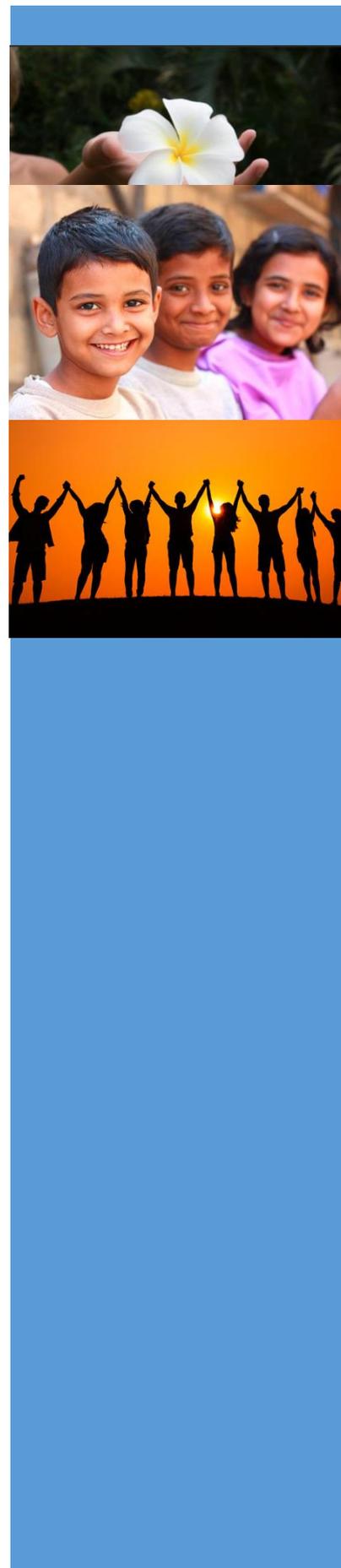


National Leprosy Strategy 2016-2020

*Accelerating towards a leprosy-free
Sri Lanka*



Anti-Leprosy Campaign
Ministry of Health, Nutrition and Indigenous Medicine



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Abbreviations

AGA	Additional Government Agent	LED	Light Emitting Diode
ALC	Anti-Leprosy Campaign	LPEP	Leprosy Post Exposure Prophylaxis
BH	Base Hospital	MB	Multibacillary
CBO	Community-based organization	MBBS	Bachelor of Medicine and Surgery
CBR	Community-based rehabilitation	MDT	Multi Drug Therapy
CDR	Crude Death Rate	MLT	Medical Laboratory Technician
CLC	Central Leprosy Clinic	MOO	Medical Officers
CCP	Consultant Community Physician	MOOH	Medical Officers of Health
DDG	Deputy Director General	MSD	Medical Supplies Division
DOT	Direct Observed Treatment	NCDR	New Case Detection Rate
EHF	Eye Hand Foot	NGO	Non-Governmental Organization
E&UH	Estate and Urban Health	NHSL	National Hospital Sri Lanka
GH	General Hospital	NTDs	Neglected Tropical Diseases
GIS	Geographic information system	OPD	Outpatient Department
G2D	Grade 2 disability	PALs	Persons affected with Leprosy
GP	General Practitioner	PB	Paucibacillary
GPS	Global Positioning System	PCR	Polymerase Chain Reaction
HDI	Human Development Index	PG	Postgraduate
HIMS	Human Information Management System	PHI	Public Health Inspector
HIV/AIDS	Human Immuno Virus/ Acquired Immuno Deficiency Syndrome	PHI LC	Public Health Inspector Leprosy Control
ICNO	Infection Control Nursing Officer	PHLT	Public Health Laboratory Technician
IEC	Information, Communication, and Education	PoD	Prevention of Disability
IPF	Individual Patient Form	RDHS	Regional Director of Health Services
ILEP	International Federation of Anti-Leprosy Associations	RE	Regional Epidemiologist
IT	Information Technology	RMSD	Regional Medical Supplies Division
		SMI	School Medical Inspection

SMS Short Message Service

SLCD Sri Lanka College of Dermatologists

SSO Social Service Officer

TOT Training of Trainers

UHC Universal Health Coverage

YEDD Directorate of Young, Elderly and
Disabled persons

WHO World Health Organization

Foreword

After the introduction of multidrug therapy (MDT) and social marketing campaign, the leprosy burden in Sri Lanka was significantly reduced. Elimination of leprosy as a public health problem was achieved nationally in 1995. Nevertheless, the disease is still a major public health concern in the country. To address this a new national leprosy strategy was developed based on WHO Global strategy and National Health Policy.

The newly developed strategy is innovative and gives the much needed increased visibility and weight to the human and social aspects affecting leprosy control. This strategy also focuses on reducing stigma and discrimination and promoting inclusiveness which will reinforce better and earlier diagnosis of the disease. Innovative approaches include many new methods of focusing on children, women and other vulnerable populations,

strengthened referral systems, systematic tracing of household contacts, monitoring drug resistance and assessing the role of post-exposure prophylaxis.

This strategy was developed over a period of one and a half years through an interactive consultation process involving all stakeholders including Anti-Leprosy Campaign, technical agencies, NGO's, representatives of patients and communities affected by leprosy, development partners from Ministry of Health and other campaigns. The title "Accelerating towards a leprosy-free Sri Lanka" embodies the need to build on the momentum created in leprosy control at the national and local level so that future generations can reach the ultimate goal of a country without leprosy.

Executive summary

In the past two decades, the number of reported leprosy cases were fluctuating around 2000 per year. Last year there was a reduction in new case detection rate which shows some impressive advances in leprosy control activities. Although elimination was achieved as a public health problem in 1995 other challenges still remain such as continued delay in detecting new patients, persisting stigma and discrimination against people affected by leprosy and limited impact on transmission of the disease.

The newly developed national leprosy strategy 2016-2020 aims at accelerating towards a leprosy-free Sri Lanka. It is based on the WHO Global Leprosy Strategy 2016-2020 'Accelerating towards a leprosy-free world'. The goal of this strategy is to further reduce the leprosy burden in the country. The strategy is structured around three main pillars namely,

- (1) Stop leprosy and its complications
- (2) Stop discrimination and promote inclusion
- (3) Strengthen government ownership, coordination, and partnership

Under each pillar, broad core areas of interventions were developed which include,

- (1) Promoting early case detection through active case-finding and strengthening passive case finding activities
- (2) Strengthening patient and community awareness on leprosy
- (3) Establish National Centre of Excellence for disability care at Hendala and disability management centres at least one in each district
- (4) Strengthen the mechanism for defaulter tracing
- (5) Promoting innovative approaches to training, referrals and sustaining expertise in leprosy
- (6) Strengthening surveillance for antimicrobial resistance including laboratory network

- (7) Promoting societal inclusion through addressing all forms of discrimination and stigma
- (8) Working towards abolishing discriminatory laws and promote policies facilitating inclusion of persons affected by leprosy
- (9) Supporting community-based rehabilitation for people with leprosy-related disabilities
- (10) Empowering persons affected by leprosy and strengthen their capacity to participate actively in leprosy services
- (11) Ensuring political commitment and adequate resources for leprosy programmes
- (12) Contributing to universal health coverage with a special focus on children, women and underserved populations
- (13) Promoting partnerships with state and non-state actors and promote intersectoral collaboration and partnerships at the national level and within districts
- (14) Facilitating and conducting basic and operational research in all aspects of leprosy and maximize the evidence base to inform policies, strategies, and activities
- (15) Strengthening surveillance and health information systems for programme monitoring and evaluation (including geographical information systems)

National and district level leprosy control programmes are encouraged to adapt the concepts and principles as proposed in the national strategy 2016-2020 to plan specific actions. It aims to promote further integration of leprosy services within the country at primary and referral level focusing on tackling the disease and its complications.

1. Introduction

Leprosy is a chronic infectious disease caused by a bacterium named *Mycobacterium leprae*. The disease mainly affects the skin and the peripheral nerves causing significant deformity if not treated early. Sri Lanka is one of the many Southeast Asian countries where the disease is still a significant public health challenge. Upon inspecting the trends of the disease for the last 15 years, it was observed that the leprosy new case detection rates were fluctuating around 10 per 100,000 population in Sri Lanka. Grade 2 deformity rates which showed a downward trend from 2001 now seem to be fluctuating around 10.1 % (2015) indicating a late diagnosis of the disease. Child rates have been fluctuating around 10% from 2001 to 2014 and it was 11.3% in 2015 indicating ongoing transmission. This highlights the fact that novel strategies are needed to control the disease in the country. Hence, in line with the WHO Global Leprosy Strategy 2016-2020, a new National Strategic Plan was developed to address the shortcomings.

The National Leprosy Strategy 2016-2020 aims at early detection and prompt treatment to prevent disability and to reduce transmission in the community. The proportion of G2D cases among newly diagnosed patients and the G2D rate in Sri Lanka indicate indirectly the low awareness levels of early signs of leprosy, insufficient access to leprosy services and lack of skill of health care staff in diagnosing leprosy. Therefore, this strategy is designed to achieve a long-term goal of a "Leprosy free Sri Lanka", which refers to a situation wherein the community is free of morbidity, disabilities and social consequences due to leprosy.

