not to the main peripheral nerve trunks.

People with loss of sensation (grade 1 disability) on the soles of their feet, but no other abnormality, are at significant risk for developing plantar ulcers. People with grade 1 disability who routinely use appropriate shoes are protected from ulceration and have far fewer long-term problems with their feet. Therefore, measuring and recording grade 1 disability is an essential step in preventing damage to the feet of people affected by leprosy- it is therefore a key component of quality leprosy services.

**Grade 2** means **that visible damage or disability** is noted.

For the eyes, this includes the inability to close the eye fully or obvious redness of the eye (in leprosy, this is typically caused by either a corneal ulcer or by uveitis); visual impairment or blindness also gives a disability grade of 2.

For the hands and feet, visible damage includes wounds and ulcers, as well as deformity due to muscle weakness, such as a foot drop, or a claw hand. Loss of tissue, such as the loss or partial re-absorption of fingers or toes of fingers or toes is a late sign in leprosy, but it also gives a disability grade of 2 for that hand or foot.

*CLINICAL ASPECT – continuation*

**A.5.3 Rehabilitation in Leprosy Services**

Rehabilitation is a process that assists people with disabilities to develop or strengthen their physical, mental and social skills to meet their individual/collective specific skills.

Leprosy may lead to physical, functional, social and/or economic problems. Persons affected by leprosy, who are in need of rehabilitation, should have access to any existing (general) rehabilitation services. Similarly, where leprosy specific rehabilitation services are available, people with other disabilities should be given access. This facilitates integration, helps to break down stigma and promotes sustainability of rehabilitation services.

**A.5.3.1 Stigma Reduction in Leprosy**

Stigma is a negative response to human differences resulting into extreme disapproval of (or discontent with) a person on socially characteristic grounds that are perceived, and serve to distinguish them from other members of society. Distinctively, the stigma in leprosy is generated in the following process:



*CLINICAL ASPECT – continuation*

In fighting stigma a deliberate program of action could be implemented by the health centers in partnership with identified leprosy advocates. Essentially, the program of action could be integrated in the following aspects of public health care system:

**A.5.3.1.a Health Promotion (IEC Interventions)**

Health Promotion is the provision of information and/or education to individuals, families, and communities that-encourage family unity, community commitment, and traditional spirituality, that make positive contributions to their health status. Health Promotion is also the promotion of healthy ideas and concepts to motivate individuals to adopt healthy behaviors. Health promotion activities should be carried out for the general public, by any available means, including:

* Word of mouth/ testimonies, including experiences shared by former patients
* School activities, including quizzes and essay competitions with prizes
* Public talks, announcements, plays, puppet shows
* Posters and leaflets (less useful where literacy is low)
* Mass media, including newspapers and local radio TV, video, DVD.

In the case of leprosy, IEC activities aim to dispel the social stigma of leprosy, to seek the participation of the community especially in facilitating early self-reporting. An equally important part of IEC activities is education of the patients and their relatives regarding compliance with treatment, prevention of disability and self-care. There is evidence that educational approaches, especially participatory approaches, result in increased knowledge, change of behavior and reduction of stigma.

There are four key messages for the general public, which can be expressed in many different ways:

* **Leprosy is Curable**: It can be cured with MDT that are available in municipal health units and partner hospitals and are free-of-charge. It is a mildly- infectious disease but the risk of developing the disease is low. Unlike other bacterial diseases, transmission is through prolonged contact with an untreated patient.
* **No need to be feared**: The disease can be managed just like any other disease; affected people should not suffer any discrimination. Treated persons are no longer infectious after a month of treatment.
* **Disabilities are preventable**: Early detection with appropriate treatment helps to prevent disability from leprosy. Early signs of leprosy are pale or reddish skin patches, with loss of sensation.
* **Empower family and communities:** Affected people need the support and encouragement of their family and community, firstly, to take the MDT and any other treatment as prescribed, and secondly, to be able to live as normal a life as possible.

*CLINICAL ASPECT – continuation*

**A.5.3.1.b Community Counselling**

Community counseling is a form of counseling in which different counselors work with families, groups, couples and also communities in one way or the other way. It is a distinct form of counseling in which not only people are taught about right and wrong things but they are also shown the right ways so they can live their life peacefully and happily.

Contact between the community and treated patients, successful self-care, rehabilitation aimed at empowerment and counselling of patients to build up their self-esteem, also help to build a positive image of those affected by leprosy. At the same time, any negative attitudes, structures or arrangements in the health services should be addressed as a matter of urgency. Assurance of privacy and confidentiality, and treatment with dignity are particularly important.

In the delivery of its services, NLCP will endeavour to harness community counselling in the conduct of its patient assessment (Item B.1.2) and the monitoring of progress (Item B.1.4). As a major component of reducing the stigma the counselling interventions will include:

1. Increasing self-esteem and self-efficacy; and stimulating positive identities through **Empowerment**.

The goal is to give persons or people the power, capacity and access needed to change their own communities and influence their own destinies.

1. Improving social inclusion and social participation through **Community- Based Rehabilitation**.

CBR is most useful in social counselling as it facilitates community awareness-raising, and eventually enabling persons with leprosy-related disabilities form local self-help groups, parents’ groups and people’s organizations together with other significant persons with disabilities.

1. Encouraging self- confidence and a sense of personal value through **Participatory Learning and Action.**

Participation must be active, free and meaningful. It gives importance to the processes that provide a high degree of participation of as many stakeholders as possible. In this aspect of intervention a Rights-Based Approach (RBA) is an essential foundation. The RBA will help open eyes to the idea of integrating PWLs’ *“…right to a standard of living adequate for the health and well-being of himself and of his family, including food, clothing, housing and medical care and necessary social services…”*

*CLINICAL ASPECT – continuation*

**A.5.3.2 Physical Rehabilitation**

Physical rehabilitation includes physiotherapy and occupational therapy, orthotics and prosthetics services, assistive and protective devices and sometimes corrective surgery.

Self-care is the management, on a daily basis, of the effects of nerve function impairment, and is the responsibility of the individual. Thus, teaching and empowering patients in self-care is an effective activity, which should be part of the leprosy program. And the use of locally acceptable, appropriate footwear is a cost-effective intervention for those with loss of plantar sensation.

There are three areas under which useful interventions can be described:

**A.5.3.2.a Activities Which Can Be Done by the Person at Home**

**(a) Problems with eye closure:**

* + Inspect the eye in a mirror every day to look for redness.
	+ Learn to blink frequently to keep the eyes moist and exercise the lids.
	+ Wear a hat or sunglasses to prevent dust from getting into the eyes.
	+ Use a sheet or mosquito net to cover the head at night.

**(b) Problems with the hand:**

* Daily inspection for signs of injury.
* Loss of feeling is associated with dryness of the skin, so the insensitive hand must be soaked in water for about 30 minutes every day, to maintain skin elasticity. Use a rough stone to rub away callous, then use oil or Vaseline to prevent the skin from drying out.
* Use a clean cloth to cover any open wounds.
* If there is muscle weakness in the hand, passive stretching and active exercises will help to prevent contractures and may lead to some strengthening.

**(c) Problems with the foot:**

* + - Daily inspection for signs of injury.
		- Soak and oil the feet, as for the hands; use a rough stone to rub away callous.
		- Walk as little as possible; walk slowly and take frequent rests.
		- If ulcers are present, rest is essential: “All simple ulcers will heal, if given sufficient rest no ulcers will heal if not rested sufficiently.”
		- Use a clean cloth to cover open wounds.
		- If there is a foot-drop, passive stretching will help to prevent a contracture of the Achilles tendon.

*CLINICAL ASPECT – continuation*

**A.5.3.2.b Activities Which Can Be Done in the Peripheral Clinic**

General health workers cannot be taught all of these interventions as a routine. When they have a patient with certain disability problems, however, they can arrange to see that person with their supervisor, so that specific interventions relevant to that person can be discussed. Leprosy related disabilities are long-term problems and individual health workers should learn how to manage the specific problems seen in their own patients.

 **(a) Problems with eye closure:**

* + - Provide saline drops for use if the eyes are very dry
		- Treat conjunctivitis with antibiotics and an eye pad
		- Refer more serious eye problems to an eye clinic

**(b) Problems with the hand:**

* + - Review, guide and refer if required

**(c) Problems with the foot:**

* + - Organize appropriate footwear
		- Review, guide and refer if required

*CLINICAL ASPECT – continuation*

**A.5.3.2.c Interventions which can usually only be done at a referral center**

**(a) Problems with the eyes:**

* + - Any acute eye problem should be managed at an eye clinic.
		- Corrective surgery may be helpful in severe cases of lagophthalmos.
		- Remember that cataract is the most common cause of blindness in elderly people, whether or not they have leprosy; leprosy does not prevent routine cataract surgery.

**(b) Problems with the hand:**

* + - Help the person adapt tools to avoid injury to insensitive hands.
		- Remove thick callous and trim ulcers with a scalpel blade.
		- If there is weakness or a contracture, make a splint to wear at night.
		- An invasive infection (the hand is hot, red and swollen) is an emergency and must be referred for intensive antibiotic treatment and surgery.
		- Surgery may be appropriate in some cases of weakness or claw hand, as long as the joints remain mobile.

**(c) Problems with the foot:**

* + - Remove thick callous and trim ulcers with a scalpel blade.
		- Chronic ulcers may be helped by orthotics, or by surgery.
		- For a foot-drop, make a spring-loaded device to keep the foot in the correct position while walking.
		- An invasive infection (the foot is hot, red and swollen) is an emergency and must be referred for intensive antibiotic treatment and surgery.
		- Foot-drop surgery

*CLINICAL ASPECT – continuation*

**A.5.3.3 Social and Economic Rehabilitation**

Leprosy has increasingly become a socio-economic concern as it is a medical one. And most people who are discovered to have leprosy become dislocated and lose their place in society, mainly due to stigma. They are unable to contribute to the welfare of their family and community.

The Magna Carta for Persons with Disabilities declares that the government shall provide full support to programs and services intended to improve the total well-being of persons with disabilities to enhance their full integration into the mainstream of society. Government shall adopt and implement policies that will ensure the rehabilitation, self-development and self-reliance of persons with disabilities.

