NATIONAL LEPROSY CONTROL STRATEGY 2019-2023

National Leprosy Control Programme
Department of Public Health
Ministry of Health and Sports
2018

Contents

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Foreword

In support of a broader vision to enhance/uplift health, social cohesion, sustainable human and economic development of Myanmar through a sustainable health system, the National Health Plan 2017-2021 aims to strengthen the country's health system and pave the way towards Universal Health Coverage (UHC) choosing a path that is explicitly pro-poor. UHC goals form an integral part of Myanmar's road to sustainable growth and poverty reduction.

Leprosy has been a public health problem in Myanmar for many centuries. Integrated Leprosy control activities into the Basic Health Services (Primary Health Care Programme) was initiated in 1978. Myanmar adopted the WHO's strategy of further reducing the leprosy burden and sustaining leprosy control activities and focused its effort on sustaining leprosy control activities and improving the quality of care by promoting disability prevention activities. MDT regime was started in 1988 and expand phase by phase covered all the townships in 1995. Elimination of leprosy was declared in the year 2003. However, new cases ranging from 2000 to 3000 are detected annually. In 2010, Myanmar again adopted the WHO strategy of Enhanced Global strategy for Further Reducing the Disease Burden due to Leprosy.

With our vision towards "Leprosy Free Myanmar", the National Leprosy Control Programme Strategic Plan 2019–2023 was drawn fittingly for recent country situation and future expectations, in align with Global Control Strategy, to ensure increased activities towards a further reduction of the burden of the disease and to prevent children affected by leprosy from living with lifelong disability. During the development process, three global strategic directions are carefully synchronized with the country situation, available resources and the programme's capacity.

We want to express our appreciation to the team for their coordinated effort and support to the development process of this Strategic Plan. We are pleased to express our thanks to Dr Kyaw Oo, Deputy Director General (Retired), Department of Human Resource for Health, Ministry of Health and Sports for his consultancy throughout the development process.

Dr.Thar Tun Kyaw

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Abbreviations

ACD	Active Case Detection
BHS	Basic Health Staff
CBO	Community-based Organization
CDR	Case Detection Rate
CEA	Community Engagement Approach
G2D	Grade 2 Disability
JLW	Junior Leprosy Worker
LAC	Leprosy Awareness Campaign
LAP	Leprosy Affected Persons
LPEP	Leprosy Post-Exposure Prophylaxis
MB	Multi-bacilliary
MDT	Multi-drug Therapy
NCDR	New Case Detection Rate
NLCP	National Leprosy Control Programme
NSC	National Steering Committee
PB	Pauci-bacilliary
PCD	Passive Case Detection
PLA	Participatory Learning in Action
POD	Prevention of Disability
QOL	Quality of life
RFT	Released from Treatment
SDR	Single Dose Rifampicin
WHO	World Health Organization

Introduction

Global leprosy strategy (2016-2020) aims at cutting transmission down to zero by early detection of all new cases before they develop disabilities and prompt initiation of treatment to prevent disability and reduce transmission of infection in the community. This will have an impact on the transmission of infection in the community achieving a situation wherein the community is free of morbidity, disabilities and social consequences due to leprosy. The proportion of G2D cases among newly diagnosed patients and the G2D rate in a population indicate the efficiency of early detection of leprosy.1It also indicates indirectly awareness level on early signs of leprosy, access to leprosy services and skills of health staff in diagnosing leprosy. The global leprosy strategy plans to achieve 'zero disabilities' among new child cases by introducing one type of treatment of all categories of leprosy for a shortened duration, targeting case detection in high endemic pockets and focusing on screening of close contacts.

Myanmar is one of the South East Asian countries. The total population of the country was estimated at 53.4 million people in 2017, according to the latest census figures. It is composed of one hundred and thirty-five ethnic groups. The climate is mostly tropical, (summer, rainy and winter). Economy mostly depends on agriculture. Administratively the country was divided into fifteen Regions and States. There are a total of (330) townships and (60,000) villages. The health system is of Primary Health Care approach covering the whole country by the government health system. There are (1565) Rural Health Centers, (348) Urban Health Center and (987) hospitals of various categories.

Leprosy has been well known to be endemic in Myanmar for many centuries. In 1891, it was estimated the prevalence to be 8.6 per 10 000 population for the country as a whole and 14.4 per 10 000 for central Myanmar. The 1932 census of Myanmar reported 11 127 leprosy cases (prevalence 7.6 per 10 000 population). In 1951 WHO estimated that there were 100 000 cases in the country and a prevalence of 50 per 10 000 population. In 1973, the National Leprosy Programme (National Leprosy Assessment Survey) estimated the prevalence of 242 per 10000 populations.

Leprosy affected persons are often experiencing stigma and discrimination. This negatively impacts access to diagnosis, treatment outcomes or care, as well as affects their societal functioning. Stigma is an important cause of delayed diagnosis, facilitating transmission of the infection within families and communities. An indicator was, therefore, introduced to monitor discrimination of persons affected by the disease. Additional indicators related to the social aspects of leprosy were also included for programme evaluation.

[1]http://www.searo.who.int/srilanka/areas/leprosy/global_leprosy_strategy_2016_2020.pdf

The Government established Regional Leprosy Control Teams in the 15 States and Regions, under the authority of the State and Region Health Departments. In areas where the disease burden was high, one regional leprosy officer was stationed at the State and Region level; at district level there were several leprosy control project teams, covering several townships according to the endemicity.

The WHO‘s global goal of “Elimination of Leprosy as a Public Health Problem” (one case per ten thousand population) was reached at the national level by early 2003. After reaching this goal, the Ministry of health continued its effort for further reduction of the disease burden, Prevention of Disability (POD) Disability care and Rehabilitation of affected persons. Neither the No. of new cases with Grade 2 nor the Grade 2 disability rate per 100,000 population shows a significant decline. The number new cases detected also remains around (3000) every year for the last five years.