1.1 Country profile

Sri Lanka is an island situated in the Indian Ocean just south of India. The commercial capital of the country is Colombo.

Sri Lanka lies between northern latitudes 5° 55' and 9° 50' and eastern longitudes 79° 42' and 81° 52'. Its greatest length is 435 kilometers from Point Pedro in the north and Devinuwara Point in the south. Its greatest width is 225 kilometers from Colombo to Sangamankanda in the east. The country covers an area of 65,610 sq.km of which land area covers 62,705 sq km.

Due to its proximity to India, Sri Lanka has experienced many cultural and economic influences from that country. Portuguese ruled parts of the country from 1505 to 1608, and the Dutch from 1608 to 1796. From 1796 the British took over, and from 1815 they ruled the entire country until Sri Lanka regained its independence in 1948.

Administratively Sri Lanka is divided into 9 provinces: Western, North Western, Sabaragamuwa, Central, Southern, Uva, North Central, Northern and Eastern and 25 Districts (figure 1).

The total population in Sri Lanka in 2012 is 20,359,439 with 48.4% males and 51.6% females. Sri Lanka has a multi-ethnic composition. The majority is Sinhalese, with 74.9 percent; another 11.2 percent are Tamils; another 4.1 Indian Tamils another 9.3 percent, Muslims; and the remaining 0.5 percent consists of Burghers, Malays, and other minor ethnic groups.

Country's per capita income was US\$ 3,280 per annum in 2013. Inflation figure was 6.7 in 2011 and 3.2 in 2014, while the unemployment rate was 4.4 in 2013 and 4.3 in 2014.

Life expectancy for the years 2011-2013 is 72.0 years for male and 78.6 for females. The life expectancies for males and females for the year 2001 are 68.8 and 77.2 years

respectively. Therefore there is an increase in life expectancy for both males and females in the year 2012 compared to 2001.

The literacy rate in 2012 was 95.6% with a literacy rate of 96.8% among males and 94.6% among females.

1.1.1 Economic and health development

There has been considerable interest over the years in developing an appropriate health policy in Sri Lanka. Political changes that took place in the last few decades have led to these major reviews of policies, although the overall policy has remained by largely unchanged. The Government of Sri Lanka continues to provide free education and medical services to people, resulting in a high standard of living as shown by some improved social and demographic indicators. For instance, the country's crude birth rate is 17.5 and the crude death rate (CDR) is 6.0 per 1,000 in 2012. The crude birth rate declined from 36.6 in 1960 to 17.5 in 2015. Life expectancy at birth for females is 79.8 in 2001 and it is somewhat lower, 70.5 years, for males. Major achievements of the county's health status include the low maternal death ratio, low infant mortality rates, and high immunization coverage.

1.1.2 Key development indicators

The Human Development Report has published the Human Development Index (HDI) which was introduced as an alternative to conventional measures of national development, such as level of income and the rate of economic growth. The HDI represents a push for a broader definition of well-being and provides a composite measure of three basic dimensions of human development: health, education, and income.

Sri Lanka's score in 2013 was 0.750, placing it in the high human development category. It ranked at 73 out of 187 countries and territories, higher than other South Asia countries and even some East Asia states. On other aspects of human development, Sri Lanka's health sector has performed remarkably, achieving low levels of infant and maternal mortality, high immunization coverage and a life expectancy of 74 years (figure 2).

Education achievements are also substantial with a literacy rate of 91 percent reached through free education. Sri Lanka is also recorded to have a considerably high level of gender equality, with a GII of 0.370, ranking it 72 out of 155 countries in the 2014 index. While this shows high levels of gender equality, especially regarding maternal health standards and educational opportunities for women, there are several areas including the labor force participation and parliamentary representation for women, in which Sri Lanka is still lagging (figure 3).

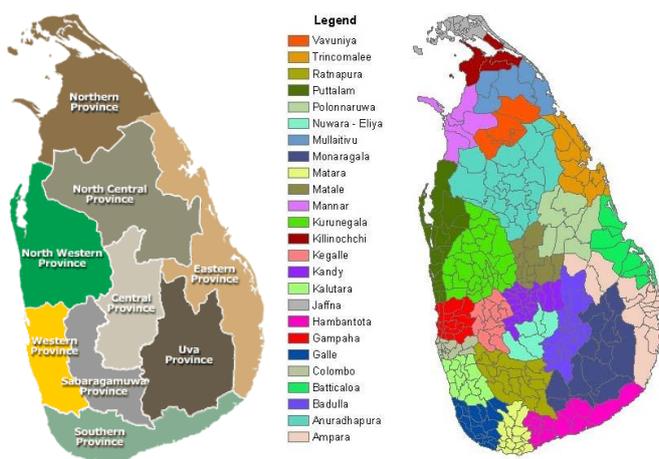


Figure 1 - Map of Sri Lanka showing Provinces and Districts

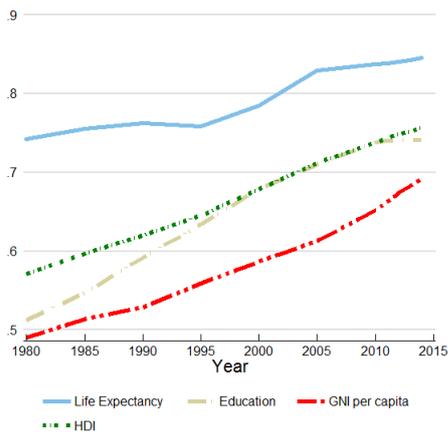


Figure 2 - Trends in Sri Lanka's HDI component indices (1980-2014)

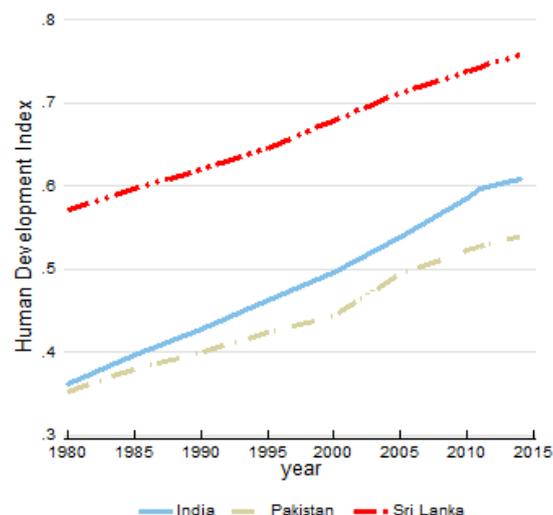


Figure 3 - HDI trends for Sri Lanka, India, and Pakistan (1980-2014)

1.2 Sri Lanka health services and its components

1.2.1 Organization of the Healthcare Delivery System

Health care is delivered through government and private sectors. The government health system has been partially decentralized to Provincial Councils since 1989 (figure 4 & 5). The Ministry of Health is the leading agency providing stewardship to health service development and delivery. Its main function is formulating public health policy and regulating services for both public and private sector. It is also responsible for directly managing several large specialized services (National Hospital of Sri Lanka, Teaching hospitals, specialized hospitals and campaigns, provincial general hospitals and selected District General Hospitals) whilst the rest of the government services in the allopathic system is managed by the decentralized system i.e. nine provincial health authorities.

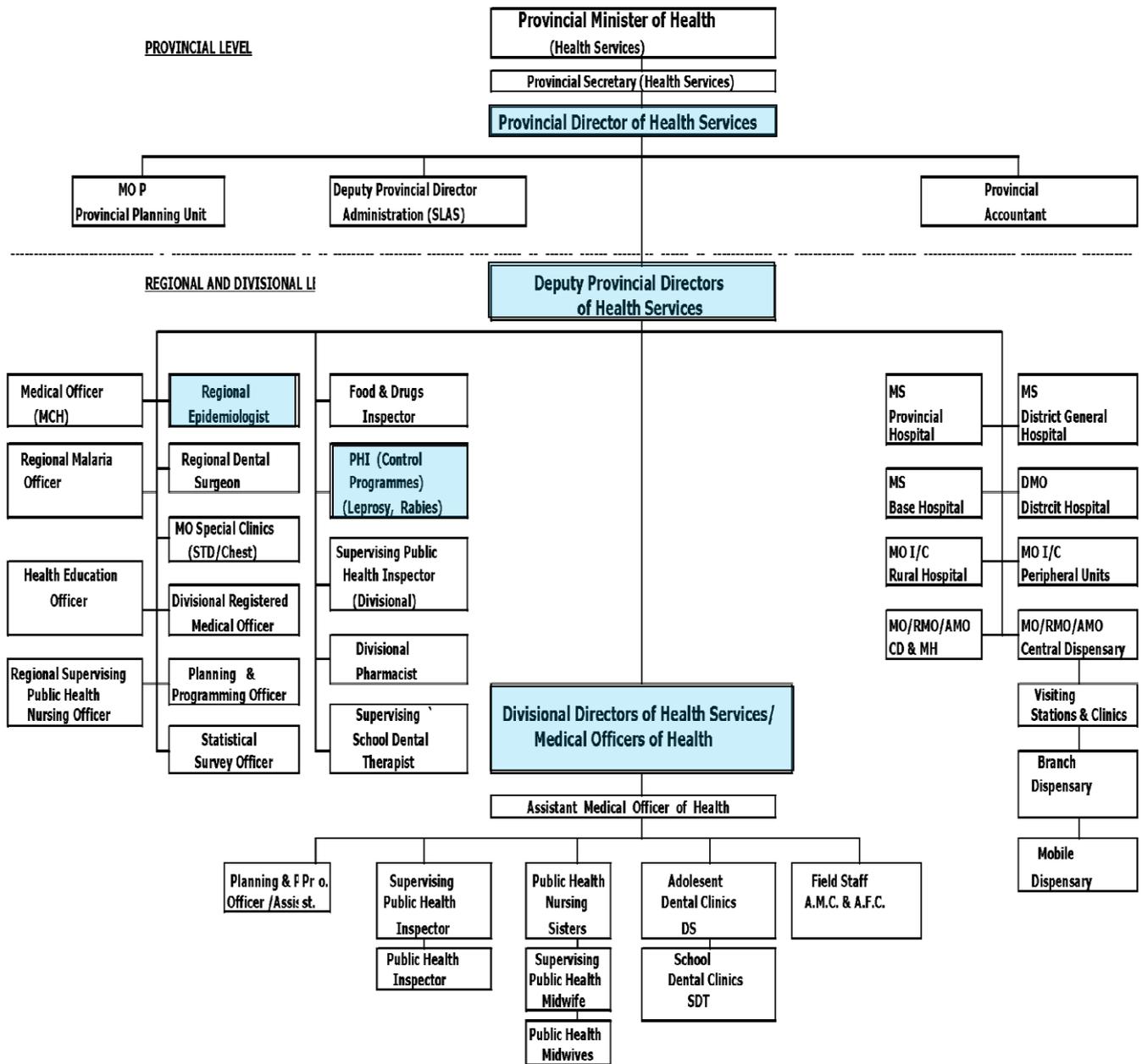
The Ministry of Health has several other training units throughout the country such as PHI Training schools, National Institute of