Social and economic rehabilitation aims at social integration, equal opportunities and economic advancement. The principles of inclusion, participation, non-discrimination, acceptance by society, respect for differences of persons with disabilities, and respect for inherent dignity shall always be the underlying principles of all programs and services implemented by the government and all stakeholders.

**A.5.3.3.a Community-Based Rehabilitation and the Multi-Sectoral Approach**

Considering the limited availability of specialized institutional services, the WHO introduced a strategy called Community-Based Rehabilitation (CBR). As a strategy, CBR is defined as “*a strategy within general community development for the rehabilitation,* *equalization of opportunities and social inclusion of all people with disabilities.*” CBR builds partnerships among local government, families, civil society, specialists, clinics, faith-based groups, and business establishments to make a better, more inclusive community.

In this regard CBR is an effective tool for leprosy-related social and economic rehabilitation undertaking.

However, in the full range of NLCP services, the Program can only leverage CBR as a tool in effectively responding to the leprosy-related disabilities. Thus, a multi-sectoral approach could be the most appropriate for NLCP. The multi-sectoral approach allows for the identification of a way for the coordination among all the stakeholders mainly government, NGOs, People’s Organizations and communities in pursuing leprosy-related social and economic rehabilitation.

**A.5.3.3.b Project Cycle Management (PCM)**

The CHD could mediate and coordinate with the LGUs regarding program/projects for persons affected with leprosy for the latter to constructively engage in the CBR processes, including community counseling. Ultimately, it will ensure the INGOs, NGOs and private service providers response to the needs of people with disabilities in an integrated manner.

*CLINICAL ASPECT – continuation*

Project Cycle Management (PCM) provides an overall analytical and decision-making framework for CHDs’ interfacing mechanism with the LGUs. It promotes a results-based management for programs and projects that are relevant, feasible and effective in combating leprosy in the areas of social and economic rehabilitation.

PCM brings together fund management principles, analytical tools and techniques and applies them within the structured decision-making process to ensure that:

(a) projects are **relevant** to the agreed strategy and to the real needs of beneficiaries;

(b) projects are **feasible** in that objectives can be realistically achieved within the constraints of the operating environment and the capabilities of the implementing agencies; and

 (c) projects are **sustainable -** factors affecting sustainability are addressed as part of project design and results from evaluation are used to build lessons learned into the design of projects.

**Generating the Project Idea.** Ideas are identified in the context of an agreed strategy. It provides a structure to ensure that stakeholders are consulted and relevant information is available, so that informed decisions can be made at key stages in the life of a project. There are three steps in order to complete a project idea:

 **1st**  **Situation Analysis-Needs Assessment** - to search, inquire and appreciate problems or needs and validate their legitimacy. Study and research are the formalized methods of conducting this step.

 **2nd** **Identification and Agreement on Priority Problems or Needs** - to distinguish which in the range of problems or hierarchy of needs are to be considered for a preferential option.

 **3rd** **Agreement on Possible Solutions and Examination of their Feasibility** - to sharply focus on problems that demand urgent responses or needs which require appropriate interventions. These solutions must be subjected to some measures of viability or success, then ---

**Crafting the Project Design.** Refers to a scheme to afford access to resources and facilitate disposition of services intended for beneficiaries. This concerns the administering of things and provision of leadership. There are two steps in this element, which is a continuation from the steps made in generating project idea, such as:

 **4th** **Agreement on Feasible Solutions to Apply** - to decide what responses and/or interventions to adopt in the context of practicability and suitability.

 **5th** **Project Planning & Management** - to develop project strategies in order to arrange and relate work for effective accomplishment of project objectives. An operational plan is likewise formulated such that, it details a built-in scheduling of activities within service targets, the corresponding resources needed and the persons or entities responsible for the implementation.

 **6th** **Monitoring and Evaluation** - a scheme to facilitate the progress monitoring and impact evaluation of the project.

*CLINICAL ASPECT – continuation*

**Role of Health Workers in Leprosy Rehabilitation:**

**(a) Peripheral level**

Health staff may not have the time or expertise to be involved in rehabilitation activities. However, they need to be able to identify physical, functional or socio-economic problems resulting from disability and know about available services for rehabilitation and how to refer people to make use of such services. Health workers may need to play an advocacy role to ensure that those affected by leprosy have access to health care services, including rehabilitation facilities, in the same way as other people.

**(b) Referral level**

The following are examples of interventions that may be available.

|  |  |
| --- | --- |
| **Problems** | **Rehabilitation interventions** |
| ***Anatomical:*** |
| Deformity of the hand | Reconstructive surgery and physiotherapy |
| Foot drop | Ankle-foot orthosis, reconstructive surgery |
| Amputation | Prosthesis |
| ***Psychological:*** |
| Depression | Person-to-person Counselling |
| ***Functional:*** |
| Limitation of fine hand movements | Occupational therapy |
| Mobility limitations | Crutches or wheelchairs |
| ***Social participation:*** |
| Stigma in the family | Community Counselling |
| Exclusion from community functions | Education and advocacy |
| Children with disability | Promoting inclusive education |
| ***Economic:*** |
| Loss of employment | Vocational training and/or job placement |
| Poverty | Income generating activities for self-employment |

*CLINICAL ASPECT – continuation*

**B. Leprosy Control & Disease Burden Reduction**

The objective of leprosy control is three fold:

(1) The main objective is in the long run to decrease incidence (that is the annual number of new cases as related to the total population) to an acceptable level. This level should be set arbitrarily according to what is considered as an acceptable reduction of the problem, taking into consideration other health needs and availability of resources.

(2) Control should efficiently prevent deformities. Control measures such as chemotherapy will prevent deformities only to the extent that the patients are treated at an early stage.

(3) Control cannot be restricted to the prevention of the disease. This is not acceptable from an ethical point of view. Existing patients have to be efficiently treated, if only for the simple reason that no cooperation of the population will be obtained if control does not include treatment of all patients, even those for whom it comes too late to ensure complete rehabilitation.

Except under very exceptional circumstances, it seems unreasonable to aim at the eradication of the disease. Thus, in 1991 the WHO standard of reducing the disease burden is expressed in leprosy elimination strategy – that is eliminating the disease as a public health threat. This means attaining a prevalence of less than one case of leprosy per ten thousand, with the accompanying indicators such as: treatment completion and reducing the delay in diagnosis and the occurrence of Grade 2 disabilities among new cases.

And the Multi-Drug Therapy (MDT), as the technology of choice, has been a significant factor in realizing elimination of leprosy. Yet, there are no new technological breakthroughs or developments that warrant any drastic changes to the strategy for leprosy control that is in place. Clearly, over the next 5-10 years the leprosy control strategy will continue to be based on timely detection of new cases and their treatment with the appropriate multi-drug regimen.

*CLINICAL ASPECT – continuation*

**B.1 Leprosy Service Delivery**

With leprosy elimination goal being accomplished at the national level, the National Leprosy Control Program (NLCP) is now into a Post Elimination era. NLCP endeavors to pursue a Leprosy Post Elimination Surveillance System (LPESS).

Public health surveillance has been defined as the on-going systematic collection, analysis, and interpretation of outcome-specific data for use in the planning, implementation, and evaluation of public health practice. To re-phrase the meaning: **surveillance data are collected at the health facility – the first level of contact of the patient with the health system – then analyzed, interpreted, and used for action.**

LPESS is defined as a routine on-going systematic way of collection, analysis and dissemination of information on reportable cases. It has the following functions:

1. **Detection and notification** of new cases of leprosy to measure incidence and any sudden changes in it for carrying out appropriate control measures.
2. Identification of high-risk areas and population groups for **developing and implementing specific interventions and activities**.
3. **Demonstration of progress of the disease control activities** so that health workers and political support can be motivated.

Efforts to increase case detection are focused on facilitating self-referral by people who develop leprosy. This is done by increasing awareness of the early signs and symptoms of leprosy among the general public. Barriers which prevent people reporting for examination should be removed. They include:

1. Lack of awareness that leprosy is treatable and that treatment is free & available locally. This can be addressed most effectively by public information campaigns using a variety of media.
2. Fear is also a common barrier. This may include fear of the diagnosis, fear of future deformity, fear of being exposed as having leprosy or fear that one’s family will suffer. The latter two relate to negative attitudes or other forms of stigma and discrimination in society. Such fears may persist long after general attitudes have become more tolerant and instances of overt discrimination have become rare.
3. Culturally determined disadvantages such as gender, ethnic group and poverty. These require specific approaches, which include awareness raising and education, but also advocacy for supportive legislation and services, and general poverty alleviation measures.
4. Physical barriers, such as mountains, rivers or distance pose particular challenges, especially in areas with low health service coverage, and form a fourth category. These need flexible arrangements of diagnostic and treatment services. The final group, issues of security in areas of war or civil unrest, is the most difficult to address, but is nevertheless a reality in several leprosy-endemic areas.

*CLINICAL ASPECT – continuation*

**B.1.1 Case finding and Detection**

There are two methods of case detection, active and voluntary. Active case detection is not recommended, except in hard to reach areas where the health infrastructure is inadequate. The NLCP should encourage people suspected with leprosy to report voluntarily for examination.

In the regular conduct of surveying a population to find affected persons that are the foci of infection the following operative strategies are essential:

1. Rural Health Units (RHUs) and Sanitaria/hospitals to conduct regular schedule of skin consultation thru “Kilatis Kutis” and ensure provision of ointments, support drugs and related logistics.
2. Pursue sustainable leprosy campaign activities that complement the passive case finding of RHUs such as Modified Leprosy Elimination Campaigns (MLEC).
3. Contact tracing - is the identification & diagnosis of persons who may have come into contact with an infected person:
	1. Household contacts- Household members living with the patients for at least six (6) months.
	2. School children who are exposed to persons affected by leprosy for at least (6) months.
	3. Kilatis Kutis in the workplace and special areas e.g penitentiaries, home for the aged and children’s home.
4. Conduct leprosy-related activities targeting the identified hyper-endemic Geographically Isolated and Disadvantaged Areas (GIDA) and depressed urban areas using the Special Action Project for the Elimination of Leprosy (SAPEL), Community Action Project for the Elimination of Leprosy (CAPEL).

 These project-specific and systematic action should pursue the following procedures:

1. The Regional Leprosy Coordinator initiates the implementation of projects according to guidelines;

1. Coordinate with the LGUs as to target areas and resource sharing;
2. Social preparation for the implementation of the planned activities; and
3. Conduct progress monitoring and end-of-project evaluation.