The National Leprosy Control Programme Strategic Plan 2019–2023was drawn appropriately for recent country situation and future expectation to ensure increased activities towards a further reduction of the burden of the disease and to prevent children affected by leprosy from living with lifelong disability.

Current leprosy situation

The Central Unit of the Disease Control Programme in the Department of Health was responsible for the planning and implementation of leprosy control activities in the whole country, and for training, monitoring, and assessment; and serving as specialized institutions for referral services, training, reconstructive surgery, rehabilitation, and research activities. As part of the Disease Control Programme, the Government established Regional Leprosy Control Teams in the 15 States and Regions, under the authority of the State and Region Health Departments. In areas where the disease burden was high, one regional leprosy officer was stationed at the State and Division level; at district level there were several leprosycontrol project teams, covering several townships according to the endemicity. Each team consisted of a medical officer, between one and three leprosy inspectors, 20–30 junior leprosy workers, and a laboratory technician.

Human Resources: Under Ministry of health and Sports, Department of Public Health organized a division named National Leprosy Control Programme (NLCP) for government authorized activities. The NLCP setup with a deputy director, 3 assistant directors and 4 staff officers as a total of 8 officers and 24 other ranks at central level. State/Regional level activities are implemented with one assistant director, one team leader (2 officers) and one health assistant (1 other rank) as a total of 3 staff per region (3x17=51 staff at State/Region level: 34 officer and 17 staff). At district level, there are one other rank staff per district counting 74 as a total. Township level activities are implemented by one junior leprosy worker (JLW) and one driver per township

as total 2 x330= 660 staff. According to the setup, Officer level staff are counted as a total of 38 (4 at central+ 34 at State/Region level). Other rank staff are also counted as 24 at central level, 17 at State/Region level, 74 at district level and 660 at township level as a total of 775 other rank staff.

Case detection: Although Myanmar has achieved the elimination of leprosy as a public health problem, new cases ranging from 2000 to 3000 are detected annually. At the end of 2017, there were (2216) registered cases and the prevalence rate was 0. 42 per 10,000 population. New Case Detection Rate (NCDR) for 2017 was (4.3 per 100,000 pop:). More than 80% of total new cases were detected by PCD. Ninety percent of the new cases were detected from high disease burden areas (Ayeyarwaddy, Bago, Sagaing, Mandalay, Magway, Yangon Regions and Shan State). In 2017, the situation was also noted as 76.7% MB proportion among new cases, 3.5% Child cases proportion, 3 to 5%were under 15 year of age,12.4% Disability Grade-2 among new cases and 5.25 per million pop Disability Grade 1 Rate. The MB proportion is slowly increasing especially when Case Detection Rate (CDRs)decrease. The proportion of women among new cases which has only been reported since 2005 remained stable at around 35%. Male and Female ratio was 2:1. The decline in CDR has slowed down since 2003 and has been completely stagnant for the past 4 years (4.7 per 100,000 in 2013). This decrease in case detection appears to have happened right across the country. As one might expect, this was accompanied by a slow decline in the proportion of children among new cases (Child%) also (from 6.4% to 4.5%).

Disability burden: The MB proportion (MB%) is slowly increasing also, something that is often observed when CDRs decrease. The proportion of women among new cases has only been reported since 2005. It has remained stable at around 35%. Since MDT was started, release from treatment cases with MDT were more than 280,000. According to the reports of Prevention of Disability (POD) Project, disability proportion of leprosy affected persons was 30 to 35 %. Moreover, proportion of Disability Grade 2 (visible deformity) among new cases detected was more than 10% for the last five years.

Social and economic burden: Leprosy and its consequences are a complex human problems leading to discrimination, stigma and prejudices. Socio-economic problems of leprosy affected persons and their families may not be uncountable and immeasurable. Although the psychosocial and medical needs were not much prevalent among the clients, socioeconomic rehabilitation activities targeted more towards RFT cases with older age and higher disability grade are needed. Quality of life (QOL) decreased progressively in leprosy-affected persons whether or not they were on-MDT or RFT.Stigma was still obvious in some areas due to less HE activities (i.e. special activities) leading G-2 cases seemed to be hiding.Most of needs

concerned were related to job that was affected by their disability. Social rehabilitation activities are needed to focus on target groups.[2]

Disease trend and current situation: New cases detection trend was decreasing but there was still in apparent number of cases in recent years. Linear trend analysis showed about new cases detection was decreasing about 100 cases per year. Top areas of high and low endemicity according to NCD during the years were Mandalay, Sagaing, Bago, Ayeyarwady, Yangon, Magway and Shan. Although Mandalay Region was highest of all regions through the years, stability of trend was marked in Yangon. Highest decreasing trend was noticed at Ayeyarwaddy and Bago Regions (Cases reduction rates were 28 and 23 per year).

Contact examination: Contact examination of leprosy –affected persons who are taking MDT and who have been Released from Treatment (RFT) is already routine practice. Household contacts of all new cases are screened yearly up to 5 years after the index case has complete MDT. At the time of diagnosis, contact examination is done by specialized leprosy staff. Yearly Follow-up contact examination is done by Basic Health Staff (BHS). Leprosy Awareness Campaign (LAC) was conducted in 60 pocket health centers during 2015, 40 pocket health centers during 2016 and 60 pocket health centers during 2017. Pocket areas are still remaining. Inadequate Manpower is obvious at the moment. POD activities are also needed to be sustained.