Health Sciences, etc directly under its control that provides basic, post-basic and in- service training to all categories of health staff engaged in providing both curative and preventive services.

1.2.2 Preventive/Community Health Services

Preventive/ Community health services are organized into health units and most of them coincide geographically with divisional secretariat areas. These are commonly known as the Medical Officer of Health (MOH) areas. There are 345 MOH areas in Sri Lanka and each is headed by a Medical Officer responsible for a defined population. The MOH is assisted by field public health staff. The average population for a MOH is approximately 60,000. Each member of health staff (Public Health Nursing Sister, Public Health Inspector, Supervising Public Health Midwife, Public Health Midwife) is also responsible for a subdivided area and the respective population. The overall responsibility for management of community health services lies with the provincial health authorities.

Figure 5: Organizational structure of the provincial health system



1.3 Key milestones in leprosy control in Sri Lanka

During the Dutch reign in Sri Lanka, the disease was identified as an infectious disease and since there was no treatment available as the only possible preventive method patients were segregated from the community. In 1708, the first leprosy hospital was established in Hendala which is about six miles north of Colombo. Second leprosy hospital was established later by the British in Manthivu, an island in Batticaloa district. Hendala hospital is still functioning and has 30 inward PALs.

During the British rule compulsory segregation of leprosy patients was carried out as enacted in Lepers Ordinance No. 4 of 1901.

In early 1940s use of Dapsone was started to treat leprosy which was found to be effective against *Mycobacterium leprae*, the causative acid-fast bacilli.

In 1954, Anti-Leprosy Campaign was formed under the Department of Health along with several other campaigns. Anti-Leprosy Campaign functioned as a vertical programme being responsible for all leprosy related activities in Sri Lanka including diagnosis, management, rehabilitation, control activities etc.

By 1983, scientific evidence suggested that Dapsone alone is not effective against leprosy as the bacteria were showing resistance against the drug and hence Multi Drug Treatment (MDT) was started in Sri Lanka.

Next most important landmark in the leprosy control programme in Sri Lanka was the successful social marketing campaign launched in 1989. As a result, significant improvements were observed in awareness, decrease in stigma and discrimination in the society towards leprosy affected persons. This led to a lot of patients presenting themselves to the healthcare facilities to be diagnosed and treated. Social marketing campaign

contributed to achieving the elimination target which was set up by the WHO at the national level in 1995.

In 2001 leprosy control activities were integrated to the General Health Services and for surveillance and control, Regional Epidemiologists (RE) were trained at the district level.

Leprosy was made a notifiable disease in 2013 to ensure prompt identification of leprosy cases among contacts and improve the follow-up mechanism at the field level and to trace the defaulters more efficiently.

Leprosy post-exposure prophylaxis pilot study was initiated in November 2015 in Puttalam and Kalutara districts. For this study 176 cases in Kalutara district and 97 cases in Puttalam district was identified as index cases. Tracing of contact of identified index patient was started in the same year.

Contact tracing at the MOH level was started island wide in 2015.

Online database for leprosy for disease surveillance activities was started in 2016.

Launching of Anti-Leprosy Campaign Website in 2016 to keep leprosy on top of the health agenda.

1.3.1 Elimination of leprosy as a public health problem in 1995

In 1991, the World Health Assembly passed a resolution to eliminate leprosy as a public health problem by the year 2000. Elimination was defined as a prevalence rate of less than 1 case per 10,000 inhabitants. The elimination strategy is based on detecting and treating all cases with MDT and thereby reducing the disease burden to a very low level. At this low level, the transmission of *Mycobacterium leprae* is likely to be reduced to such an extent that the occurrence of new cases in the community

would gradually decrease. The key was to ensure that all new cases continue to have access to MDT services.

Sri Lanka managed to achieve elimination target as a country by 1995 following the extra efforts made at that time including the social marketing campaign.

1.3.2 Integration of leprosy services to the general health service in 2001

Leprosy services, which were the sole responsibility of ALC since 1954, were integrated into general health system in 2001. Integration implied that day-to-day patient management, recording, and reporting becoming the responsibility of general health staff as for other health conditions.

Following integration, the role of the ALC at the central level changed to policy making, planning, monitoring, evaluation, supervision, capacity building, setting technical standards and research.

At the district level, it was expected that the regional epidemiologist becomes the coordinator while PHI LC, pharmacists, physiotherapists, MOOH and the dermatologists will play complementary roles regarding leprosy control activities. This team was expected to carry out appropriate interventions and assure sustainability of leprosy control in the respective districts. The RDHS were, therefore, expected to take full ownership of leprosy control in their districts.

All medical officers in primary care services were provided with adequate training and MDT was made available in all health care institutions. Later, due to logistical problem of maintaining MDT stocks in all institutions, it was decided that stocks of MDT are confined to hospitals with dermatology clinics. At present 90% of all leprosy cases are diagnosed and treated in such clinics. ALC conducts its own daily leprosy clinic at the NHSL in Colombo.

1.3.3 Introduction of Leprosy Notification System in 2013

Leprosy was made a notifiable disease in 2013 to ensure prompt identification of leprosy cases among contacts and improve the follow-up mechanism at the field level and to trace the defaulters more efficiently. However, this system did not function fully until 2015.

1.3.4 Focus on research to support leprosy control: LPEP pilot study on chemoprophylaxis for contacts in 2015

Leprosy post-exposure prophylaxis pilot study (LPEP) was started in 2015 November at Puttalam and Kalutara districts. Special training was conducted for Medical officers at dermatology clinics and MOOH. For the LPEP study, 176 cases in Kalutara district and 97 cases in Puttalam district was identified as index cases in the same year. This pilot study was supported by its own online data management system for patient information and drug management.

1.3.5 Development of online database for leprosy disease surveillance in 2016

The need for diseases surveillance system to move from the traditional paper-based format to online/web-based system was identified long time ago. It materialized in 2016 with the launch of the online system in latter half of 2016. The system was customized such a way the regional epidemiologists are able to take decisions based on a simple but comprehensive online real-time dashboard.

1.3.6 Keeping leprosy on top of agenda: Launching of Anti-Leprosy Campaign Website 2016

This media event was participated by the Hon. Minister of Health. The website provided the much needed online platform for data sharing both locally and internationally. It was designed entirely by in-house developers of the Anti-Leprosy Campaign.

1.4 Global and country strategies in controlling leprosy

1.4.1 Enhanced global strategy for further reducing the disease burden due to leprosy 2011-2015

The 'Enhanced Global Strategy for Further Reducing the Disease Burden due to leprosy: 2011-2015' was formulated as an extension of WHO's strategy of 2006 - 2010. It offers multiple opportunities to reform joint actions and enhance global actions to address the remaining challenges to reduce the disease burden due to leprosy and its impact on persons affected by leprosy and their family members.

1.4.2 Global Leprosy Strategy 2016-2020: Accelerating towards a leprosy-free world

The Global Leprosy Strategy 2016–2020 aims at accelerating action towards a leprosy-free world. It is based on the principles of initiating action, ensuring accountability and promoting inclusion. Initiating action involves developing country-specific plans of action. Ensuring accountability will be achieved by strengthening monitoring and evaluation in all endemic countries in order to objectively progress towards achieving targets. Promoting inclusion can be supported through establishing and strengthening partnerships with all stakeholders, including persons or communities affected by the disease. The global strategy fits within the WHO aim to provide universal health coverage with its focus on children, women and vulnerable populations. It will also contribute to reaching Sustainable Development Goal 3, reaching health and wellbeing for all by 2030.