*CLINICAL ASPECT – continuation*

**B.1.2 Case holding and Patient Participation**

When someone is newly diagnosed with leprosy, he/she should receive help and counselling so that the disease can be treated in the best possible manner. Every effort should be made to persuade newly diagnosed patients to complete their treatment as prescribed; discuss attendance at the clinic and if there is likely to be any difficulty, work out ways in which it can be made easier for the patient.

1. Conduct counseling and education information at the start, during and after treatment. It is important that the person learns:
* that he/she should lead a normal life;
* that leprosy is caused by a germ and is curable;
* that consultations and treatment are free-of-charge;
* that leprosy is no longer infectious once treatment has started and there is no dietary restrictions; and
* close contacts may develop leprosy, so should be brought for examination at the next visit.
1. If the person has difficulty in attending the clinic, it is possible for them to receive several blister packs at once, so that the visits to the clinic are less frequent. It is advisable in such cases to involve another responsible person (Treatment Partner) to supervise the treatment (a community volunteer, a family member or neighbour), to help the patient to continue the treatment properly at home (this is called Accompanied MDT, or A-MDT).
2. Regular clinical assessment (NFA) of patient’s progress. Clinical progress is assessed during the monthly clinic visit of the patient to collect the blister pack. During the visit, the health worker concerned (MHO/PHN/RHM) should note and record the following:
* Changes in the character of the lesion (color, extent, etc.);
* Pain the eyes, changes in color of sclera and conjunctiva;
* New disabilities or progression of previous disabilities;
* Nerve damage in the form of:
* Nerve pain, loss of sensation and loss of muscle strength;
* Painless wounds, or blisters, or simply an area of insensitivity;
* Difficulty in performing simple tasks, like holding a pen, buttoning a shirt or signs of

 any weakness or loss of prehensile skill; and

* Monitor leprae and drug reactions and when problems occur the patient may need to be referred to another clinic for specialist care.

*CLINICAL ASPECT – continuation*

**B.1.3 Referral**

Staff should refer patients whose condition they are not able to deal with. - The specialist clinics and other professionals to whom they may refer patients, such as:

* Ophthalmology for significant eye pathology
* Dermatology for diagnosis of difficult skin conditions
* Laboratory for skin smears and histopathology
* Physiotherapy for assessment and management of reaction
* RPOID care / Podiatry for the feet and footwear
* Occupational therapy for rehabilitation and adaptations
* Reconstructive and plastic surgery
* Social worker for assessment and further referral
* Rehabilitation specialist and CBR program
* Dental Care or Oral Health Care
* Mental Health / Psychiatric Care

**B.1.4 Case Monitoring**

The quality of diagnosis should be monitored as part of regular technical supervision. If there are indications of substantial over-diagnosis, a validation exercise on a representative sample of cases can be conducted in order to understand the magnitude of the problem

1. Follow up patient’s condition and treatment compliance
	1. to remind the patient of the importance of taking treatment regularly and of finishing the full course of MDT.
	2. home visit should be undertaken preferably within one month of the first missed visit date.
2. Post MDT Follow-up

The lead time for the **post-MDT follow-up** is as follows:

1. PB: every 6 months for two years
2. MB: every 6 months for 5 years
3. Record keeping
	1. The health facility will keep the records always at least two (2) years for PB cases and five years for MB cases for easy tracking and evaluation on the patients’ status regarding early signs of nerve damage as well as further educating PAL

*CLINICAL ASPECT – continuation*

**III. PROGRAM PLANNING AND MANAGEMENT**

The National Leprosy Control Program (NLCP) of the Infectious Disease Office under the National Center for Disease Prevention and Control is responsible for advocacy, policy formulation, technical guidance, technical training, planning, monitoring and evaluation. Regardless of the level of endemicity, a well functioning NLCP in a Central Office is necessary. As a matter of policy, the NLCP is committed to sustain leprosy control strategies.

**A. Integration of Leprosy Services**

Disease control can be defined as reduction of the incidence and prevalence of the disease, and of the morbidity and mortality resulting from the disease to a locally acceptable level as a result of deliberate efforts. Continued intervention is required to maintain the reduction.

The strategy to achieve control of leprosy consists of four major elements:

1. Early case detection;
2. Adequate chemotherapy (Multi-Drug Therapy-MDT);
3. Prevention of leprosy related-impairments; and
4. Counseling and Rehabilitation.

Implementation of this strategy ideally requires readily accessible, efficient and sustainable health services that cover the population fully, and are acceptable by the community and the patients. This strategy implies that leprosy control activities should be implemented by the general health services.

In order to establish sustainable services, broad ownership of the control strategy must be assured, both within the specific leprosy organizations and, equally important, outside. Thus, the following basic requirements for sustaining effective integrated leprosy services include:

1. Existence of an adequately functioning general health service infrastructure;
2. The private health sector will play an increasing role in the provision of leprosy services. National strategy should therefore clearly define the role of the private sector, including training and quality control;
3. Non-governmental organizations supporting leprosy control continue to be important partners with governments in integrated leprosy control programs. They must work with and strengthen the national general health services system;
4. It is important that various agencies involved in leprosy control collaborate and coordinate their activities, in order to increase their effectiveness.

*PROGRAM PLANNING AND MANAGEMENT – Continuation*

**The Focused Strategy:**

Although leprosy will continue to be a disease of low endemicity, and may even be rare in some areas, leprosy services (diagnosis, treatment, prevention and care of disabilities, counseling, and rehabilitation) will need to be sustained. Operationally, a focused strategy is necessary to demonstrate sustainability.

The schemes designed to implement a focused strategy are:

|  |  |
| --- | --- |
| **SCHEME** | **ACTIVITIES** |
| **“To undertake the disposition of LGU-owned, Region-coordinated and Central Office-guided”** |
| ***Intensified – Special efforts for areas having a prevalence rate of 0.8 to more than 1.0*** |
| * Enabling all health facilities to diagnose and treat leprosy
* Ensure easy & uninterrupted access to free MDT drugs
* IEC to promote case-finding, early consultation and treatment and reduce stigma
* High geographical coverage with MDT service
* Enabling intervention for Prevention of Impairment and Disabilities (POID) and Rehabilitation
* Close monitoring towards elimination
 | * Training of all RHU Physicians, PHN and BHM
* Regular and adequate supply of MDT drugs
* Public awareness campaign
* Adequate and appropriate IEC materials
* Active case finding through LEC, CAPEL and SAPEL
* Regular monitoring and supervision by LGUs
* Program and Review meetings
* POID is integrated in all of the above activities and Rehabilitation as may be deemed necessary
 |
| ***Accelerated – Step up efforts for areas registering the prevalence rate of 0.5 to 0.75*** |
| * Ensure easy and uninterrupted access to free MDT drugs
* Ensuring high cure rate through flexible and patient-friendly delivery system
* Sustaining high geographical coverage with MDT services
* Integrate intervention for POID and Rehabilitation
 | * Regular and adequate supply of MDT drugs
* Patient friendly drug distribution system
* Advocacy/Public awareness campaign
* Regular monitoring in all of the above activities
* POID is integrated in all of the above activities and Rehabilitation as may be deemed necessary
 |
| ***Sustained – Continuing efforts for areas still exhibiting a prevalence rate of below 0.5*** |
| * Providing simplified guidelines and materials for diagnosis and treatment at health center level
* Providing easy and uninterrupted access to free MDT drugs
* Identify areas where the disease is prevalent and implement core activities of the intensified strategy
* Sustaining intervention for POID and Rehabilitation
* Putting into place simple and integrated surveillance system
 | * Provide each health center and field guidelines and treatment
* Install LPESS validation center
* Adequate supply of MDT drugs
* Identify areas for implementing intensification
* Prevention of Impairment and Disability
* Rehabilitation as may be deemed necessary
 |

*PROGRAM PLANNING AND MANAGEMENT – Continuation*

**B. Program Supervision, Monitoring and Evaluation**

Supervision is a way of ensuring Staff competence and effectiveness through observation, discussion, support and on-the-job training. Its aim is to ensure that:

1. the technical skills required for leprosy control activities are present;
2. any obstacles faced by the peripheral health worker are identified and removed;
3. plans for future work and improved performance are made;
4. health workers are supported and motivated in their work; and
5. additional information, not available under the routine reporting system, is collected and analyzed.

The central figure in supervision is the designated NLCP Coordinator & at all levels who visits individual clinics/RHUs on a regular basis. With the NCLP Coordinator at the Central Office, he/she arranges and relates program supervision, monitoring and evaluation work. At the core of this undertaking is the coordination and collaboration of the Centers for Health Development’s – Provincial Health Offices’ decision making connection or loop. The **full range of program supervision, monitoring and evaluation is anchored on the current and existing road map of NLCP**.

One of the most important aspects of a supervision visit is to see and examine patients with the clinic staff. The supervisor will also use methods such as, document review (records and registers), observation of skills and activities, and interviews with health workers.

Correspondingly, **training in supervisory skills and attitudes is essential for effective supervision**. The supervisor should be aware of his own tasks and responsibilities, and also those of the people he has to supervise.

**Type of training for the health workers:** Training of general health workers should enable them to:

1. correctly diagnose and classify a case of leprosy;
2. treat a leprosy patient with the appropriate MDT regimen;
3. manage or refer cases with complications;
4. maintain simple patient cards and a treatment register, and submit reports regularly;
5. keep adequate stocks of drugs for MDT;
6. provide appropriate information about the disease to patients, community members, and decision-makers; and
7. recognize patients in need of rehabilitation and refer them to the appropriate services.

*PROGRAM PLANNING AND MANAGEMENT – Continuation*

**B.1 Monitoring and Evaluation (M & E)**

The aim of monitoring and evaluation is to determine if an on-going program is on the right track and focusing the future direction of the program. Monitoring and evaluation reporting enables the gathered information to provide recommendations in improving program performance and to be used in decision-making process of the program.

**Monitoring is the regular, systematic and purposeful observation and recording of activities taking place in a Program.** It is a process of routinely gathering information on all aspects of the program - to check on how program activities are progressing.

**Evaluation is the systematic assessment of a program’s performance after a specified period of implementation.** It compares achievements with the intended outcomes that have been defined in the NLCP road map. Evaluation will look mainly at the effectiveness of the program, but it can also look at a number of other aspects of quality, including efficiency, equity, relevance, sustainability, quality of care and impact on the target population. When planning the evaluation mission, the national level should take into consideration the interests of all concerned stakeholders, particularly the people affected by leprosy.