Leprosy Post-Exposure Prophylaxis Pilot Study: In 2013, a collaboration was initiated between the Netherlands Leprosy Relief (NLR), Novartis Foundation for Sustainable Development and scientists from the Erasmus Medical Center, to support the ministries of leprosy post-exposure prophylaxis (LPEP) in the form of a single dose Rifampicin. The project started in 2014 and has the three years duration. The purpose of the PEP is to reduce the incidence of new leprosy cases and to interrupt transmission of *Mycobacterium Leprae*. Total 540 index cases were traced (97.5% of the targeted index cases) and reviewed and their contacts (both house-hold and neighbor) were able to screened. Total number of screened contacts was (9603), among them 8944 (93.1%) of the contacts were receiving Single Dose Rifampicin (SDR). Total number of new leprosy cases detected from the LPEP activities was 15 cases. Among them 5 new cases from the household and 10 cases from the neighbor contacts. Pauci-bacilliary (PB) cases was (11) and Multi-bacilliary (MB) was (4), i.e MB proportion among new cases was (26.6%). No disability grade-2 was detected, Female and Child proportion were, (46.6% & 6.6% respectively). New MB case among all contacts was (0.055%), child case among all contacts was (0.011%) Female among all contacts was (0.08%).

[2]KyawOo, Chan TunAung, Tin Shwe. Need assessment for leprosy affected persons in hyperendemic township of central Myanmar (2016)

Achievements

The past three decades have seen impressive achievements and progress in leprosy control dueto the widespread and free availability of robust chemotherapy in the form of multidrug therapy (MDT), good strategies, strong collaboration with major partners, and political commitment from countries where leprosy is endemic. In Myanmar, WHO, MDT regime was started in 1988 and expand phase by phase. By the year 1995, MDT expansion was covered all the townships. Myanmar achieved the goal of Elimination of leprosy as a Public Health Problem at the national level (prevalence of less than one case per 10,000 population at the national level) was declared in the year 2003.The introduction of WHO MDT in Myanmar dramatically changed the picture of leprosy. Leprosy patients could now look forward to effective treatment. The community too, with the expansion of MDT services, realized that the disease can be cured within a relatively short time – and this was one of the main reasons for the lessening of the stigma associated with leprosy.

Information materials for the public could now be presented in a positive way without creating fear. Patients could be told that they were cured after finishing the recommended course of treatment. Equally significant is the fact that MDT also restored the credibility of the leprosy programme and renewed the enthusiasm of leprosy workers. The public health approach to dealing with leprosy lives on in Myanmar thanks to MDT.[3]

Elimination of leprosy as a public health problem at the global level was achieved in the year 2000. It was pragmatically defined as a registered prevalence of less than one case of leprosy per 10 000 population. Over 44000 patients have been diagnosed and treated since the introduction of MDT over the past decades.

Indicators	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Reg:	2708	2679	2790	2893	2793	2816	2569	2735	2680	2721	2687	2413	2526	2216
PR	0.49	0.48	0.49	0.5	0.48	0.47	0.5	0.45	0.43	0.45	0.52	0.46	0.49	0.42
NC	3756	3499	3721	3648	3383	3147	2950	3082	3013	2950	2877	2571	2609	2279
NCDR	6.86	6.31	6.59	6.33	5.76	5.25	5.7	5.04	4.8	4.72	5.59	5	5.1	4.3
MB	2241	2133	2345	2442	2295	2189	2059	2165	2202	2155	2209	2013	2020	1747
<15yrs	242	225	253	220	200	165	156	149	155	134	119	101	88	79
G-2	362	346	421	470	442	468	410	463	503	423	415	350	358	283
Female	NA	NA	1328	1293	1254	1106	1087	1067	965	997	964	781	801	699
Year RFT	3807	3694	3655	3521	3444	3118	3158	3159	3006	2943	2830	2787	2418	2460

[3]KyawLwin, Tin Myint, Mg MgGyi, MyaThein, Tin Shwe, KyawNyuntSein. Implementation of WHO MDT in Myanmar

Challenges

The following are the critical challenges leprosy control services are faced with:

Case detection:

Detection of paediatric patients (3.5%) indicates the continued presence of undetected patients and continued transmission in the community. The low proportion of females in new cases (30%) indicate differential access to diagnosis and treatment, which negatively affects women. This, therefore, needs a more careful consideration and more systematic collection of information disaggregated by sex for proper assessment. The current detection of patients already with disabilities and the high proportion of multibacillary cases (MB) indicate delay in detection in the community.

Community awareness:

Active Case Detection is less than 20% and presence of pocket areas (Hot Spots , high disease burden) indicate less effectiveness of IEC to increase community awareness. Identification, education and examination of contacts has been slow and largely unreported.

Stigma and discrimination against persons affected by the disease continues to challenge early detection and successful completion of treatment. Many patients continue to experience social exclusion, depression and loss of income. Their families often also suffer due to stigma.

Partnership:

There is low public and political priority over leprosy control at era after elimination of leprosy. Change of priority activities, resource opportunities, community interest, partnerships of stakeholders, including involvement of persons affected by leprosy, and private providers is leading to weak in actions at all directions.

Programme implementation:

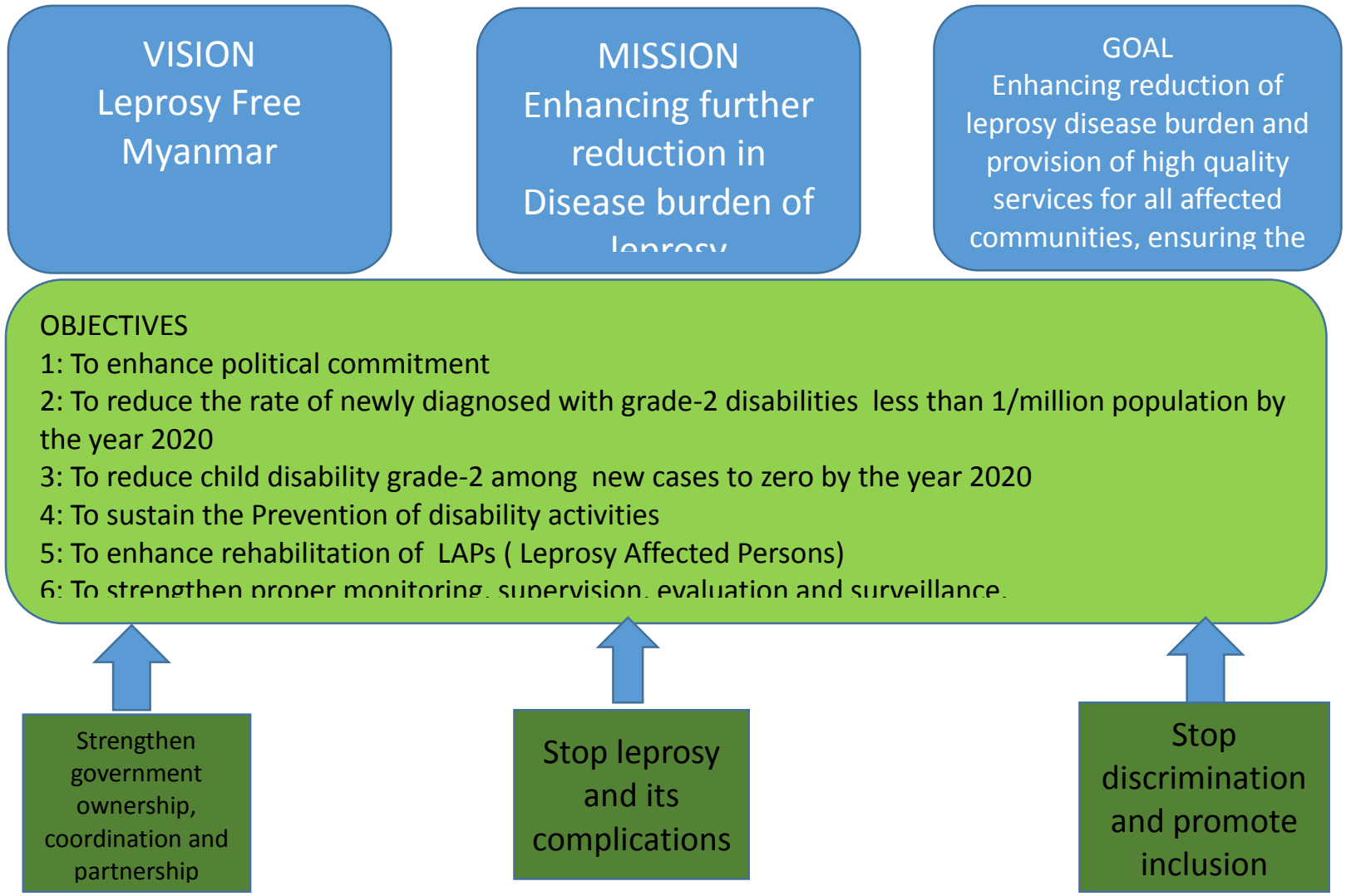
Sustainability of POD activities in POD townships after project period is a challenge, especially in the context of care after treatment to prevent and manage residual post-treatment disabilities. Weak referral services, referral network, monitoring and supervision at all level together with reduced funding and weak infrastructure at operational level has impeded some of the achievements.

Strategic Plan

Development Process

Development of strategic plan was made by following steps.

Framework


VISION
Leprosy Free Myanmar
MISSION
Enhancing further reduction in Disease burden of
GOAL
Enhancing reduction of leprosy disease burden and provision of high quality services for all affected communities, ensuring the
OBJECTIVES
1: To enhance political commitment
2: To reduce the rate of newly diagnosed with grade-2 disabilities less than 1/million population by the year 2020
3: To reduce child disability grade-2 among new cases to zero by the year 2020
4: To sustain the Prevention of disability activities
5: To enhance rehabilitation of LAPs (Leprosy Affected Persons)
Strengthen government ownership, coordination and partnership
Stop leprosy and its complications
Stop discrimination and promote inclusion

Vision

Leprosy Free Myanmar

Mission

Enhancing further reduction in Disease burden of leprosy

Goal

Enhancing reduction of leprosy disease burden and provision of high quality services for all affected communities, ensuring the principles of equity and social justice.

Objectives

1:To enhance political commitment

2: To reduce the rate of newly diagnosed with grade-2 disabilities less than 1/million population by the year 2020

3: To reduce child disability grade-2 among new cases to zero by the year 2020

4: To sustain the Prevention of disability activities

5: To enhance rehabilitation of LAPs (Leprosy Affected Persons)

6: To strengthen proper monitoring, supervision, evaluation and surveillance.

7: To enhance the use of basic and health system research

Main targets

The following are the global targets envisaged by the Strategy by 2020: 1) Zero G2D among paediatric leprosy patients. 2) Reduction of new leprosy cases with G2D to less than one case per million population. 3) Zero countries with legislation allowing discrimination on basis of leprosy.

Other programme performance indicators

Registered case	Number of leprosy identified who are registered for treatment with MDT
Prevalence Rate	Number of registered cases per 10,000 population at a given point of time
New Case	Number of cases newly detected by active or passive case detection.
New Case Detection Rate	Number of cases newly detected per 100,000 population at a given point of time.

Multi-Bacillary proportion	Number of new MB cases in total no. of new cases detected during one year.
Case under-15 yrs-old proportion	No. of new cases under 15 yrs in total no. of new cases detected during one year.
Grade-2 proportion	No. of new cases with grade-2 disability in total no. of new cases detected during one year.
Female case proportion	No. of new female cases in total no. of new cases detected during one year.
Year RFT	No. of cases after complete treatment with MDT during one year.