1.4.3 IELP Strategy 2015-2018: Achieving a world free from leprosy

This strategy was developed in 2015 with the following purposes in mind combining forces to achieve a world free from leprosy, expanding partnerships, track progress and promote learning and accelerate efforts with

urgency to reduce the number of people suffering from leprosy. The strategic goals include stopping transmission, preventing disabilities and promoting inclusion.

1.4.4 Leprosy among other neglected tropical diseases

Leprosy has been included in the list of neglected tropical diseases. Many other diseases including Leishmaniasis and Typhus, which are also prevalent in Sri Lanka are diagnosed and treated in dermatology units. Management of disabilities caused by Filariasis, leprosy, and diabetes share a common approach at the district level.

Using a synergistic approach for all neglected tropical diseases prevailing in the country will be the most effective approach rather than the singular, disjointed efforts and separate disease programmes aimed at controlling or eliminating these diseases. Therefore, it is important that collective efforts to be made in managing and controlling the NTDs. This will provide a unique opportunity for collaborative advocacy activities or integration of disease treatment and prevention activities in endemic districts.

1.4.4.1 Investing to overcome the global impact of the NTDs – Third WHO report on neglected tropical diseases

Investing to overcome the global impact of neglected tropical diseases charts new ground in tackling the 17 neglected tropical diseases (NTDs) that affect more than a billion people in 149 countries worldwide. It makes the case for domestic investment to reach the targets of WHO's Roadmap on NTDs by 2020 and sustain enhanced, equitable access to high-quality coverage against these diseases to 2030. This third WHO report anticipates the investments needed as countries graduate from low-income to middle-income status and as the world's focus expands from the Millennium Development Goals to the Sustainable Development Goals.

1.4.5 National Health Policy Sri Lanka: 2016-2025 (Ministry of Health Nutrition & Indigenous Medicine Sri Lanka)

The new national health policy plan has been designed in a systemic process over 3 years (2014-2016) addressing newly emerged and emerging health issues. It was developed by conducting a situational analysis made in each sub-sector with an extensive collaboration with all stakeholders, the policy issues identified and documented under the title ‘National Health Strategic Framework for Health Development 2016-2025’. Policies are analyzed and the master plan is a set of documents indicating specific objectives of each sub-sector, the major activities identified for each sub-sector and the expected outputs with verifiable indicators to monitor and evaluate the progress and documented as “National health strategic master plan 2016-

2025 Preventive Services, Ministry of Health Sri Lanka”. Leprosy is coming under the preventive health services and highlighted as “Leprosy, Tuberculosis, HIV/AIDS, and Dengue, need utmost attention with new strategies in the health care delivery system, to reduce the present threat imposed by said diseases on population”. The main areas of the strategic plan of Anti-Leprosy Campaign are incorporated into Preventive Services Volume 1 page 95. The government of Sri Lanka has decided to adopt these strategies as the guide for leprosy control programme for Sri Lanka till 2020.

2. Current situation

Following the re-integration of leprosy services into the general health services in 2001/02, leprosy patients are now managed at skin clinics conducted in higher-level hospitals (i.e. district & provincial general hospitals and teaching hospitals). Primary and many of the secondary level hospitals and Medical Officer of Health (MOH) offices are expected to refer suspected leprosy cases to these skin clinics for confirmation of leprosy and initiation of standardized drug regimens by Consultant Dermatologists (i.e. specialist medical officers with a postgraduate qualification in dermatology). It is indeed a great advantage looking into the quality of diagnosis and treatment including early recognition and management of reactions, referrals of disabilities, and other surgical and/or medical complications.

Since leprosy services in Sri Lanka are generally provided through skin clinics conducted at higher-level hospitals they are limited to urban areas of the country. Hence, accessibility to these skin clinics is an issue, especially in areas located far away from major hospitals. Therefore the satellite clinic system was established in Sri Lanka by the ALC to overcome this disparity of accessibility. By bringing the services closer to the needy communities via satellite clinics, case detection, regular follow-up, compliance to treatment with a reduction in a number of defaulters are expected to be ensured.

The current leprosy situation in the country is described in the graphs and figures given in the following pages (Table 1-3 & Figure 6-9).

Table 1 - National performance indicators 2009 to 2016

	2009	2010	2011	2012	2013	2014	2015	2016
Total cases	1955	2091	2229	2211	2131	2281	2098	1973
New cases	1955	2091	2229	2189	1990	2157	1977	1832
NCDR	9.14	9.50	10.60	10.60	9.60	10.4	9.43	8.6
Child cases	190	202	238	163	182	213	223	158
Child percentage	9.92	9.7	10.72	7.64	9.17	9.87	11.28	8.6
Deformity cases	128	147	147	148	133	147	198	138
Deformity percentage	6.35	7.09	6.66	7.37	6.73	7.10	10.01	7.5
MB cases	935	967	1069	1089	947	1014	1064	980
MB percentage (%)	47.63	46.19	48.18	49.34	48.82	47.01	53.81	53.5
Late presentation (> 6months)(%)	54	55	55	55	46	55	44.76	54.7

Table 2 - Reported Relapses & Defaulters Numbers 2012 to 2016

	2012	2013	2014	2015	2016
Number of Relapses	11	59	37	58	83
Number of defaulters restarting treatment	12	82	53	63	58

Figure 6 - New Case Detection Rates of leprosy from 2001 to 2016

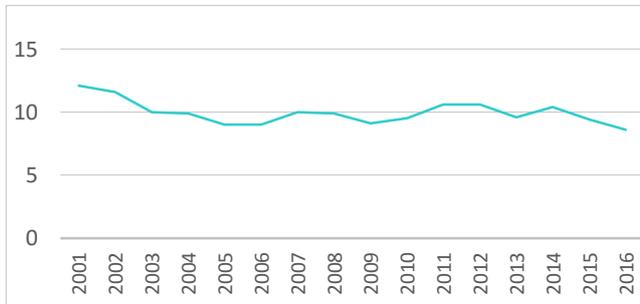


Figure 7 - Child case percentage among new leprosy cases from 2002 to 2016

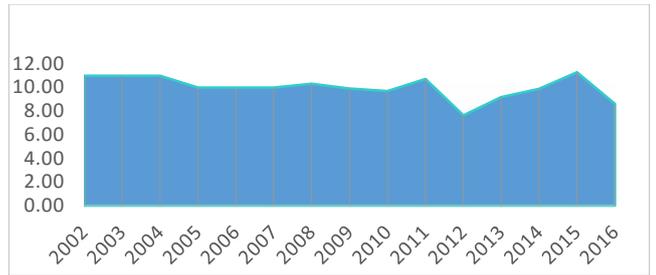


Figure 8 - MB percentage at the time of diagnosis of leprosy cases from 2002 to 2016