The national level must plan and organize the evaluation missions. It has to define the terms of reference and to choose the evaluation team. Team members can be:

1. **Internal**: the programme’s own staff, who are directly responsible for its implementation and management;
2. **External**: experts from outside the programme (they may be national or international experts); or
3. **Mixed**: participatory evaluation by internal and external evaluators.

**M & E Indicators:**

A program indicator is basically a number, proportion, percentage or rate that suggests or “indicates” the extent to which planned activities have been conducted (output indicators) and program achievements have been made (outcome indicators). These two families of indicators, very broadly defined, are briefly described below:

1. **Outcome** – is that which results or is a consequence of actions or events. A desired outcome is the behavior or circumstances the Government wants to occur or the need it wants to satisfy. Public sector outcomes can be categorized into two groups:

 a.1 Behavior change – increasing positive behavior; and

 a.2 Satisfaction of needs – responding to the community’s need for a clean water supply.

1. **Output** – are the goods or services produced by the program or sub-program and provided to the external client/user. Goods and services can never be outcomes. They are the means by which outcomes are achieved.

*PROGRAM PLANNING AND MANAGEMENT – Continuation*

**B.1.1 Epidemiological Indicators of Leprosy**

The following are the main indicators used for **monitoring the epidemiological trends of leprosy**:

**B.1.1.1 Number of New Cases Detected in a Given Area Each Year**

The number of new cases indicates how much leprosy there is in an area. This helps to estimate how much MDT should be supplied to that area during the following year. Given consistent procedures for case detection, figures for a period of several years will show whether there is an increase or decrease in numbers, which may indicate whether activities aimed at controlling the disease are effective. If the population of the area is known, it is possible to calculate the case detection rate (the number of new cases per 100,000 people) which can be compared with other areas.

**Additional indicators for monitoring case detection:** The information used to calculate these indicators is usually collected routinely, but in areas with a large number of cases, it may be collected from a representative **sample** of cases: (items a,b,c,d refer to WHO Blue book)

1. **Proportion of new cases presenting with grade 2 disability**

Because disability and deformity occur late in the disease, the proportion of new cases with disability gives a rough indication of how early, on average, leprosy cases are coming forward for diagnosis.

1. **Proportion of child cases (under 15 years of age) among new cases**

If the transmission of leprosy is being reduced in an area, it is expected that the proportion of children affected will decrease. Monitoring this indicator over several years, may show a trend. It is also required for correctly replenishing the stock of child doses for MDT.

1. **Proportion of multi-bacillary (MB) cases among new cases**

The proportion of MB cases is a useful guide to the proportion of cases at risk of complications and is needed for replenishing the stock of MDT correctly.

1. **Proportion of female patients among new cases**

Many programs diagnose leprosy more frequently in men than in women, but there is concern that women may have less access to health care in some situations. Thus, a ratio of two (2) males to every one (1) female is commonly seen. If the ratio is higher, steps should be taken to ensure that women have adequate access to diagnostic services.

*PROGRAM PLANNING AND MANAGEMENT – Continuation*

**B.1.1.2 Proportion of patients who complete their treatment on time as a proxy for cure rate**

The proportion of new patients who complete their treatment on time is an indication of how well the leprosy patients are being served by the health services. The information required to calculate this indicator can be collected either through the routine reporting system from all health facilities or from a representative sample of health facilities as part of supervision.

The rate is calculated separately for PB and MB patients, in what is known as a ‘cohort analysis’. A cohort is simply a group of patients who all started treatment in the same batch, usually in the same year.

The calculation of the completion rate is as follows:

1. The report date will normally be at the beginning of a new reporting year and the annual report will refer to the year just completed (Year Y). For completion statistics, the PB cohort will be from Year Y-1; the MB cohort will be from year Y-2.
2. Identify all the PB patients who are new cases in the register and who started MDT in year Y-1..
3. From this cohort, count the number who completed treatment within 9 months of registration.

(d) The PB treatment completion rate is calculated as follows:

* Number of new PB cases who completed MDT x 100
* Number of new PB cases who started MDT

(e) Identify all the MB patients who are new cases in the register and who started MDT in year Y-2.

(f) From this cohort, count the number who completed treatment within 18 months of registration.

(g) The MB treatment completion rate is calculated as follows:

* Number of new MB cases who completed MDT x 100
* Number of new MB cases who started MDT

Note that each cohort includes all new cases who started treatment during the year, including any who became defaulters or who died before completing treatment. For example, the report for the year Y= 2012, will include completion statistics for PB cases registered in 20011 (Year Y-1) and for MB cases registered in 2010 (Year Y-2).

Insert visual illustration c/o ms. Malou

Example 1. Regular MDT – BP Collection / Supervised Treatment

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
| Year |  |  |  |  |  |  |  |  |  |  |  | X |
| 2010 |  |  |  |  |  |  |  |  |  |  |  |  |
| 2011 | X | X | X | X | X | X | X | X | X | X | X |  |
| 2012 |  |  |  |  |  |  |  |  |  |  |  |  |

On MB patient has taken 12 BPs of MDT within 12 months, but should be reported by end of December 2012.

Example 2. Irregular MDT-BP Collection / Supervised Treatment

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
| Year |  |  |  |  |  |  |  |  |  |  |  | X |
| 2010 |  |  |  |  |  |  |  |  |  |  |  |  |
| 2011 | X | X | - | X | X | X | - | X | X | - | X | X |
| 2012 | - | - | - | X |  |  |  |  |  |  |  |  |

An MB patient has completed his 12 BPs of MDT within a period of 18 months. This patient should be reported by end of December 2012

Legend:

X- BP Collected

(-) – BP not collected

*PROGRAM PLANNING AND MANAGEMENT – Continuation*

**B.1.1.3 Registered prevalence**

Annual incidence as a measure of transmission is difficult in leprosy due to its long incubation period, delays in diagnosis after onset of the disease and the lack of laboratory tools to detect leprosy in its very early stages. Instead, the registered prevalence is used. Registered prevalence is a useful proxy indicator of the disease burden as it reflects the number of active leprosy cases diagnosed with the disease and receiving treatment with MDT at a given point in time.

The prevalence rate is defined as the number of cases registered for MDT treatment among the population in which the cases have occurred, again at a given point in time. PR is computed as follows:

 Total Number of Cases on Treatment at the End of the Year

 PR = ---------------------------------------------------------------------------------------- X 10,000

 Total Population

**B.1.2 Indicators for Patient Management**

The following indicators for quality of care and patient management may be collected, usually on a representative **sample basis,** as part of an integrated supervision process.

1. **The proportion of new cases correctly diagnosed**

The accuracy of diagnosis should be assessed through regular technical supervision. If there is any suggestion of significant over-diagnosis, a sample of new cases should be reviewed within three months of the diagnosis being made. The proportion of new cases included in the review would depend on the total number of cases and the resources available (staff and funds) for the review. This would identify problem areas where additional training and supervision are needed, but would not impede treatment at all.

1. **The proportion of treatment defaulters**

This only requires examination if the completion rate is low. The proportion of patients who default and who are transferred out are calculated in exactly the same way as the cure rate .If transfer out is the main reason for non-completion of treatment, the situation needs to be investigated to find out whether the transferred patients are really continuing treatment at a new clinic, or whether in fact they just stop taking treatment.

*PROGRAM PLANNING AND MANAGEMENT – Continuation*

1. **The number of relapses reported during the year**

Relapse cases occur sporadically and are generally not part of any defined cohort, so these figures are difficult to analyze. If high numbers are reported from any particular area, further investigations must be carried out.

1. **The proportion of patients who develop new or additional disability during MDT**

Possible methods of calculating this indicator are given below:

This indicator is a measure of how well new nerve damage is detected and treated by the programme. The EHF (eye-hand-foot) scoring system can also be used after completion of treatment to monitor POD activities.

The **EHF score** is calculated from data already being recorded routinely. It 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, 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.

The EHF score has been shown to be more sensitive to change overtime than the Disability Grade itself. The simplest way to use the EHF score to measure the development of new or additional disability during MDT, is to calculate the score at diagnosis (this examination is already done in the initial assessment of Disability Grade) and then repeat the examination at the time treatment is completed. The two scores can then be compared.

When the cure rate is calculated for any cohort, the proportion in which the EHF score increased can be calculated at the same time – an increase in the score would indicate some new or additional disability.

*PROGRAM PLANNING AND MANAGEMENT – Continuation*

**B.2 Information System and Knowledge Management**

Information Systems (IS) is based on a database evolved for the purpose of providing information support for decision-making process. Harnessing computer systems with three primary components: technology, people and data; IS are used to analyze data and generate knowledge – that is actionable information, eventually facilitating strategic and operational activities.

Knowledge Management (KM) systems are mostly built over existing information systems. Information systems that support information flow are an essential component in knowledge management system that centers on ‘best practices’ or guiding principles, reference sources, proven processes and procedures, established formulas and corrective fixes. Knowledge management is the management of the knowledge cycle, such that:

**Knowledge Lifecycle**

As a systematic process, KM acquires, distills, shares, stores, retrieves and uses knowledge to enable learning. Its purpose is to solve problems or address challenges and knowledge is selected because of its utility in the specific circumstances. Knowledge management processes can help generate novel ideas and craft innovative means in leprosy program and services.

*PROGRAM PLANNING AND MANAGEMENT – Continuation*

**B.2.1 Data Base Development – NLCP Reporting Form**

A database is a collection of related files that are usually integrated, linked or cross-reference to one another. Since data, information and knowledge play an essential role in both an information system and knowledge management system, the NLCP forms are so designed recognizing the potentials to generate knowledge – meaning information that is relevant, actionable, and based at least partially on experience.

In the NLCP Forms, data represents facts that are created when organizational processes are performed. As these are further analyzed (condensation, contextualization, calculation, categorization and/or correction), they are transformed into an information containing substance and purpose.