Strategic Directions[4]

1. Strengthen government ownership, coordination and partnership

The first pillar will focus on governance issues, partnerships, policies and strategies and encompasses the following key areas of intervention: 1) Ensuring political commitment and adequate resources for leprosy programmes, 2) Promoting partnerships with state and non-state actors and promote intersectoral collaboration and partnerships at the international level and within countries, and 3) Facilitating and conducting basic and operational research in all aspects of leprosy and maximize the evidence base to inform policies, strategies and activities.

2. Stop leprosy and its complications

The second pillar includes core activities in the medical and epidemiological area: 1) Strengthening patient and community awareness on leprosy. 2) Promoting early case detection through active case-finding (e.g. campaigns) in areas of higher endemicity and contact management. 3) Ensuring prompt start and adherence to treatment, including working towards improved treatment regimens improving prevention and management of disabilities. 4)Strengthening surveillance for antimicrobial resistance including laboratory network. 5)Promoting innovative approaches for training, referrals and sustaining expertise in leprosy such eHealth.

3. Stop discrimination and promote inclusion

Socio-economic and integration aspects compose the third pillar: 1) Promoting societal inclusion through addressing all forms of discrimination and stigma. 2) Empowering persons affected by leprosy & community and strengthen their capacity to participate actively in leprosy services. 3) Promoting access to social and financial support services, e.g. to facilitate income generation, for persons affected by leprosy and their families.4) Supporting community-based rehabilitation for people with leprosy-related disabilities.

[4] http://www.searo.who.int/srilanka/areas/leprosy/global_leprosy_strategy_2016_2020.pdf

Guiding principles

Responsibility of national governments and strengthening partnerships

The primary responsibility for leprosy control is for National leprosy Control Programme, Ministry of Health and sports. Different approaches and increased collaboration at the national and sub-national levels within the country is necessary. A range of government departments and agencies will be responsible for leprosy activities, and their actions shall be coordinated and harmonized. The government will act through partnerships with international organizations including WHO, the private sector, local and international NGOs, CBOs, as well as people affected by leprosy.

Sustaining expertise in leprosy

There should be a focus on strengthening leprosy training sessions. New tools utilizing e-learning and health literacy promotion activities, wherever relevant and available, are also be exploited. Nursing and medical schools' curriculums as well as education curriculums shall include leprosy to generate a minimum awareness among health-care workers. Former patients and their family members could be utilized as peer-educators about the disease.

Quality leprosy services with children and women as the focus

Special attention should be given to children and women, promoting early detection through periodical screening, and facilitating diagnosis and access to care.

Participation of persons affected by leprosy in leprosy services

Persons affected by leprosy are considered as an important resource for leprosy programmes. Strategies would focus on building the capacity of persons affected by leprosy in the area of advocacy and on setting up networks for psycho-social support for reducing emotional and economic distress that often results in depression and poverty. Persons affected by the disease could be involved to support early identification and improve treatment adherence. International, national and local organizations representing persons affected by leprosy would be integral to this process.

Reduction of stigma and discrimination

"Elimination of discrimination against persons affected by leprosy and their family members" would be considered. Nongovernmental and civil society organizations would complement government actions to reduce stigma and advocate against discrimination. Needs related to job that was affected by their disability should be concomitantly carried out with rehabilitation activities focus on target groups.

Focus on research to support leprosy control

Basic research designed to study leprosy transmission and to develop new regimens for prophylaxis, and operational research involving all partners to identify implementation strategies and interventions would be supported strongly. Health system research and implementation research agenda should be identified, prioritized and carried out.

Country implementation plan

Strategic Direction 1. Strengthen government ownership, coordination and partnership

Objective	Strategies	Key Activities	Process Indicator	Denominator	Baseline (2018)	Target				
						2019	2020	2021	2022	2023
To enhance political commitment	Advocacy to policy makers	Advocacy meeting	Number of meeting	Once a year	1	1	1	1	1	1
	Formation of National Steering Committee for Leprosy Control	Formation of National Steering Committee (NSC) for LCP	NSC formed	Single body	0	1	0	0	0	0
		Meeting of NSC	Number of meeting	Once biennial year	0	1	0	1	0	1
	Community awareness raising	Printed Media	Number of poster	1000 per State/Region	-	15000	0	0	0	0
		Media conferencing	Episode	One a year	0	1	1	1	1	1
		National conference	Episode	Once per five year	1	0	0	0	0	1
To strengthen proper monitoring, supervision, evaluation and surveillance	Capacity building of BHS & LCP staff for effective supervision and monitoring	Coordination meeting at all level	Number of meeting	One per State/Region	15	15	15	15	15	15
		Evaluation meeting at all level	Number of meeting	One per State/Region	15	15	15	15	15	15
	Strengthening of field supervision	Field supervision by checklist at Regional level	Number of supervision visit	Four per year per region	8	8	8	8	8	8
		Field supervision by checklist at Team Leader level	Number of supervision visit	12 per year per township	72	72	72	72	72	72
		Provision of transport facilities	Number of Motorcycle distributed				/	/	/	/

	Strengthening of surveillance system	Workshop on Development of an effective surveillance method	Surveillance system developed	NA	NA	Done				
		Implementation of leprosy surveillance	Annual surveillance package done	Once a year	0	0	1	1	1	1
To contribute UHC with a special focus on children, women and underserved populations including migrants and displaced people	Community awareness raising	Printed Media	Number of poster distributed	15000 per year	0	15000	0	15000	0	15000
		Electronic media	Episode of transmission	Twice per year	0	2	2	2	2	2
To promote partnerships with state and non-state actors and promote inter-sectoral collaboration and partnerships at the international level and within countries	Coordination meeting with implementing partners	Annual programme review meeting	Number of meeting	Once a year	1	1	1	1	1	1
		Technical Advisory Group (TAG) meeting	Number of meeting	Twice per year	3	2	2	2	2	2
		State/Region Coordination meeting at hyperendemic areas	Number of meeting	One in each of six hyperendemic areas	6	6	6	6	6	6