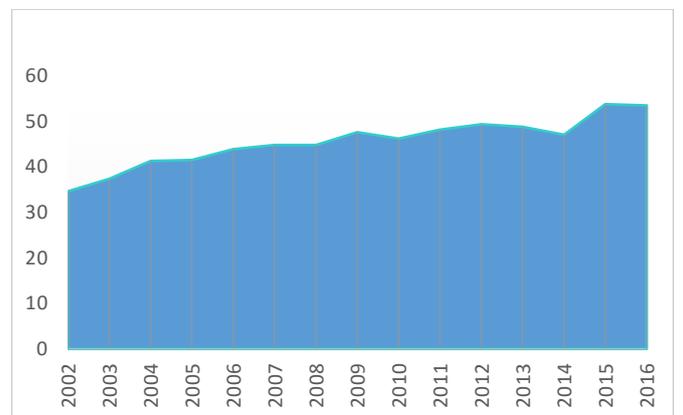


Figure 9 - G2D percentage at the time of diagnosis from 2002 to 2016

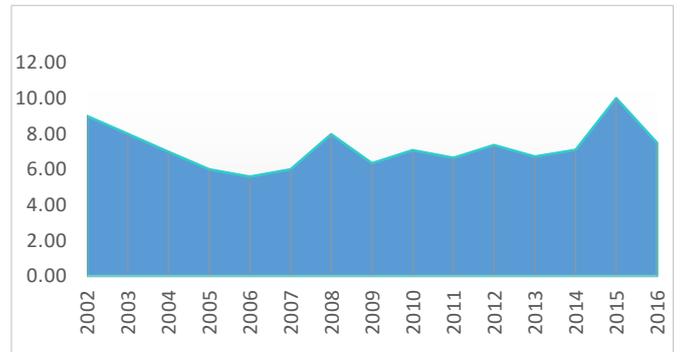


Table 3 - District performance indicators 2016

District	New cases	NCDR	MB cases	MB %	Child cases	Child %	GR 2 Deformity cases	GR 2 Deformity %	Female cases	Female cases %	Defaulter	Relapse
Kandy	23	1.6	15	65.2	1	4.3	3	13.0	6	26.1	2	0
Matale	26	5.1	12	46.2	0	0	1	3.8	13	50.0	0	1
Nuwaraeliya	8	1.1	6	75.0	0	0	1	12.5	2	25	0	0
Ampara	41	15.3	25	61.0	6	14.6	5	12.2	11	26.8	0	2
Batticaloa	93	16.9	57	61.3	8	8.6	4	4.3	42	45.2	1	1
Kalmunai	50	11.8	30	60.0	5	10.0	3	6.0	14	28.0	1	2
Trincomalee	23	5.7	17	73.9	2	8.7	2	8.7	8	34.8	1	0
Jaffna	33	5.5	23	69.7	2	6.1	7	21.2	14	42.4	2	1
Kilinochchi	6	4.9	3	50.0	0	0	1	16.7	4	66.7	0	0
Mannar	3	2.8	2	66.7	1	33.3	0	0	1	33.3	0	1
Mulliativu	3	3.2	2	66.7	1	33.3	0	0	2	66.7	0	0
Vavuniya	9	4.9	7	77.8	1	11.1	1	11.1	2	22.2	0	0
Anuradhapura	67	7.4	48	31.6	6	9.0	5	7.5	19	28.4	9	5
Polonnaruwa	82	19.3	41	50.0	7	8.5	6	7.3	30	36.6	1	2
Kurunegala	106	6.3	62	58.5	4	3.8	8	7.5	41	38.7	2	2
Puttalam	68	8.5	36	52.9	6	8.8	4	5.9	37	54.4	2	2
Kegalla	19	2.2	13	68.4	0	0	3	15.8	4	21.1	0	0
Rathnapura	106	9.3	61	57.5	8	7.5	10	9.4	41	38.7	7	3
Galle	105	9.5	55	52.4	11	10.5	5	4.8	47	44.8	1	7
Hambantota	79	12.4	37	46.8	8	10.1	4	5.1	29	36.7	4	5
Matara	72	8.5	34	47.2	3	4.2	5	6.9	25	34.7	2	4
Badulla	32	3.7	21	65.6	1	3.1	5	15.6	7	21.9	0	0
Moneragala	38	7.9	18	47.4	6	15.8	2	5.3	11	28.9	1	1
Colombo	335	13.9	164	48.9	43	12.8	25	7.4	129	38.5	11	25
Gampaha	231	9.7	120	51.9	16	6.9	17	7.4	99	42.9	6	11
Kalutara	174	13.8	71	40.8	12	6.9	11	6.3	70	40.2	5	8

3. Current challenges and issues in leprosy control activities in Sri Lanka

3.1 New case detection activities

3.1.1 Community surveys and house to house surveys

Leprosy cases are known to cluster in the communities. Hence it is very important to conduct active case finding activities even if a single case is reported in an area. Currently, many community surveys are being conducted for active case finding. However, these are not focused and not properly organized. This renders them to be less cost-effective compared to other active case finding activities.

3.1.2 Contact tracing

Household contacts and other contacts (social and workplace) of leprosy patients are at a higher risk of developing the disease. The risk faced by the household contacts is much higher than the general population. Due to this, it is necessary that the household contacts of all new patients be examined for evidence of leprosy.

At present contact tracing is carried out by asking patients to bring their household contacts to MOH or dermatology clinics voluntarily by the Range PHI. Range PHII is visiting the index case after getting the notification and participating in active contact tracing. Anyhow due to financial constraints, problems of accessibility and, stigma many contacts are not been examined. Sometimes the true contacts with the disease may not live under the same roof. Furthermore, stigma and discrimination against leprosy prevent a broader spectrum of screening contacts.

3.1.3 Late presentation

Early detection of the cases will prevent transmission of the disease and reduce the risk of developing disabilities. ALC data shows

nearly 55% of all new cases detected in 2016 had a delay in diagnosis of more than six months. Such a long delay favors transmission. Some of the possibilities for delayed presentation include ignorance of the signs and symptoms of the disease, lack of skills among general health staff in diagnosing leprosy, the social stigma, poor accessibility to health services, and certain cultural beliefs, practices, and poverty.

3.1.4 Lack of targeted IEC hindering case detection

There is a lack of IEC material for public in all three languages to increase awareness of leprosy in the community and to enhance voluntary reporting of new patients. There are few IEC materials addressing the importance of screening household contacts and reporting early when signs of the disease develop. This issue was rectified as much as possible during the last 2 years. However, new innovative-targeted IEC material is needed to further improve the case detection and to increase awareness of the community.

3.1.5 High proportion of MB cases

MB leprosy is the infective type, hence it is important to detect them early to prevent the spread of the disease. These patients are at more risk of developing deformities later on. In 2016 53.5% MB cases were reported. In addition, the number of MB cases is increasing which in turn will spread the disease.

3.1.6 High proportion of child cases

This indicator shows that there is continuing active transmission of the disease in the community. School medical inspections (SMI), are carried out in Grade 1, 4 and 7 in schools with more than 200 students and in schools

with less than 200 students in all grades. SMIs provide a good platform to examine the children for early signs of leprosy. Special screening of school children is carried out when a child case is diagnosed, to identify any contacts among children. All the child cases are investigated by the district PHI LC with the help of range PHI, and all child cases should be investigated under the supervision of RE.

3.1.7 High proportion of Grade 2 disability patients at the time of diagnosis

Disability due to leprosy will lead to loss of productivity in economically active population. Grade 2 disability means that the patient presents with a visible deformity at the time of diagnosis. The proportion of new cases with grade 2 disabilities among new cases in a year is an indicator used to assess the delay in diagnosis. Delay may be attributed to accessibility difficulties and economic constraints in addition to the lack of awareness. Another cause for high grade-2 disabilities could be a delay in diagnosis. This is due to lack of awareness about leprosy among medical professionals. Sri Lanka has relatively high Grade 2 disability rates compared to the other countries in the region.

More information needs to be generated on this issue. Also, it is important to carry out research on health seeking behaviors of patients who are diagnosed late.

3.1.8 High endemic districts

Although Sri Lanka has achieved elimination of leprosy as a public health problem in 1995 there are several districts at sub-national level where the indicators are higher than the national level. Lack of a designated PHI LC in some of these districts is hindering efforts to reduce the disease burden in these districts. True reasons for high endemicity may still be obscured, and needs further research in this aspect.

3.1.9 Underserved populations

Underserved populations and risk populations refer to groups of people who live in geographical areas that are difficult to access, slum-dwellers, immigrants, garment factory workers or those who live in special facilities such as prisons and people living in fishing communities. Issues in accessing the leprosy services and poor utilization of service among such groups are due to lack of knowledge and deficiencies in the dissemination of health education messages.

3.1.10 Workplace based screening

Current disease trends in the country indicate that the disease mostly affects the working population. Hence, it will be beneficial to conduct workplace based screening programmes in high endemic districts if cases are detected in garment factories and BOI zones protecting privacy and confidentiality of the index case.

3.2 Quality of services delivered to patients

3.2.1 MDT distribution through the Medical Supplies Division (MSD)

The distribution of MDT to all treatment centres is handled by the MSD of the ministry of health. Thus MDT is not available in private sector or to government doctors engaged in private practice. Information required for the ordering of MDT is provided annually to the WHO by ALC. All the institutions with dermatology clinics receive their MDT stocks through their respective regional MSDs. The hospitals of the line ministry receive MDT directly from the MSD. Chief Pharmacists estimates the MDT requirement and other leprosy drugs annually and assures uninterrupted supply. Pharmacists are responsible for dispensing MDT and maintaining the MDT registers and stocks of MDT accurately. There were several delays in supply of the MDT in the early part of the year

due to non-availability of MDT drug management information system at ALC.

MDT is supplied to all institutions through MSD and RMSDs. Stocks received, utilization and the balance stocks should be entered each month in the MDT register for each institution so that the RE receive information about the drug availability within the district at the end of the month. In the quarterly return of leprosy statistics to the ALC, RE should report information on MDT at the district level. Currently, this information flow is not occurring optimally.

3.2.2 Issues related to MDT

MDT is effective, safe and provided free of charge for all leprosy patients. These drugs are provided in blister packs, each containing drugs for 28 days duration. Specific blister packs are available for Multibacillary (MB) and Paucibacillary (PB) leprosy as well as for adults and children. Multidrug therapy (MDT) is a combination of drugs that is effective in treating leprosy to prevent the emergence of drug resistance. Under no circumstance should leprosy be treated by a single drug. All relapse cases and patients who return from default receive the exactly the same treatment regimens as new cases, according to the disease classification at that time. MDT is available in all hospitals where there is a functioning dermatology clinic.

The current treatment based on WHO-recommended multidrug therapy for MB and PB leprosy is unlikely to have any major, immediate change. However, this situation may be threatened by the emergence of Rifampicin resistance. Systematic surveillance of drug resistance is currently not taking place hindering the ability to detect drug resistance early. Also, lack of reporting of relapses to the national level indicates the need to standardize case ascertainment and definitions as well as reporting.

In general, MDT drug supply is adequately managed although supply breakdowns do occur. Requirements are calculated depending on the basis of the number of new cases reported in the previous year and the number of patients under treatment at a particular given time /point prevalence on 31st of December. While MDT distribution is done by the MSD, monitoring is carried out by the ALC. ALC receives information on utilization and availability of MDT from districts quarterly and annually. Secondary/ second-line drugs needed for management of leprosy are also available through the MSD. However, the ALC doesn't receive any information on second line drugs at the moment.