**The NLCP Forms are:**

**Form 1** – Patient’s Record Card

**Form 2** – Patient Identification Card

**Form 3** – Leprosy Treatment Register

**Form 4** – Quarterly/Annual Statistical Reports

**Form 5** – Annual Cohort Analysis of PB/MB Cases Registered

**Form 5.a** - Annual Cohort Analysis of Multi-Bacillary (MB) Leprosy Cases

**Form 5.b** - Annual Cohort Analysis of Pauci-Bacillary (PB) Leprosy Cases

**Form 6** – Referral/Transfer Form

**Form 7** – Monitoring Checklist

*PROGRAM PLANNING AND MANAGEMENT – Continuation*

**PATIENT RECORD CARD (NLCP Form 1)**

All leprosy patients on treatment should have a **Patient Record Card (PRC)**. This card contains the necessary information about the patient including the location of lesions, Eyes, Hands and Feet **(EHF)** score, WHO Grading on Disability, Nerve Function Assessment **(NFA)** and Voluntary Muscle Testing (VMT).

**Figure 1. Patient Record Card**

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Following are the necessary information that needs to be recorded in the form, to be filled out by the Physician or authorized representative of the physician.

1. Leprosy case number assigned to a leprosy case. Copy this number from the leprosy Treatment Register

E.g. 13-123-001 refers to the patient’s number

Refers to the facility number (refer to the FHSIS facility code)

Refers to the last two digits of the current year

1. Write the patient’s full name ( family name first in capital letters followed by first name and middle name)
2. Record the patient’s age in years
3. Write M for male and F for female
4. Write S for single, M for married and W for widow/er
5. Write the complete address of the patient (house no., street, barangay, municipality/ city, province). Include contact number.
6. Tick the patient’s mode of detection
7. Diagnosis
	1. Clinical:
		1. Record number of patches with loss of sensation
		2. Tick “yes”, if with enlarged/tender peripheral nerves, and record the number. Tick “no”, if absent.
	2. Laboratory
		1. Tick “yes”, if SSS is done and record SSS result
		2. Tick “no”, if SSS is not done
8. Tick patient’s leprosy classification.
9. Write the date (month/date/year) patient was classified.
10. Write the date (month/date/year) when treatment was started.
11. Tick the type of leprosy case.
12. Body charting- Mark where lesions can be found according to **patient’s orientation**:
	* 1. upon diagnosis, and
		2. upon completion of treatment
13. Write on the appropriate space provided the date (last dose taken) of Treatment Outcome.
14. **Eyes, Hands and Feet (EHF) Score.**
	1. Write the corresponding score on the appropriate box for eyes, hands and feet as follows:
		* 1. Normal 1- with anesthesia 2- with visible deformity
	2. Compute the total EHF Score and write on the appropriate boxes
		1. upon diagnosis, and
		2. upon completion of treatment.
	3. Write the patient’s maximum WHO disability grade (0, 1, and 2).
		1. Upon Diagnosis, and
		2. Upon Completion of treatment.
15. **Nerve Function Assessment (NFA).** Accomplish recording “Upon Diagnosis” and “Upon Completion of Treatment”
	1. Sensory Testing (ST)
		1. Check (/ ) the point/s with sensation, and
		2. Mark (0 ), if without sensation
	2. Voluntary Muscle Testing (VMT)
		1. Write (S) for strong,
		2. (W) for weak, and
		3. (P) for paralyzed, opposite each key movement.
16. **Household Contact Examination.**
	1. List name, age and relationship of all household contacts to the patient. Under the “**Remarks”** column, write pertinent data about the household contacts.

e.g. treatment started if with positive (+) results

* 1. Record the date and result of clinical examination. Write as follows:

(-): for a negative result (+): for positive result in **red ink**.

**VERY IMPORTANT:** Print legibly and affix signature of examining officer and date of assessment.

**PATIENT IDENTIFICATION CARD (NLCP Form 2)**

All leprosy patients on treatment should be issued an Identification card and its possesion should be the responsibility of the patient. This contains information of the patient’s leprosy classification and the treatment details. This ID card should be presented to the health worker whenever the patient comes for MDT supervised dose/collection.

**Figure 2. Patient Identification Card**





Following are the necessary information that needs to be recorded in the form, to be filled out by the health worker:

1. Write the patient’s leprosy case number from the **Patient’s Record Card (PRC) / Leprosy Treatment Register (LTR).**
2. Write name of health facility where the patient has taken her/ his treatment.
3. Write the patient’s full name family name first, in capital letter followed by first name and middle name).
4. Write complete address (house number, street, barangay, municipality/ city, province) of patient.
5. Tick patient’s leprosy classification accordingly.
6. **Drug Collection.**
	1. Indicate the date (month/ day/ year) of the next collection of blister pack;
	2. Indicate the date (month/ day/ year) when the patient has collected the blister packs and/ or taken the supervised dose;
	3. Affix signature of health worker giving the MDT;
	4. Write any pertinent information about the patient drug intake or the number of blister packs given to the patient under the **Remarks** column;

**LEPROSY TREATMENT REGISTER (NLCP FORM 3)**

Every health facility with a case of leprosy should maintain a **Leprosy Treatment Register (LTR)** for an effective supervision and monitoring. This contains list of patients receiving MDT including the details of drug collection and treatment outcome. As the main source of data, it provides calculation of leprosy indicators and of the quarterly/annual reports.

**Figure 3. Leprosy Treatment Register (Left Half)**



**Figure 4. Leprosy Treatment Register (Right Half)**



Following are the necessary information that needs to be recorded, maintained and updated by the Physician/Nurse:

1. Record the date (month/ day/ year) when patient is registered.
2. Leprosy case number assigned to a leprosy case. Record the last 2 digits of the year followed by the 3 digits facility code and the 3 digits patient’s number, e.g. 12-010-001…..
3. Write the patient’s full name (family name first, in capital letters followed by first name and middle name).
4. Record the patient’s age in years.
5. Write (M) for male and (F) for female.
6. Write the complete address (house number, street, barangay, municipality/ city, province) of the patient.
7. Tick patient’s Leprosy Classification.
8. Tick the type of leprosy case under the appropriate column provided.
9. Write date (month/ day/ year) treatment started or has taken the first supervised dose.
10. Record EHF Score upon diagnosis and after completion of treatment.
11. Record the date (month/ day/ year) for the monthly supervised dose. Numbers 1-18 represent the months allowable for MDT regimen:
	1. PB- 6 to 9 months
	2. MB- 12-18 months
12. Reaction. Record frequency of reactions during and post- treatment (after completion of treatment) within 5 years.
13. Treatment Outcome. Write date (month/ day/ year) when last dose was taken accordingly.
14. Remarks. Write pertinent information about patient’s condition and treatment, e.g. hospitalization due to complications of leprosy and other inter-current illnesses; transferred out to other health facility (name of facility and location)

**QUARTERLY/ANNUAL STATISTICAL REPORTS (NLCP Form 4)**

The quarterly/annual statistical report summarizes the PB and MB case detection of new and re-treatment cases and registered prevalence at the end of the period. It contains information for obtaining indicators in monitoring the epidemiological trends of leprosy, evaluating case detection activities, and assessing the quality of leprosy services.

**Figure 5. Quarterly / Annual Statistical Report Forms**



This is to be accomplished by the Nurse at the health facility. Source of data for this report is the **Leprosy Treatment Register** **(LTR).** The Quarterly/Annual Statistical Report will be submitted by the RHUs, hospitals and other reporting units collated and analyzed by the PHO Leprosy Coordinators. The CHD collates and analyzes the reports from the provinces and cities. Collated reports are submitted to NLCP, NCDPC-IDO, DOH.

Following are the necessary information that needs to be recorded in the form.

1. **Reporting Unit- Write where the report was generated from.**
2. **Date reported (month/ day/ year)- indicate the date when the report was submitted.**
3. **Municipality/ Barangay-**
	1. Indicate the municipality where the cases came from.
	2. Select from the reporting units below:
		1. RHU/CHO – to list the districts/ barangays with leprosy cases;
		2. PHO– to list the municipalities with leprosy cases;
		3. CHD– to list the provinces, cities, National / DOH retained Hospitals and other reporting units with or without leprosy cases;
		4. Sanitaria– to list the leprosy cases; and
		5. National– to list the regions with or without leprosy cases.
4. **Population.** Write the population opposite the name of barangays/ districts/ cities/ province.
5. **Registered cases beginning Qtr/ year.**

Enter total number of registered cases accordingly at the beginning of the reporting quarter. Copy/ transfer the number of cases (PB/ MB) from the last quarter’s report from the column “Cases on treatment at the end of the quarter/year”.

1. **New Cases.**

Record the total number of new cases detected (PB/MB; Male/Female). Determine who among the new cases of children below 15 yrs old are for both PB and MB and record the number. Also determine who among the new cases with WHO Grade 2 Disability (visible deformity) and record the number.

1. **With Previous Treatment.**

Record the number of cases with previous treatment as indicated (PB and MB cases).

1. **Total Cases Treated With MDT during the Qtr/ Year.**

Add registered cases at the beginning of the quarter/year (Column No.5), total new cases detected (Column No. 6) and with previous treatment for PB and MB cases (Column No. 7) accordingly.

**REMEMBER: Do not include children <15 years old and cases with WHO**

 **Disability Grade 2 in the computation**

1. **Completed Treatment on Time.**

Enter number of cases who completed treatment on time accordingly (PB and MB cases).

1. **Movement of Patients.**

Record the number of cases as indicated (PB and MB cases).

1. **No. of Cases with Reaction.**

Record the number of cases with leprae reactions.

1. **Cases on Treatment at the End of the Qtr/ Year.**

Add the “C**ases who Completed Treatment”** (Column No. 9) to the cases under “**Movement of Patients**” (Column No. 10). The sum of which will be subtracted from the “**Total Number of Cases Treated with MDT during the Quarter/Year”** (Column No.8).

 **IMPORTANT NOTE: Compute Case Detection Rate (CDR) and Prevalence Rate**

 **according to the formula provided in this form.**

**ANNUAL COHORT ANALYSIS OF PB/ MB CASES REGISTERED (NLCP Form No. 5)**

A cohort is simply a group of patients with the same treatment regimen who all started treatment in the same year. The rate is calculated separately for PB and MB.

This report contains information on the treatment outcome for a group of patients who were treated one (1) year earlier for PB and two (2) years earlier for MB. Such information serves as basis for evaluating program efficiency. The source of data is the Leprosy Treatment Register (LTR). This is to be accomplished by the Nurse.