		Attending international coordination meting	Number of attendance	Twice a year	NA	2	2	2	2	2
To facilitate and conduct health system research and operations research	Utilization of HSR findings for effective implementation	Research methodology training	Number of workshop	Once a year	0	1	1	1	1	1
		HSR protocol development workshop	Number of workshop	Once in biennial year	0	1	0	1	0	1
		Implementation of operational research (LPEP expansion)	Number of report	One per five year	1	1	1	0	0	0
		Implementation of health system research (LCP activities among migrant and conflict affected community)	Number of report	One per five year	0	0	0	0	0	1
		Implementation of basic research (Sentinel Surveillance on Anti-Microbial Drugs Resistance)	Number of report	One per biennial	1		1		1	

Strategic Direction 2. Stop leprosy and its transmission

Objective	Strategies	Key Activities	Process Indicator	Denominator	Baseline	Target				
						2019	2020	2021	2022	2023
To reduce the rate of newly diagnosed with Grade-2 disabilities less than 1/million population by the year 2020	Identification of "Hot Spots" by mapping project	Leprosy awareness campaign in pocket health centers by using mapping project	Year-wise implementation	Once a year	1	1	1	1	1	1
	Early diagnosis and quality care	ACD especially contact survey	Number of contact examined	NA	NA	/	/	/	/	/
		ACD with LAC in pocket areas	Number of LACs	Once a year in each of 60 pocket area	60	60	60	60	60	60
		Well supervised MDT services and reaction management	Number of registered cases	1200 per year	1187	1200	1200	1200	1200	1200
	Prevention of Leprosy (Immuno and chemo-prophylasix)	Expansion of LPEP to appropriate townships	Number of township	2 townships per year	8	6	5	5	5	7
To reduce child disability grade-2 among new cases to zero by the year 2020	Stratified focused case finding among children community	School health talk with examination	Number of inclusion in school health visit performed	NA	NA	/	/	/	/	/
		Distribution of IEC materials	Number of schools distributed	15 per year per each of six hyperendemic townships	NA	90	90	90	90	90

		Verification of New Child cases	Number of child cases identified	66 cases per year with -13 per year trend	79	66	53	40	27	14
To strengthen surveillance for antimicrobial resistance including laboratory network	Surveillance on Anti-Microbial Drugs Resistance	Sentinel Surveillance on Anti-Microbial Drugs Resistance	Number of activity performed	Once a year	1	1	1	1	1	1
To improve quality of care	Capacity building of BHS & LCP staff	Programme management Refresher training for ALI	Number of training session (50 attendee each)	Twice a year	NA	2	2	2	2	2
		Clinical management Refresher training for ALI	Number of training session (50 attendee each)	Twice a year	NA	2	2	2	2	2
		Filed management training for ALI	Number of training session (50 attendee each)	Twice a year	NA	2	2	2	2	2
		Fellowship Programme	Number of fellowship	Two fellowships per biennial year	0	0	2	0	2	0

Strategic Direction 3. Stop discrimination and social suffering

Objective	Strategies	Key Activities	Indicator	Denominator	Baseline	Target				
						2019	2020	2021	2022	2023
To sustain Prevention of disabilities	Strengthening Monitoring and evaluation	Monitoring, field supervision and evaluation at all level	Number of field visits	Twice a year per team leader in six hyperendemic tsp	NA	12	12	12	12	12
	Co-ordination with special institutions use of proper form for referral cases and feedback	Workshop on Development of proper referral form for disabilities	Number of workshop	NA	NA	1				
		Integration of referral system	Referral system integrated	NA	NA		Done			
		Workshop on Review and revise of feedback on referral system	Number of workshop	NA	NA			1	1	1
	Capacity building for Effective implementation of POD activities	Workshop on sustaining POD activities	Number of Workshop	Once a year at selected tertiary hospital	1	1	1	1	1	1
		Refresher training on POD for BHS (PHS2 and LCP staff)	Number of training	10 sessions per year	10	10	10	10	10	10
		Workshop on Strengthening POD activities	Number of Workshop	Once a year	1	1	1	1	1	1
		POD review meeting	Number of meeting	Once Biennial	1	0	1	0	1	0
	Expansion of POD Projects	Provision of supportive materials and drugs	Number of township supported	5 townships per year	NA	5	5	5	5	5

To enhance rehabilitation of LAPs (Leprosy Affected Persons)	Development of national CBR guideline	Workshop on development of national CBR guideline	Number of workshop	NA	NA	1				
		Introduction of CBR Guideline	Guideline systemized	NA	NA	Done				
		Review and revise of CBR	Number of Workshop	NA	NA		1			
	Ensuring financial support for CBR	Co-ordination meeting with partners	Number of meeting	Once a year	NA	1	1	1	1	1
	Strengthening of existing institutional rehabilitation	Workshop on inclusion & empowerment of LAPs	Number of workshop	Once per five year	NA	0	1	0	0	0
	Advocacy for inclusion & empowerment of LAPs	Advocacy meeting for CBR	Number of meeting	Once per five year	NA	0	1	0	0	0
	Establishment of multi-sectorial partnership	Workshop on multi-sectorial partnership	Number of Workshop	Once a year	0	1	1	1	1	1
	Capacity building of Health staff	Training on CBR for both BHS and LCP staff	Number of training session	Once a year	0	1	1	1	1	1
	Strengthening of participation of LAPs	Training of LAPs using PLA approaches	Number of training session	Once a year	0	1	1	1	1	1
	Implementation of CBR in selection of CBR township and	CBR activities using community engagement approaches (CEA)	Number of CEA session	5 sessions per year	0	5	5	5	5	5