Recommended WHO regime is to provide PB treatment for 6 months and provide MB treatment for 12 months. WHO estimates the annual MDT requirements for the country based on above regime. Therefore, it is essential to adhere to a management guideline for the duration of treatment. Longer periods of treatment given by dermatologists (extended treatment) and cutting blister packs for using Clofazamine for reaction management leads to the short supply of MDT. Loose Clofazimine is available in the MSD hence; it is the responsibility of the Pharmacists concern to get them down for usage in clinics instead of cutting the blister packs for such purposes. Such circumstances could create a shortage of MDT especially MB drugs during the latter part of the year.

3.2.3 Inadequacy of available data on leprosy reactions

A leprosy reaction is a sudden appearance of symptoms and signs of inflammation in the existing skin lesions and appearance of new skin lesions and/or loss of nerve functions in a person with leprosy.

Reactions are important clinical conditions, as they should be treated vigorously to avoid development of permanent deformities.

Reactions are treated with high doses of steroids, clofazimine and for some resistant cases thalidomide. Thalidomide is a drug that is not registered to be used in Sri Lanka. In order to develop a clear policy on management of reactions, it is important that the ALC receive information of the number of reactions treated and the medications that are been used. At present, information on reaction and requirement of drugs for reaction management at district levels are not available to the ALC.

3.2.4 EHF score and detection of early nerve damage

Longer the delay between the appearance of the symptoms of leprosy and the commencement of treatment, patients are more at risk of developing nerve damage. The proportion of patients who develop a new or additional disability during MDT is an indicator that shows the efficiency of the patient follow-up programme. It is important to collect such information in all dermatology clinics. The EHF (eye-hand-foot) score can be used to monitor the success of PoD activities. The EHF score is calculated from data already being recorded routinely. 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 should be done in the initial assessment of the disability grade) and then repeated at the time treatment is completed. However, many clinics don't record the EHF score during the first visit and the subsequent visits.

3.2.5 Treatment, disability care, and follow-up

As mentioned before, all patients are treated and followed up in dermatology clinics located in the districts. Follow-up doses of MDT are only available through such dermatology units. Disabilities that are detected before or during treatment are referred to rheumatologists, neurologists, physiotherapists, ophthalmologists, vascular surgeons and plastic

surgeons by the dermatologists. In some clinics, this system is not functioning properly. Furthermore, patients who default and who develop deformities after the treatment may not receive adequate care as expected.

Treatment period for PB cases and MB cases vary from 6 months to 12 months duration. It is important to follow the patients at least 5 years after completion of treatment. At present, such practice does not exist. Some patients may develop reactions and silent neuritis after completing the treatment and some may even develop relapses. Therefore, ideally, leprosy patients need to be followed up at least for 5 years annually following the release from treatment.

3.2.6 Referral system for complications and follow-up

An adequate referral system ensures that specialist services are accessible and available to any patient who needs them. Referring health staff should know the details of clinic dates and times of specialist clinics and other professionals to whom they may refer patients. This will help them to provide better advice to referred patients. The referral areas include; ophthalmology for significant eye pathology, physiotherapy for assessment and management of deformities, podiatry for the feet and footwear, occupational therapy for rehabilitation and adaptations reconstructive and plastic surgery, a social worker for assessment and further socio-economic support and disability care in districts.

Currently, there is no organized referral system functioning in the clinics that lead to many failures in the quality of the services supplied. This is further aggravated by non-availability of proper paper-based formats.

3.2.7 Rehabilitation, wound care and reconstructive surgeries: facilities and the policies

Leprosy may lead to physical, functional, social and/or economic, psychological problems. Physical rehabilitation includes physiotherapy and occupational therapy, orthotics and prosthetics services, assistive and protective devices, and sometimes corrective surgery. Social and economic rehabilitation aims at social integration, equal opportunities, and economic advancement. A comprehensive approach to rehabilitation will provide maximum benefit for the individual, family, and society at large. At present only few centres are available with optimum rehabilitation services.

Persons affected by leprosy (PAL) have a substantial role to play in leprosy control, especially in the area of advocacy, awareness generation, and rehabilitation. Organized efforts by persons affected by leprosy are definitely needed to promote a positive perception and attitude about the disease among the public. This will also bring about essential changes in the legal provisions in many countries where the legal enactment of a discriminatory in nature with people affected with leprosy. Involvement of people affected with leprosy will also ensure that leprosy control continues to occupy an important place in the health policy framework of the country.

Physiotherapy services and community-based rehabilitation services need to be strengthened. More efforts need to be put to ensure patients with permanent disabilities receive disability allowance, social support and vocational rehabilitation from Social Services Department.

3.2.8 Non-availability of national Centre of excellence for disability care

A comprehensive approach to rehabilitation will maximize the benefit for the individual, family, and society at large. 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 could also be given access. This facilitates integration, helps to bring down stigma and promote sustainability of rehabilitation services. Such centre could be established in Hendala Leprosy Hospital with all the necessary facilities and could refer the patients who need reconstructive surgeries to NHSL. A Plastic Surgeon who is willing to undertake reconstructive surgeries for PALs and who is willing to work in collaboration with the ALC in capacity building programmes and other relevant areas could be identified preferably from the NHSL and be given training in handling leprosy deformities.

3.2.9 Inadequate laboratory facilities

Slit skin smear examination requires a suitably equipped laboratory with staff trained to perform this test. Leprosy skin smear services could be made available in institutions where there are functioning dermatology clinics. 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 and it is very important in detecting relapse and response to the treatment. Depending on the human resources available in health institutions, MLTs or the PHLTs could be used for providing services. ALC has trained more than 80% of PHLT's attached to hospitals up to base hospital levels in last few years, but this is not enough due to the annual transfer of these officers away from the institutions. Laboratory facilities should be improved in hospitals where the satellite clinics are functioning, to improve accessibility to the services rendered for leprosy patients. Facilities for punch biopsies (and reporting of biopsies) are also found to be inadequate in some centres when difficult to diagnose cases are found.

3.2.10 PCR testing for relapse patients

The number of relapse cases reported in the country is increasing every year. The true cause

for these relapses should be ascertained. Therefore, it is essential to perform PCR studies to analyze these cases to find out if there is any drug resistance in the country. Steps should be taken to collaborate with WHO drug resistance surveillance system similar to many other countries in the region.

3.3 Disease surveillance activities

3.3.1 Data quality of the current disease surveillance system

The primary point of collection of data in the current system is the government dermatology clinics of the country. Medical Officers who are treating leprosy patients in dermatology clinics enter this data into IPF forms. Other data relevant to multidrug therapy (MDT) are collected by the pharmacists/dispensers who are dispensing MDT for leprosy patients. There are nearly 70 dermatology clinics operating islandwide under the direct supervision of Consultant Dermatologists.

There are forms and registers that have to be maintained at institutional level apart from IPF and MDT register. At the regional level, the focal point is the Regional Epidemiologist and he/she is expected to analyze the data and send returns to the ALC Anti monthly/quarterly. To facilitate this activity further, Regional Epidemiologist receives the help of the PHI LC. It is essential that each district has a designated PHI LC to carry out leprosy control activities and compilation of this data.

The case detection data has been flowing without an interruption from the periphery to the centre. However, other data relevant to the quality of patient management and follow-up are not entered properly. Analysis of own data at the district level and utilization this data for district planning is very poor.

Except for the data of main indicators (new cases, child cases, disable cases etc.) the quality of the rest of the data in some districts are poor. The addresses of some of the IPF's are

unreadable and some clinical indicators are entered improperly.

Some of the data collecting formats (registers, records, and returns) are very old and need revision.

Timeliness of receiving the information is a problem encountered at the centre very often. To address this web-based system to collect data from district level was developed by the ALC. Providing IT exposure to all staff involved in data management in leprosy is essential for the sustainability of the above system.

3.3.2 Deficiencies in dissemination of information and feedback at district and central level

ALC should be strengthened with new IT facilities in order to carry out data dissemination activities. Publishing a printed / electronic newsletter quarterly to disseminate information to health institutions, dermatology clinics, MOH offices and district need to be established.

3.3.3 Geolocation system for patients in the districts

Since leprosy patients tend to cluster, the effective geographic information system will enable the district programme managers to plan more targeted activities. ALC should be strengthened with such facilities and the necessary software and training should be provided. The Range PHI's can be used as human resources for these mapping facilities if they can be provided with smartphone based simple application interface. A built-in monitoring system can be developed into the same system to monitor the follow-up visits by the same Range PHIs.

3.3.4 Mechanism for defaulter tracing

A defaulter is an individual who fails to complete treatment within the maximum allowed time frame. Every effort needs to be made in relation to avoiding defaulting by

strengthening the counseling services and health education. PHI LC needs to be encouraged to keep track on each patient under treatment in his area and to trace them if they have missed a single pack. Since the information such as mobile phone numbers and addresses are available, a system should be established to remind the patients to present themselves for treatment either through a phone call, SMS, etc. Failing that they should be traced with the help of the Range PHII by visiting the households. A smartphone based simple application interface can be developed for both PHI LC and Range PHII to enter data of the defaulters that will further enhance the tracing activities. Once defaulting patients are traced, a mechanism should be established to reintroduce them for treatment. Accompanied treatment where a family member is provided with drugs could be considered in such instances.