This report is submitted every end of December by the reporting units (RHU/ CHO/ PHO/ Hospitals/ Sanitaria/ Clinics/ CHD). Collated and analyzed data from the provinces/cities are submitted to CHD. The CHD Leprosy Coordinator is responsible in collating and analyzing the data and submitted to the NLCP Program Manager, NCDPC- IDO, DOH.

**Figure 6. Annual Cohort Analysis of Multi- Bacillary (MB) Leprosy Cases**

 **(NLCP Form 5a)**



**Figure 7. Annual Cohort Analysis of Pauci- Bacillary (PB) Leprosy Cases**

**(NLCP Form 5b).**



Following are the necessary information that needs to be recorded in Forms 5a and 5b.

1. **Registered in-** write the year when cases were registered.
2. **Date reported (month/ day/ year) -** indicate the date when the report was submitted.
3. **Reporting Unit-** Write where the report was generated from.
4. **Reported by-** Write the name of the person who accomplished the form.
5. **Province/ City**- Indicate the municipality/ province/ city where the cases came from.
6. **No. of Registered (New cases)**

Enter the number of new registered cases from January-December of the year to be analyzed.

Form 5a. E.g. Multibacillary (MB) - new cases registered in January-December 2010 will be analyzed at the end of December 2012.

Form 5b: E.g., Paucibacillary (PB) - new cases registered in January-December 2011 will be analyzed at the end of December 2012.

1. **Completed Treatment/ Cured**

From this cohort, count and enter the number who completed treatment within nine (9) months of registration for PB and within eighteen (18) months of registration for MB.

1. **Completion/ Cure Rate**

Number who completed treatment divided by the total number of new registered cases x 100. Follow the formula below:

 No. Who completed treatment

**100**

X

 Total No. of new registered cases

1. **No. Defaulted**

From this cohort, count and enter the number who defaulted from treatment (more than 3 months for PB and more than 6 months for MB).

1. **Defaulter Rate**

Number who defaulted from treatment divided by the total number of new registered cases x 100. Follow the formula below:

No. who defaulted from treatment

**100**

X

Total No. of new registered cases

1. **No. Trans- out**

From this cohort, count and enter the number who transferred out to another health facility with proper referral slip

1. **Trans- out Rate**

Number who transferred out to another health facility divided by the total number of new registered cases x 100. Follow the formula below:

 No. who transferred out

X

**100**

Total No. of new registered cases

1. **No. Died**

From this cohort, count and enter the number who died during the course of treatment

1. **Death Rate**

Number who died during the course of treatment divided by the total number of new registered cases x 100. Follow the formula below:

No. who died

X

**100**

Total No. of new registered cases

 **For Cohort Analysis of Pauci- Bacillary Leprosy Cases (NLCP Form 5b)**

1. **Re- classified**

From this cohort, count and enter the numbers who were re-classified PB to MB.

1. **Percent (%) Re- Classified**

From this cohort, count and enter the number who were re- classified divided by the number of new registered cases x 100. Follow the formula below:

 No. who are reclassified (PB)

X

**100**

 Total No. of new registered cases

**REFERRAL / TRANSFER FORMS (NLCP Form 6)**

**Figure 8. Referral/ Transfer Forms**

**MONITORING CHECKLIST (NLCP Form 7)**



**Figure 9. Monitoring Checklist**

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*PROGRAM PLANNING AND MANAGEMENT – Continuation*

**B.2.1.1 Community of Practice (COP) – Knowledge Management and Learning**

The first generation Knowledge Management (KM) architecture rolled out a proliferation of document management systems, intranets, extranets and other manifestations of ICT. It was able to help better track of what we know. However, the first generation KM is decidedly weak when we are to make judgments about the value of knowledge: that is to apply what we know or to generate genuinely new ideas.

With the advent of the second generation of KM, it has not simply focused on the technology of developing organizational memory (how knowledge is retained for future use) but also on the people who are central to the organization and the processes that help them share and use their collective knowledge. Here there has been an important emphasis on the development of such mechanisms as Community of Practice (COP).

Gathering information, storing it and making it accessible does not necessarily increase our knowledge and learning. Knowledge is generated when information is combined with context and experience. We should recognize the fact that knowledge is information that individuals have reflected on, understood, internalized and are able to use.

Learning, on the other hand, is a developmental process that integrates thinking and doing. It is about skills, insights, feelings, wisdom, shared understandings, and self-awareness. Learning enriches what we do as individuals and collectively, and is central to organizational effectiveness, to developing the quality of our work and to organizational adaptability, innovation and sustainability.

In the context of knowledge management and learning, the important aspect and function of COP is that it is a tool of the learning organization and knowledge management through relationships. The structural characteristics of COP are:

1. **Domain** – a domain of knowledge that creates common ground, inspires members to participate, guides their learning and gives meaning to their actions;
2. **Community** – a notion (an individual’s conception or impression of something known, experienced or imagined) of community that creates the social fabric for that learning (in the domain) which fosters interactions and encourages willingness to share ideas; and
3. **Practice** – while the domain provides the general area of interest for the community, the practice is the specific focus around which the community develops, shares and maintains its core knowledge.

*PROGRAM PLANNING AND MANAGEMENT – Continuation*

**B.2.1.2.a Community of Practice for CHD-LGU Interface**

Given the priority concern of *sustaining political commitment at the national & local government levels, and strengthening routine & referral services within the integrated health systems*, COP can be harnessed in order for NLCP to engage along the epidemiological contours of the municipalities where leprosy services of the Center for Health Development-Provincial Health Office (CHD-PHO) alliance have been pursued. In this convergent interface, the COP can proactively facilitate in the undertaking to share know-how, to improve the competencies of health human resources and other stakeholders, to develop and verify good practices, to foster innovative ideas or to support collaborative work.

Being not a new kind of organizational unit, but rather a different cut on the bureaucracy’s structure COP can be organized (adopt Item A.5.3.3.b) within the convergent interface of the CHD-PHO alliance; such that:

|  |  |
| --- | --- |
| **Aspects of Operative Strategies** | * + - * **Elements**
 |
| * + - * Sponsor
 | An overall executive sponsor that assures investment and legitimacy within an appropriate leadership structure that can guide, support, & renew the community initiative over time. |
| * + - * Domain
 | Thematic issues or functional concerns in the leprosy post elimination era. |
| * + - * Members
 | Practitioners who interact regularly and who develops and share tools, concepts, resources and capabilities for dealing with recurring problems and opportunities. |
| * + - * Activities
 | * Teleconferences, on-line access to research, tools, stories, & videos, carefully & critically & examined written and video description of methods
* Coordinator for Q & A, expert reference, directory of members, face-to-face meetings, sharing agency approaches
* Projects or joint project, visits
 |
| * + - * Outcomes
 | * Acceleration of adoption of best practices, faster learning about methods
* Joint efforts between health service providers, civil society groups, & people’s organization
* Reduction of stigma
* Increased collaboration among Sanitaria, research institutions, & private sectors
* Emerging community to design e-record system
 |

As a cooperation and coordination mechanism, COP facilitates: *(i)* effective flow of information that makes new ways of thinking and acting possible, *(ii)* steward competencies-best practice & problem solving to keep the CHD-PHO alliance at the cutting edge, and *(iii)* managing by making connections.

*PROGRAM PLANNING AND MANAGEMENT – Continuation*

**B.2.1.2.b E-Learning**

*PROGRAM PLANNING AND MANAGEMENT – Continuation*

**B.3 Research**

Over the past two decades, through the efficacy of the WHO-MDT, the global leprosy program has been successful in decreasing the prevalence of registered leprosy cases. However, further advancement in the field of diagnostic, therapeutic and rehabilitative leprosy has been hindered by the lack of novel tools and approaches to address the challenge of continued transmission, incidence and lifelong complications of the disease. It is therefore important to continue generating innovative and cost-effective approaches to improve and sustain existing global leprosy control activities.

**Priorities and Working Method:**

In the current context, research initiatives must pay attention to four key issues: integration, quality, equity and sustainability. The three main research domains to address include epidemiology, patient management and operational/ community management.

In the Philippines, in collaboration with local and international partners, the strategy should focus on applied research either through technology transfer or evaluation on the efficacy of scientifically documented, highly promising interventions. Local research strategy shall be classified into main themes wherein research on specific areas must be fully integrated in various field settings. These research priorities shall be implemented in reference to locally generated or multi-center protocols requiring field implementation of newly developed tools and methodologies.

**1. Epidemiology** – tools to detect infection and identify patterns of transmission are essential for a better understanding of various factors influencing the occurrence of the disease. Simultaneously, there is also a need to explore the use of a vaccine and/ or a single – dose anti-leprosy drug in preventing the occurrence of new cases among household and community contacts.

**1.1 Prevention** – do field studies related to chemoprophylaxis and/or immune-prophylaxis on a high risk population covering house and community contacts.

**1.2 Early detection** – involve in multi-center testing of neurologic, immunologic and molecular diagnostics in various field settings. Develop and improve diagnostics to identify individuals who are at risk of developing leprosy is another research priority with major public health care implications. It is also important to do field studies on existing methods that identify barriers that cause detection delay and implement solutions in specific settings.

**1**.3 Disease burden / retrospective study

*PROGRAM PLANNING AND MANAGEMENT – Continuation*

**2. Patient management** - the priority issues for research include prevention of disabilities through

 timely management of reactions and nerve function impairment.

 **2.1 Chemotherapy**- improvement of chemotherapy:

 (a) evaluate patient adherence on conventional anti-leprosy (WHO-MDT) drugs & study more

 effective approach to improve treatment completion rate; and

1. initiate or participate in multicenter clinical trials that develop new alternative drugs considering adverse effects associated with MDT- such as Dapsone toxicity and resistance along with the threat of Rifampicin resistance. The development of new drugs to use when Rifampicin is contraindicated either due to toxicity or resistance should not be undermined; and participation of multi-center molecular drug resistance surveillance among recalcitrant and relapse cases is also an important research priority to explore.

 **2.2 Reactions and Disability Prevention** – test new early nerve impairment detection methods and initiate or participate in clinical trials developing second line but readily available treatment for reactions particularly for ENL. This is of paramount importance in the Philippines because of lack of access to Clofazimine and Thalidomide. (CONSULT LIG-PDS)

 **2.3 Medical Rehabilitation** – participate in studies requiring field testing of novel methods to manage plantar ulcers.