Costing of the planned activities

Strategic Direction 1

Objective	Strategies	Key Activities	Process Indicator	Denominator	Baseline (2018)	Target						Unit cost (USD)	Target year				
						2019	2020	2021	2022	2023			2019	2020	2021	2022	2023
To enhance political commitment	Advocacy to policy makers	Advocacy meeting	Number of meeting	Once a year	1	1	1	1	1	1		2500	2500	2500	2500	2500	2500
	Formation of National Steering Committee for Leprosy Control	Formation of National Steering Committee (NSC) for LCP	NSC formed	Single body	0	1	0	0	0	0		0	0	0	0	0	0
		Meeting of NSC	Number of meeting	Once biennial year	0	1	0	1	0	1		1500	1500	0	1500	0	1500
	Community awareness raising	Printed Media	Number of poster	1000 per State/Region	NA	15000	0	0	0	0		0.5	7500	0	0	0	0
		Media conferencing	Episode	One a year	0	1	1	1	1	1		500	500	500	500	500	500
		National conference	Episode	Once per five year	1	0	0	0	0	1		30000	0	0	0	0	30000
To strengthen proper monitoring, supervision, evaluation and surveillance	Capacity building of BHS & LCP staff for effective supervision and monitoring	Coordination meeting at all level	Number of meeting	One per State/Region	15	15	15	15	15	15		1000	15000	15000	15000	15000	15000
		Evaluation meeting at all level	Number of meeting	One per State/Region	15	15	15	15	15	15		1000	15000	15000	15000	15000	15000
	Strengthening of field supervision	Field supervision by checklist at Regional level	Number of supervision visit	Four per year per region	8	8	8	8	8	8		1000	8000	8000	8000	8000	8000
		Field supervision by checklist at Team Leader level	Number of supervision visit	12 per year per township	72	72	72	72	72	72		500	36000	36000	36000	36000	36000
		Provision of transport facilities	Number of Motorcycle distributed	NA	NA		30	/	/	/		1000	0	30000	0	0	0

	Strengthening of surveillance system	Workshop on Development of an effective surveillance method	Surveillance system developed	NA	NA	Done						5000	5000	0	5000	0	5000
		Implementation of leprosy surveillance	Annual surveillance package done	Once a year	0	0	1	1	1	1		2000	0	2000	2000	2000	2000
To contribute UHC with a special focus on children, women and underserved populations including migrants and displaced people	Community awareness raising	Printed Media	Number of poster distributed	15000 per year	0	15000	0	15000	0	15000		0.5	7500	0	7500	0	7500
		Electronic media	Episode of transmission	Twice per year	0	2	2	2	2	2		5000	10000	10000	10000	10000	10000
To promote partnerships with state and non-state actors and promote intersectoral collaboration and partnerships at the international level and within countries	Coordination meeting with implementing partners	Annual programme review meeting	Number of meeting	Once a year	1	1	1	1	1	1		10000	10000	10000	10000	10000	10000
		Technical Advisory Group (TAG) meeting	Number of meeting	Twice per year	3	2	2	2	2	2		1500	3000	3000	3000	3000	3000
		State/Region Coordination meeting at hyperendemic areas	Number of meeting	One in each of six hyperendemic areas	6	6	6	6	6	6		1000	6000	6000	6000	6000	6000

		Attending international coordination meting	Number of attendance	Twice a year	NA	2	2	2	2	2		1500	3000	3000	3000	3000	3000
To facilitate and conduct health system research and operations research	Utilization of HSR findings for effective implementation	Research methodology training	Number of workshop	Once a year	0	1	1	1	1	1		3000	3000	3000	3000	3000	3000
		HSR protocol development workshop	Number of workshop	Once in biennial year	0	1	0	1	0	1		3000	3000	0	3000	0	3000
		Implementation of operational research (LPEP expansion)	Number of report	One per five year	1	1	1	0	0	0		10000	10000	10000	0	0	0
		Implementation of health system research (LCP activities among migrant and conflict affected community)	Number of report	One per five year	0	0	0	0	0	1		2500	0	0	0	0	2500
		Implementation of basic research (Sentinel Surveillance on Anti-Microbial Drugs Resistance)	Number of report	One per biennial	1	1	1	1	1	1		1500	1500	1500	1500	1500	1500
												Total	**148000**	**155500**	**132500**	**115500**	**165000**

Strategic Direction 2

Objective	Strategies	Key Activities	Process Indicator	Denominator	Baseline	Target						Unit cost (USD)	Target year				
						2019	2020	2021	2022	2023			2019	2020	2021	2022	2023
To reduce the rate of newly diagnosed with Grade-2 disabilities less than 1/million population by the year 2020	Identification of "Hot Spots" by mapping project	Leprosy awareness campaign in pocket health centers by using mapping project	Year-wise implementation	Once a year	1	1	1	1	1	1		1000	1000	1000	1000	1000	1000
	Early diagnosis and quality care	ACD especially contact survey	Number of contact examined	NA	NA	/	/	/	/	/			0	0	0	0	0
		ACD with LAC in pocket areas	Number of LACs	Once a year in each of 60 pocket area	60	60	60	60	60	60		1000	60000	60000	60000	60000	60000
		Well supervised MDT services and reaction management	Number of registered cases	1200 per year	1187	1200	1200	1200	1200	1200		0	0	0	0	0	0
	Prevention of Leprosy (Immuno and chemo-prophylasix)	Expansion of LPEP to appropriate townships	Number of township	2 townships per year	8	2	2	2	2	2		5000	10000	10000	10000	10000	10000
To reduce child disability grade-2 among new cases to zero by the year 2020	Stratified focused case finding among children community	School health talk with examination	Number of inclusion in school health visit performed	NA	NA	/	/	/	/	/			0	0	0	0	0
		Distribution of IEC materials	Number of schools distributed	15 per year per each of six hyperendemic townships	NA	90	90	90	90	90		100	9000	9000	9000	9000	9000
		Verification of New Child cases	Number of child cases identified	66 cases per year with -13 per year trend	79	66	53	40	27	14		300	300	300	300	300	300