3.4 Logistical Issues

3.4.1 Physiotherapy appliances, ulcer care kits availability and distribution

Approximately 9% of the new patients are presenting with a grade 2 deformities at the time of diagnosis. Some of these patients need special appliances such as MCR shoes, splints, finger loops gutters and ulcer care kits for their rehabilitation. It is essential to identify the mode of producing such appliances and regular distribution to relevant institutions. A physiotherapist should be specially trained to use these appliances in the hospitals. It is needed to establish official work agreements with hospital orthopedic workshops or physiotherapy training school workshop for providing splints, gutters, and special shoes whereas CBOs and NGOs should be promoted to provide the ulcer care kits with necessary ingredients. The distribution of these should be monitored in the districts properly.

3.4.2 Transport facilities for district level for satellite clinics and, central level for monitoring and training activities

Provision of transport facilities for satellite clinics will ensure proper functioning of these clinics in the districts. These peripheral clinics are usually conducted by consultant dermatologists who are working in urban areas. Hence, they will be more willing to conduct these clinics with their teams if proper transport facilities are provided.

Furthermore, the success of the control programme depends mainly on close monitoring and supervision. It is important to carry out district review meetings in all 25 districts of the country as patients are reported from all districts. It is also essential to carry out many training programmes as possible for district health staff. Hence, it is essential that adequate transport facilities are available to conduct these activities.

3.5 Policy, Programme Planning, and Monitoring

3.5.1 Monitoring quality of services provided

The quality of services should be viewed as part of the responsibilities of every health facility providing leprosy services and should be adhered to by all staff of the facility. The following indicators for quality of leprosy service provisions may be collected,

- Treatment completion
- The proportion of new cases correctly diagnosed
- The proportion of treatment defaulters
- The number of relapses reported during the year
- The proportion of patients who develop new or additional disability during MDT

Currently, these indicators are not being measured at the district level or clinic level.

3.5.2 District level leprosy control activities and district teams

RE has been identified as the focal point of leprosy control activities following the integration. RE is a technical carder that is responsible for all vaccine preventable diseases, other communicable diseases and diseases with high burden such as dengue leptospirosis and all other NTDs. Since RE is very busy with the diseases like dengue (which has a high mortality), a new carder position for a Medical Officer for all NTDs at the district level could be proposed (such as MO-NTD or MO/Leprosy if feasible). Under such an officer, it is essential to form a district teams/task force for leprosy control activities along with other NTDs.

All carder positions of district PHI LC should be filled with a designated PHI LC. Officers responsible for leprosy control at district level should be provided appropriate training nationally and internationally and should provide refresher training at least every 2 years as many officers get transfers every 4 years.

3.5.3 Concept of regional disability care centres

Leprosy patients who have chronic wounds and other neurological deformities need to be followed up regularly. Dermatology clinics in which they obtain services and the physiotherapy departments are highly crowded and following up these patients are difficult. Therefore, it is proposed to have disability care centres at least one for each district which will provide comprehensive disability care for not only leprosy patients but also for all other patients with disabilities. These centres could be established in identifies local health institutions such as base/district hospitals where there are less workload and easy access. A mechanism could be established for patient referrals for such institutions and provision of appliances such as splints, gutters, ulcer care kits and special shoes.

3.5.4 Low priority for leprosy control in the districts

Following achievement of elimination targets in 1995 nationally, leprosy was given low priority in many districts activities. Priority is given mainly for the burning issues with political commitments and hence low priority is given for leprosy in district activities. Regularizing reviews at the district level is of utmost important to boost their enthusiasm. It is important to keep leprosy up in the agenda of RDHS, REs at the district level by providing them with feedback from the centre on district leprosy situation.

3.6 Human Resources in leprosy services and Control

3.6.1 Lack of human resource at central level and the need for training

The Anti-Leprosy Campaign has expanded its capacity during the last couple of years with many monitoring, training and field activities. However, to carry out these activities the medical officer carder is not sufficient. The current staff is new and needs training on leprosy and its control measures.

ALC is expected to provide technical guidance and capacity building of all categories of health staff. It is essential that a resource pool consists of all categories of staff which could work in close collaboration with ALC. ALC has to identify and train them and provide comprehensive training modules for them to use. This should be applied for all categories of health staff including medical officers, PHII, physiotherapists, MLTs and public health staff. Therefore, the campaign has to develop a human resource development plan for the capacity building of ALC staff. Training programmes need to be arranged both national and international level.

3.6.2 Lack of human resource at district level and the need for training

The vacant cadre positions of RE's and PHI LC in all districts should be filled to carry out the control activities efficiently. A plan has to be made to train all PHI LC and REs in regular basis at least once a year since there is a high turnover.

Training of Trainers programmes to build capacity at the district level is needed in order to train the district health staff within their districts. Training programmes need to be arranged as an urgent need in order to strengthen the technical competence of all categories of health staff. In addition, non-availability of expertise in deformity care, community-based rehabilitation; prevention of disability could be addressed by networking with professional colleges and organizations. Training programmes can be developed for those areas where there are no national expertises available by seeking the assistance of foreign experts.

International training should be opened up for other categories such as pharmacists, PHLTT and physiotherapists/occupational therapists. Since they now have a pivotal role in leprosy patient management. PHLT training school tutors should also be provided with these training opportunities to strengthen the teaching/training activities occurring at these schools.

3.7 Stigma and discrimination

3.7.1 Poor awareness among general public and health staff leading to stigma

Stigma causes problems providing and receiving treatment of leprosy. Often, to escape discrimination, patients try to hide their disease by not immediately seeking medical help on noticing signs of leprosy. Once treatment for leprosy has commenced, patients may stop going to clinics or taking their medication (non-compliance) because of fear of being noticed by

their community or inability to accept the condition. Some patients are willing to continue treatment from clinics far from their homes to hide their identity.

There are many causes for the stigma associated with leprosy. There is no one easy answer to dispelling this image; it is something that has to be undertaken in partnership with communities and patients. Poor awareness may be one of the causes for persistent stigma for the disease. Considering the poor awareness among general public and health staff, ALC should focus on awareness programmes on leprosy related-stigma. Feasibility should be explored for another social marketing campaign to alleviate the stigma and discrimination for leprosy.

3.7.2 Lepers Ordinance and reference in Establishment Code

Lepers Ordinance No. 4 of 1901 enacted during the British rule made compulsory segregation of patient which is not acceptable at present. In addition, there are several amendments that need to be done for the Establishment code by working in collaboration with Ministry of Public Administration. Repealing the Lepers Ordinance is a timely need that should be addressed by ALC with a multidisciplinary team.

3.7.3 Inadequate counseling services for patients and their families

Leprosy care is provided in an integrated setting showing patients and their communities that leprosy is not a special disease. Gradually attitudes towards leprosy are changing, but there is still much to be done if the underlying menace of stigma is to be dealt with.

Each new patient should be counseled adequately by a member of the health staff explaining about the disease, treatment, side effects, self-care, PoD, and rehabilitation. At least 15 – 20 minutes should be spent with a patient for this process. Currently, this is not occurring in many centres in the country.

3.8 Community-based activities

3.8.1 Participation of PALs at leprosy control activities

PALs have a substantial role to play in leprosy control, especially in the area of advocacy, awareness generation, and rehabilitation. Organized efforts by persons affected by leprosy are definitely needed to promote a positive perception and attitude about the disease among the public. This will also bring about essential changes in the legal provisions in many countries which are perceived to be discriminatory in nature, and ensure that leprosy control and patient rights continue to occupy an important place in the health policy framework of the country.

Currently, there are no formal PAL groups established in Sri Lanka. Hence, every effort should be taken to establish such groups in districts with the help of other NGO's/organizations working in leprosy control activities.

3.8.2 Involving religious leaders to reduce stigma and discrimination

Religious leaders in the communities have a major role to play in reducing stigma for the

disease. All religious leaders in districts should be involved in leprosy control activities in the districts as much as possible. They should be involved in community surveys, awareness programmes, and advocacy programmes.

3.9 Promoting Leprosy research

There are many research areas that could help to strengthen the leprosy control activities in Sri Lanka. Research should be undertaken to identify issues related to stigma, reasons for defaulting, outcomes of reactions, relapses, drug compliance, GIS mapping and epidemiology, quality of life of leprosy patients, health economics related to leprosy, resistance to drugs, chemoprophylaxis etc.

Research interest among academics needs to be developed. Postgraduate trainees should be encouraged to undertake research in leprosy. In addition, health system research on leprosy needs to be promoted. Research on leprosy should be promoted by identifying research priorities, allocating adequate funds for research. Research should also include areas such as reevaluating cost effectiveness of interventions and promote results-based financing. Establishing partnerships with local and international universities should be explored.