**3. Operational and Community Management** – study measures to remove barriers towards access to medical services ; empowerment of the patients and the community in decision –making are significant challenges that need research requiring active support from other stakeholders.

 **3.1 Psychosocial Studies** – identify more effective approaches to uplift patients’ morale (counseling approach)

 **3.2 Community Based Rehabilitation** – do research on best approaches and examples of good practice to reduce stigma associated with the disease. Include in the research agenda the rights-based approach

In conclusion, the enhanced global strategy needs continued input from ongoing and future research activities to improve and sustain leprosy control. These can only be attained through quality research activities requiring collaborative efforts from local, national and global partners.

*PROGRAM PLANNING AND MANAGEMENT – continuation*

**C. Administration and Logistics**

The Department of Health (DOH) is the national lead agency in health. As the lead agency, the DOH is mandated to ensure the delivery of health care to all participants in the health system. National standards should be developed to guide various implementers of health programs at the local level in planning, carrying out and efficiently using limited resources for health.

As a major program of the Department of Health (DOH), NLCP is carried by the Infectious Disease Office (IDO). The NLCP roadmap is aligned with the DOH’s Vision-Mission statement as follows:

Vision: Asia’s pride in disease prevention and control.

Mission: To lead and synchronize to all efforts in disease prevention and control towards health families and communities through Good Governance, Dynamic Partnership, and Shared Values.

**C.1 Administrative Policies**

Under the term of President Benigno S. Aquino III the DOH launched an operational strategy (Administrative Order No. 2010-0036) called Kalusugan Pangkalahatan (KP) which aims to achieve universal health care for all Filipinos. Among others, the success of the KP shall be measured by:

“*...controlling both communicable and non-communicable diseases, improvements in access to quality facilities and services...prioritizing the poor and the marginalized (such as the Geographically Isolated and Disadvantaged Area-GIDA) population, indigenous population, older persons, differently-abled persons, internally displaced population, and people in conflict-affected areas. These performance measures are the results of effective interaction between families and health care providers (both public and private) in local health systems.”*

1. The National Leprosy Control Program (NLCP) activities are integrated into the general health services, within the existing general health care delivery system.

2. Program evaluation from the National Level will be initiated by the NCDPC Staff in collaboration with the CHDs through the support of the Local Government Unit (LGU) officials.

3. Conceptualization and designing program implementation scheme shall be in accordance with standards set at the national level.

4. Training needs Assessment (TNA) and the conduct of the corresponding training program shall be done by the CHD with technical support from the Sanitarium and partner hospitals.

5. Nurture partnership for collaborative work between and among regional agencies, LGUs and local NGOs and significant private agencies.

6. Ensure timely submission of quality assured data to be consolidated as basis for analysis to inform planning and decision-making process.

*PROGRAM PLANNING AND MANAGEMENT – continuation*

7. The admission, confinement and treatment of patients with lepra reactions and other complications shall be done in any government/private (PPP) and health facility.

8. Ensure continuous supply of primary and secondary drugs.

9. Ensure effective and efficient program implementation through technical assistance and regular monitoring.

10. Training of Health Workers in leprosy control shall be conducted by CHDs, Sanitaria/Partner Hospitals and LGUs.

11. MDT drugs including supply of Prednisone shall be provided by NCDPC based on documented reports of number of cases generated by the CHDs.

12. Conceptualization and development of prototype IEC and advocacy materials shall be the responsibility of the CHDs/Partner Hospitals. Implementation of a comprehensive IEC campaign shall also be the responsibility of the NCDPC and Sanitaria in coordination & cooperation with LGU.

13. Funds from external sources including GOP may be accessed by CHDs/Partner Hospitals as proponent, through a project proposal. Any proposals received must be reviewed and endorsed by

 NCCCL and approved by NLAB.

14. Other partner agencies, resources and technical expertise shall be tapped to support the

 NLCP.

15. NGOs who wish to participate in NLCP activities will be required to:

* Submit letter of intent signifying areas of partnership with NLCP;
* Forge a MOA, MOU and Contract of Service according to agreed Terms of Reference with DOH-NCDPC; and
* Keep records and submit appropriate reports to the NCDPC.

*PROGRAM PLANNING AND MANAGEMENT – continuation*

**C.2 Organizational Framework and Health Human Resources**

The DOH recognizes that the Local Government Units (LGUs) have the primary mandate to finance and regulate local health systems, including provision of the right information to families and health providers. With the devolution of health services to the Local Government Units (LGUs), the provincial and district hospitals are under the Provincial Government while the Municipal Government manages the rural health units (RHUs) and Barangay Health Stations (BHSs).

In every province, city or municipality, there is a local health board chaired by the Chief Executive. Its function is mainly to serve as advisory body to the local executive and the “Sanggunian” or local Legislative Council on health related matters.

 **C.2.1 NLCP in the National Center for Disease Prevention and Control (NCDPC)**

The *Infectious Disease Office* (IDO) Leprosy Program under the NCDPC shall oversee the operations of the NLCP. The IDO shall designate a National Leprosy Control Program Manager. To facilitate implementation of strategies, the DOH adopted a functional management structure that assigned accountability to Centers for Health Development (CHDs) and operations cluster heads in achieving health outcome targets.



**Note:**

**1. add box for district hospitals under PHO**

1. **add a box for BHW under MHO**
2. **Sanitaria (DOH retained hospitals)**

*PROGRAM PLANNING AND MANAGEMENT – continuation*

To ensure that appropriate policies and other technical considerations keep pace with scientific facts and the prevailing socio-economic and political environment, the following bodies at the National Level were created by the DOH with the following roles and functions.

**C.2.1.1 National Leprosy Advisory Board (NLAB)**

 1. Review/ recommends policy changes, redirection and expansion for National Leprosy Control Program.

 2. Provides overall technical supervision of the NLCP implementation.

 3. Devises and evaluates program, goal, plans and strategies.

 4. Receives validated reports and collated data and present these to the Undersecretary of Health for approval and subsequent dissemination to the public.

**C.2.1.2 National Collaboration Coordinating Committee for Leprosy (NCCCL)**

1. Supports the Infectious Disease Office (IDO) in the operationalization of policy recommended by the National Leprosy Advisory Board.

2. Ensures that actual operating procedures are consistent with DOH standard embodied in NLCP MOP.

3. Serves as Technical Advisers to NLCP Coordinator at all levels.

*PROGRAM PLANNING AND MANAGEMENT – continuation*

**C.2.2 Local Government Units**

The provincial, city and municipal health officers through the designated Leprosy Coordinators shall direct and administer the implementation of leprosy control program in the province, city and municipal level in accordance with the national policies, with technical assistance from the CHDs/ Sanitaria.

Encourage organization of TWG at the provincial, municipal/ city levels.

**C.2.2.1 Provincial Health Office (PHO)**

The Provincial Health Office shall designate a Provincial Coordinator and exercise the following functions;

1. Coordinates NLCP activities in the province/ city.
2. Assists in the training, workshops and consultative meetings.
3. Provides technical assistance to municipalities and component cities.
4. Conducts monitoring and supervision of all NLCP activities.
5. Gathers and analyzes the municipal and city reports and submission of collated data to the CHD and utilizing these data for planning and decision making.

**C.2.2.2 City Health Office (CHO)**

The CHO shall designate a City Health Coordinator and exercise the following functions:

1. Coordinate and conduct monitoring and supervision of all NLCP activities.
2. Assist in the training, workshops and consultative meetings.
3. Provide technical assistance to municipalities and component cities.
4. Gathering and analyzing the municipality and city reports and submission of collated data to the CHD.

**C.2.2.3 Rural Health Unit (RHU)/ Municipal Health Office**

1. Municipal Health Officer (MHO)

The MHO shall exercise the following functions:

* 1. examine patients for signs and symptoms of leprosy;
	2. establish clinical diagnosis, classification and assign regimen;
	3. manage patients specifically for reaction, complication and disability;
	4. conduct post- treatment evaluation; and
	5. supervise leprosy program activities.

*PROGRAM PLANNING AND MANAGEMENT – continuation*

1. Public Health Nurse (PHN) and Rural Health Midwife (RHM)

The PHN and RHM are responsible for:

* 1. Initial screening and physical examination of suspected leprosy cases and refers to MHO;
	2. Recording of relevant data in Individual Patient’s Record;
	3. Administration of supervised MDT dose and does monitoring of self- administered doses;
	4. Patient, family and community education on:
		1. Leprosy facts and update
		2. Prevention of Impairments and Disabilities (POID)
		3. Patient support group and self- care
	5. Accomplishment and submits necessary reports;
	6. Referral of patients for post- treatment evaluation.
	7. Periodic updating of central registration form drug collection chart and other MDT records namely:

**Form 1** – Patient’s Record Card

**Form 2** – Patient Identification Card

**Form 3** – Leprosy Treatment Register

**Form 4** – Quarterly/Annual Statistical Reports

**Form 5** – Annual Cohort Analysis of PB/MB Cases Registered

**Form 5.a** - Annual Cohort Analysis of Multi-Bacillary (MB) Leprosy Cases

**Form 5.b** - Annual Cohort Analysis of Pauci-Bacillary (PB) Leprosy Cases

**Form 6** – Referral/Transfer Form

**Form 7** – Monitoring Checklist

* 1. Resource/ Logistic Management

Supervision and monitoring of leprosy program activities within their catchment area including case finding and case holding, thus:

1. conduct case finding by recognizing early signs and symptoms of leprosy during routine and special case finding;
2. re-motivating defaulters; and
3. recognizing early signs and symptoms of reaction and complication and reporting the same to the midwife for referral to the Municipal Health Officer.

*PROGRAM PLANNING AND MANAGEMENT – continuation*

**C.2.3 Task Definition of Health Workers**

The human health resources are the main drivers of the health care system and are essential for the efficient management and operation of the public health system.

**C.2.3.1 National Leprosy Control Program Manager**

The National Leprosy Control Program Coordinator will be in charge of the following:

1. Formulation of administrative policies and technical guidelines for effective program implementation and initiation of corresponding legislation;
2. Coordinating regularly with WHO and international funding agencies to ensure that funds are readily available for the program;
3. Consolidation and analysis of national data on leprosy; and
4. Establishment and maintenance of linkages with GOs, NGOs and other organizations.