To strengthen surveillance for antimicrobial resistance including laboratory network	Surveillance on Anti-Microbial Drugs Resistance	Sentinel Surveillance on Anti-Microbial Drugs Resistance	Number of activity performed	Once a year	1	1	1	1	1	1		1500	1500	1500	1500	1500	1500
To improve quality of care	Capacity building of BHS & LCP staff	Programme management Refresher training for ALI	Number of training session (50 attendee each)	Once a year	NA	1	1	1	1	1		3000	3000	3000	3000	3000	3000
		Clinical management Refresher training for ALI	Number of training session (50 attendee each)	Once a year	NA	1	1	1	1	1		3000	3000	3000	3000	3000	3000
		Field management training for ALI	Number of training session (50 attendee each)	Once a year	NA	1	1	1	1	1		3000	3000	3000	3000	3000	3000
		Fellowship Programme	Number of fellowship	Two fellowships per biennial year	0	0	2	0	2	0		3000	0	6000	0	6000	0
												Total	**90800**	**96800**	**90800**	**96800**	**90800**

Strategic Direction 3

Objective	Strategies	Key Activities	Process Indicator	Denominator	Baseline	Target						Unit cost (USD)	Target year				
						2019	2020	2021	2022	2023							
To sustain Prevention of disabilities	Strengthening Monitoring and evaluation	Monitoring, field supervision and evaluation at all level	Number of field visits	Twice a year per team leader six hyperendemic tsp	NA	12	12	12	12	12		1000	12000	12000	12000	12000	12000
	Co-ordination with special institutions use of proper form for referral cases and feedback	Workshop on Development of proper referral form for disabilities	Referral form developed	NA	NA	1						3000	3000	0	0	0	0
		Integration of referral system	Referral system integrated	NA	NA		Done					0	0	0	0	0	0
		Review and revise of feedback on referral system	Workshop on Referral system reviewed and revised	NA	NA			1	1	1		3000	0	0	3000	3000	3000
	Capacity building for Effective implementation of POD activities	Workshop on sustaining POD activities	Number of Workshop	Once a year at selected tertiary hospital	1	1	1	1	1	1		9000	9000	9000	9000	9000	9000
		Refresher training on POD for BHS (PHS2 and LCP staff)	Number of training	10 sessions per year	10	10	10	10	10	10		4000	40000	40000	40000	40000	40000
		Workshop on Strengthening POD activities	Number of Workshop	Once a year	1	1	1	1	1	1		3000	3000	3000	3000	3000	3000
		POD review meeting	Number of meeting	Once Biennial	1	0	1	0	1	0		3000	0	3000	0	3000	0

	Expansion of POD Projects	Provision of supportive materials and drugs	Number of township supported	5 townships per year	NA	5	5	5	5	5		3000	15000	15000	15000	15000	15000
To enhance rehabilitation of LAPs (Leprosy Affected Persons)	Development of national CBR guideline	Workshop on development of national CBR guideline	CBR Guideline developed	NA	NA	1						3000	3000	0	0	0	0
		Introduction of CBR Guideline	Guideline systemized	NA	NA	Done						10000	10000	0	0	0	0
		Review and revise of CBR	Workshop	NA	NA		1					3000	0	3000	0	0	0
	Ensuring financial support for CBR	Co-ordination meeting with partners	Number of meeting	Once a year	NA	1	1	1	1	1		3000	3000	3000	3000	3000	3000
	Strengthening of existing institutional rehabilitation	Workshop on inclusion & empowerment of LAPs	Number of workshop	Once per five year	NA	0	1	0	0	0		3000	0	3000	0	0	0
	Advocacy for inclusion & empowerment of LAPs	Advocacy meeting for CBR	Number of meeting	Once per five year	NA	0	1	0	0	0		3000	0	3000	0	0	0
	Establishment of multi-sectorial partnership	Workshop on multi-sectorial partnership	Number of Workshop	Once a year	0	1	1	1	1	1		3000	3000	3000	3000	3000	3000
	Capacity building of Health staff	Training on CBR for both BHS and LCP staff	Number of training session	Once a year	0	1	1	1	1	1		5000	5000	5000	5000	5000	5000
	Strengthening of participation of LAPs	Training of LAPs using PLA approaches	Number of training session	Once a year	0	1	1	1	1	1		3000	3000	3000	3000	3000	3000
	Implementation of CBR in selection of CBR township and	CBR activities using community engagement approaches (CEA)	Number of CEA session	5 sessions per year	0	5	5	5	5	5		3000	15000	15000	15000	15000	15000
												Total	**124000**	**120000**	**111000**	**114000**	**111000**

Conclusion

The National Leprosy Strategic Plan 2019–2023 was developed through a series of consultations with various stakeholders during 2017 and 2018. Inputs were collected from national leprosy programmes, technical agencies, independent leprosy experts, public health experts, funding agencies and relevant communities. The strategy is developed based on WHO Global Leprosy Strategy 2016-2021 which built around three major pillars: (i) strengthen government ownership and partnerships; (ii) stop leprosy and its complications; and (iii) stop discrimination and promote inclusion. Its contents are carefully analysed and adapted to local context of the country for feasibility, resource availability and priority in contributing to reduce the global and local leprosy burden, thereby aiming for zero children with leprosy-affected disabilities, a reduction of new patients diagnosed with leprosy-related deformities to less than one per million population and a repeal of all laws that allow discrimination of leprosy patients. The strategy was endorsed by the Technical Advisory Group on Leprosy.