**C.2.3.2 Center for Health Development (CHD)**

The CHD Director shall designate a Leprosy Coordinator who shall direct and administer the leprosy program within the region in accordance with NLCP policies. Also, ensure that the NLAB mandates are implemented and monitored at the CHD/ Provincial / Local Levels. Thus:

 (a) The CHD- Infectious Diseases Prevention and Control / Communicable Diseases staff and the Sanitaria shall provide technical assistance to the Local Government Units (LGUs).

 (b) It shall strengthen a comprehensive and IEC campaign.

The CHD is encouraged to organize TWG, integrating all health programs) that will be tasked to conceptualize and develop the following:

1. Establish standards in the conceptualization and development of work packages parallel to the scheme of intensification, acceleration and sustaining elimination strategies.
2. Evaluation of Leprosy Elimination Status
3. Development of Surveillance System including maintenance network of referral system
4. Development of Rehabilitation, Prevention of Impariment and Disabilities Program.

*PROGRAM PLANNING AND MANAGEMENT – continuation*

**C.2.3.3 Sanitaria**

Basically, the Saniataria offers general health care services facility to address the health needs of the general population in its immediate area as part of its succession/ conversion plan. And its expabnded role include:

1. Tala – training institute and rehab (?)
2. Bicol – geriatrics center
3. Culion – general hospital/museum (medical tourism)
4. WVS – RITM of western Visayas
5. ECS – Research Center for Infectious Diseases **(MAY** become a department of Vicente sotto medical center , Treatment and rehab center)
6. MCS – Center for Mental Health in Mindanao
7. CS – General Hospital
8. SS – Maternal and Child Hospital

Technically the Sanitaria functions to:

 (a) Act as center for rehabilitation and leprosy research.

 (b) Provide technical assistance of leprosy control activities in its designated catchment areas.

 (c) Referral center for diagnosis and management of relapse and difficult cases.

 (d) Training center for health workers on leprosy control program on Prevention of Impairment and Disabilities.

 (e) Custodial care facility for persons affected with leprosy who are disabled, abandoned and elderly, including education information and counseling for clients

**C.2.3.4 DOH Provincial / Municipal Officers**

The DOH Representative assists the Provincial, City and Municipal Health Officer in the formulation of policies appropriate to the locality that will accelerate the elimination program for leprosy. These include:

1. Technical and administrative support to the attainment of leprosy program objectives; and
2. Facilitate submission of reports.

*PROGRAM PLANNING AND MANAGEMENT – continuation*

**C.2.3.5 Leprosy Regional Program Manager**

The designated Program Manager will be responsible for the following:

1. Provision of technical assistance and monitoring and evaluation of the leprosy program implementation.
2. Conduct of regular consultation meetings on leprosy program planning and review performance with PHO/ CHO/ MHO leprosy Coordinator on NLCP within the Region.
3. Gathering and analyzing Provincial and Sanitaria reports and submission of collated data to the NCDPC-IDO.
4. Identification of the training needs of health personnel implementing the leprosy program and subsequent recommendation for training.
5. Resource mobilization and management of Leprosy Program. And initiate or co-participate in the Project Cycle Management (Item No. A.5.3.3.b of NLCP MOP) when opportunities present to undertake project partnership between and among LGUs and leprosy advocates.
6. Maintenance and management of the Recording and Reporting System for Leprosy Program in the Region.
7. Strengthen comprehensive IEC/ advocacy and networking activities.

**C.2.3.6 Nursing Attendants**

The nursing attendants attached to the CHDs/ PHOs or Skin clinics/Partner Hospitals shall:

1. Assist in the initial and periodic clinical and bacteriological assessment of patients by the MHO or Medical Officer or the Skin clinics.
2. Take smears of suspected leprosy cases, when requested.
3. Assist the RHU personnel in the following activities:
	1. Planning for self- care and prevention of impairment/ deformities for specific patients;
	2. Disability grading of each patient;
	3. Constructing indigenous aids for mobility;
	4. Teaching and integrating self- care activities to leprosy patients.
4. Assist in the distribution of drugs. They may administer supervised dose when necessary.
5. Assist in case finding through contact examination, household survey and IEC activities.
6. Assist in the collection of NLCP reports.

*PROGRAM PLANNING AND MANAGEMENT – continuation*

**C.2.3.7 Barangay Health Worker**

The CVHW/ CHW/ BHW is a recognized leader in a community. The DOH, cognizant of their role, has provided them with basic orientation on leprosy. On the basis of this training, she can assist in:

1. Case finding by recognizing early signs and symptoms of leprosy during routine and special case finding activities.
2. Re- motivating defaulters.
3. Health education of treatment compliance, self- care and prevention of impairment and disabilities.
4. Recognizing early signs and symptoms of reaction and complication and reporting the same to the midwife for referral to the Municipal Health Officer.

**C.2.3.8 Community Health Teams**

The Department of Health (DOH), with the Departments of the Interior and Local Government (DILG), Social Welfare and Development (DSWD), and Education (DepEd), launched the Community Health Team (CHT) Mobilization campaign to guarantee that every family in the community is periodically visited and attended by health providers as part of the government’s efforts to achieve Kalusugan Pangkalahatanor Universal Health Care.

 Each team is composed of a leader, either a midwife or nurse, and four members that include a barangay health worker or traditional birth attendant, a social welfare development office representative or parent-leader, a barangay nutritionist, and a barangay service population officer.

Roles/Functions:

The CHT Mobilization teams (CHTs) will:

1. do a nationwide door-to-door visit to reach all families, especially the poorest Filipino households, identified through the DSWD’s National Household Targeting System (NHTS);
2. link these families to social service providers, provide critical social services when needed, and deliver key health messages;
3. provide information and services to all populations and individuals vulnerable to illnesses in maintaining their health and well-being and to prevent progression of illness; and
4. distribute complete treatment packages or medicines for all health programs as the need arises;

*PROGRAM PLANNING AND MANAGEMENT – continuation*

**C.2.4 Participating and Partner Institutions**

**C.2.4.1 Skin Clinics and Collaborating Hospitals**

MAIN TASKS: Case finding and validation/ confirmation of diagnosis

1. All skin clinics will provide hands- on training while doing routine skin consultation services to peripheral units in their respective areas.
2. Participate in planning and implementation of special activities relative to Leprosy Elimination Campain (LEC) and other special leprosy elimination campaign.
3. Confirm the diagnosis of suspected leprosy cases at the clinic or area visited.
4. Assist in initiating and maintaining home and Community Based Rehabilitation (CBR) activities.
5. Conduct other leprosy related functions like monitoring and collection of data in areas not covered by sanitaria.
6. Submit reports of each visit to the appropriate level, copy furnish the Regional Leprosy Coordinator and the Provincial Coordinator. It is presumed that the RHU visited is also given a copy of the findings and recommendations resulting from the visit.
7. Education information and counseling for clients.

The current skin clinics are operating and geographically located as follows:

Region I

* 1. With PHO-Ilocos Norte managed by PHO
	2. With PHO-Ilocos Sur managed by PHO

Region III

1. With PHO-Tarlac coordinated by DOH rep and Nursing Attendant
2. With PHO-Nueva Ecija coordinated by DOH rep and Nursing Attendant

Region IV-A

1. With PHTO-Batangas coordinated by DOH Rep
2. With Quezon Province as extension office of CHD

*PROGRAM PLANNING AND MANAGEMENT – continuation*

Region V

 Albay skin clinic managed by Bicol Sanitarium

Region VII

Cebu skin clinic / Leonardwood Research Center managed by American Leprosy Missions

Region IX

1. Mindanao Central Sanitarium with functional Travelling skin clinics

Region X

* 1. Reg. 10 with the CHD(Cagayan DO) managed by Nursing Attendant coordinated CDO, Misamis Oriental, and Lanao Del Norte
	2. PHTO coordinated by Nursing Attendant covering the province of Bukidnon
	3. PHTO coordinated by Nursing Attendant covering Misamis Occidental
	4. PHTO coordinated by Nursing Attendant covering Camiguin

Region XI

1. RO 11 managed Derma Unit, Southern Philippines Medical Center

*PROGRAM PLANNING AND MANAGEMENT – continuation*

**C.2.4.2 Private Sector**

All private practitioners are encouraged to participate in the leprosy program (TWG member, resource person) and must use MDT (WHO recommended regimen) in the treatment of leprosy. (TWG to be participated by GOs, NGOs and POs.); eduction information and counseling for clients

(a) The IDO-NCDPC will establish an active and continuing forum for sharing of information and exchange of views regarding the practice of certain professions relative to leprosy elimination.

(b) All private practitioners are encouraged to participate in the leprosy program and must use MDT in the treatment of leprosy.

(c) Referral, notification and reporting of cases to the municipal / city health office.

**C.2.4.3 Philippine Dermatological Society**

1. Assist in the conduct Community Outreach Programs
2. Act as trainors and “experts” in diagnosis and management (Private-Public Partnership)
3. Assist in quality assured epidemiologic data.
4. Assist in evidence-based care and operational researches.
5. Help in bridging the gap between patient and treatment particularly with private clinics and hospitals.

**C.2.4.4 Peoples’ Organization**

*PROGRAM PLANNING AND MANAGEMENT – continuation*

**C.2.4.5 Public and Private Health Facilities**

1. To provide hands-on-training while doing routine skin consultation services to peripheral units in their respective areas.

2. Participate in planning and implementation of special activities relative to Leprosy Elimination Campaign (LEC)

3. Confirm the diagnosis of suspected leprosy cases at the clinic or area visited.

4. Submit reports of each visit to the appropriate level.

5. Conduct education information and counseling

**Resource Documents and Reference Materials:**

BioMed Central Public Health 2002, 2:2

Community of Practice in Government: Leveraging Knowledge for Performance

Enhanced Global Strategy for Further Reducing the Disease Burden due to Leprosy (Plan Period: 2011-2015)

Hastings

ILEP: Handbook on Counseling

International Journal of Leprosy, Volume 70, Number 1 (Supplement), March 2002

INTRAC: The International NGO Training and Research Centre, March 2005

Magna Carta for Persons with Disabilities

NLCP Implementation Review by R. F. Gajete, E. Costo, M. A. Merla, & R. Ces, January 2012

Rights-Based Approach to Development and Governance, A Primer (Purification C. Valera Quisumbing, Chairperson)

UN convention on the Rights of Persons with Disabilities, 2006