4. Vision, Mission, and Objectives of Anti-Leprosy Campaign of Sri Lanka

4.1 Vision

Leprosy free Sri Lanka

4.2 Mission

To stop transmission of the disease and to plan and implement cost effective quality leprosy services to all persons affected with leprosy, and to sustain such services to ensure a reasonable quality of life to those affected

4.3 Goal

Reduce the burden of leprosy in the country

4.4 Objectives

1. To reduce the rate of new cases per 100 000 population per year at district level below 10 in all districts in 2020
2. To reduce rate of newly diagnosed leprosy patients with visible deformities < 1 per million in all districts in 2020
3. To reduce the number of children diagnosed with leprosy and visible deformity to zero in 2020
4. To improve the percentage of early reporting (< 6 months of the onset of symptoms) up to 90% in 2020
5. To improve treatment completion rate in all districts to more than 90% in 2020
6. To reduce proportion of treatment defaulters less than 5% in all districts by 2020
7. To reduce percentage of child cases in newly reported cases to less than 7% by 2020
8. To achieve zero discriminating legislation allowing discrimination on basis of leprosy in 2020
9. To investigate all the relapse cases in the country at CLC for drug registration by 2020
10. To establish a leprosy research centre at ALC to conduct basic and operational research in all aspects of leprosy by 2020
11. To achieve zero stigma and discrimination and ensure rights for patients affected by leprosy in the country by 2020
12. To improve the current surveillance and health information system to a web-based system with geographical mapping of all leprosy cases by 2020
13. To establish at least 2 satellite clinics in each district to improve access with a special emphasize on children, women and underserved population by 2020
14. To establish at least one rehabilitation centre in each district for people with leprosy-related disabilities by 2020

4.5 Guiding Principles

1. Responsibility of national governments and strengthening partnerships
2. Sustain expertise in leprosy
3. Quality leprosy services with children and women as focus

4. Participation of persons affected by leprosy in leprosy services
5. Protection of human rights
6. Focus on research to support leprosy control

3.6 Strategic pillars

1. Stop leprosy and its complication
2. Stop discrimination and promote inclusion
3. Strengthen government ownership, coordination, and partnership

5. National strategies for accelerating towards a leprosy-free Sri Lanka

PILLAR 1

STOP LEPROSY AND ITS COMPLICATIONS

CORE ISSUES	STRATEGIES TO ADDRESS THE CORE ISSUES
<p>High endemic districts</p> <p>High proportion of MB cases</p> <p>High proportion of child cases</p> <p>Increasing proportion of G2D at the time of diagnosis</p> <p>No proper workplace based screening programmes</p>	<p>Promoting early case detection through active case-finding and strengthening passive case finding activities</p>

ACTIVITIES	MONITORING AND PERFORMANCE INDICATORS
<ol style="list-style-type: none"> 1. Develop district Leprosy control teams- (Designated PHILC / MO-NTD or MO-Leprosy in each district) 2. Provide special training for MOH health staff 3. Conduct special training for OPD medical officers and GPs 4. Provision of additional resources to district teams 5. Conduct house to house surveys 6. Conduct ring surveys 7. Strengthen contact tracing by MOH and/or Dermatology clinic 8. Conduct contact tracing clinics at dermatology clinics / MOH offices on stipulated dates 9. Establish workplace based screening programmes in industrial zones - 3 per district 10. Conduct screening skin clinics 11. Conduct field clinics in identified pockets 12. Conduct satellite dermatology clinics in high endemic areas 13. Conduct special screening clinics in underserved areas 14. Training of health staff to screen for leprosy at SMI 15. Conduct screening of school children at SMI's in all districts 16. Develop IEC materials on self-screening for leprosy 17. Awareness campaigns targeting high burden communities, schools, religious leaders, health-care workers and the general public at least once per year 18. Improve health education activities by regular monitoring 19. Training/awareness programmes for pre-interns before internships (at MBBS level) 20. Conduct refresher training programmes for medical officers yearly 21. Improve the field clinics of endemic pockets 22. Conduct awareness campaigns before conducting skin clinics 	<p>Number of new leprosy cases reported in a year</p> <p>Annual new case detection rate (NCDR)</p> <p>Prevalence</p> <p>Percentage of child cases among new cases</p> <p>Percentage of multibacillary (MB) cases among new cases</p> <p>Deformity percentage at the time of diagnosis</p> <p>Percentage of cases detected more than 6 months duration</p> <p>Percentage of female cases among new cases</p> <p>Percentage of public health and relevant curative health staff trained out of total health staff in the districts</p>

23. Train a special nursing officer for health education in dermatology clinics
24. Establishing a feedback network on contact screening at MOH to dermatology clinics
25. Introduce a government circular for direct referrals and back referrals to a dermatologist with suspected leprosy

CORE ISSUES

STRATEGIES TO ADDRESS THE CORE ISSUES

Poor awareness about the disease

Strengthening patient and community awareness on leprosy

Increasing proportion of G2D at the time of diagnosis

Improving prevention and management of disabilities

Late detection of cases and delayed presentation

Policies for disability management

Poor neurological assessment for early detection of disabilities

ACTIVITIES

MONITORING AND PERFORMANCE INDICATORS

1. Increase public awareness through mass media and use IEC materials at MOH and other government institutions
2. Training of medical officers in dermatology units to implement neurological assessment
3. Identify target audience and current KAP (knowledge, attitude, and practices) for leprosy in developing IEC's
4. Carry out periodical leprosy only/or integrated awareness activities to ensure that basic level of knowledge on leprosy is sustained (support of known/influential public persona, community leaders, and religious leaders can be utilized)
5. Introduce a Disability Register for clinics
6. Improve patient follow-up at clinics - "care after cure"
7. Assess the impact of activities through repeating KAP surveys and plan awareness campaigns taking into account those assessment's results
8. Develop new innovative targeted IEC materials
9. Create leprosy-related interactive IEC applications using iOS /Android based smartphones
10. Advertise on LED Boards in public places, TV's and government hospitals
11. Use social media messages to address young generations
12. Encourage self-referrals of cases through mass media
13. Conduct research to find out causes for delay in presentation
14. Encourage SLCD to provide standard guidelines for detection and recording of nerve damage
15. Ensure that leprosy is part of the curricula of the clinical nurses and

Percentage of new grade 2 disability cases

Late detection (more than 6 months) percentage

Percentage of public health and relevant curative staff trained on leprosy in each district out of the total

Number of MOs trained in neurological assessment/disability

Number of locally trained staff on disability care at district level per year

Number of overseas trained staff on disability care per year

Number of IEC material developed for PoD in leprosy

Proper referral system established

- the medical doctors, also to include in specialized branches like dermatology
16. Ensure the use of current patient follow-up form (IPF) in every dermatology unit
 17. Ensure training of referral centre staff on disability assessment through national training or via online training and provide a certificate of completion
 18. Ensure reporting on disabilities at the end of treatment through training and supervision
 19. Ensure availability and support for patients' self-care through provision of equipment free of charge directly or through referral to private institutions that has the capacity to provide such services
 20. Ensure provision of patients' education on disability prevention through simple education material developed using the reference the manual "I can do it myself "or other similar guides for persons affected by disabilities
 21. Ensure social support to patients, and facilitate access to referral centres
 22. Establish a monthly disability clinic at provincial and/or district level
 23. Establish a good referral system
 24. Develop a partnership for integrated medical rehabilitation with YEDD
 25. Initiate intellectual collaboration with NGO's to develop social media ads and education material
 26. Employ a specially trained nursing officer on counseling for each dermatology clinic
 27. Conduct Pre-intern training programmes
 28. Develop guidelines for neurological assessments twice month for patients with reactions
 29. Train medical officers on proper maintenance of IPF

CORE ISSUES	STRATEGIES TO ADDRESS THE CORE ISSUES
<p>Non-availability of facilities for rehabilitation, wound care and surgeries</p> <p>Non-availability of National Centre of Excellence for disability care</p> <p>Poor rehabilitation services for patients affected by leprosy</p>	<p>Establish disability management centres at least one in each district</p> <p>Establish National Centre of Excellence for disability care</p> <p>Supporting community-based rehabilitation for people with leprosy-related disabilities</p> <p>Improving facilities for reconstructive surgeries</p>

ACTIVITIES	MONITORING AND PERFORMANCE INDICATORS
<ol style="list-style-type: none"> 1. Prepare a development plan with a budget for disability care centre 2. Upgrade the CLC by providing furniture & equipment 3. Strengthen facilities for Leprosy Hospital Hendala 4. Provide guidelines on expected role for the staff, provide training and necessary equipment 5. Issue a circular to hospital administrators requesting the establishment of district disability management centres 6. Provide guidelines to dermatology units regarding referrals for disabilities 7. Ensure availability of online training material on disability assessment 8. Establish the concept of multi-disciplinary clinics for each district 9. Training of physiotherapists to assess and follow-up patients at regular intervals 10. Engage PALs in Community Based Rehabilitation 11. Provision of splints and gutters 12. Production and distribution of appliances 13. Plan and conduct surveys to establish the number of persons with leprosy-related disabilities in need of various kinds of CBR services 14. Link persons affected by leprosy with CBR and mental health services at national and subnational levels 15. GIS mapping of disability data, if possible integrated with other NTDs and preferably alongside information on where particular services are available 16. Development and mapping of networks identifying services provided by local organizations or government – health, education, labour, social welfare/ security, savings and credit programmes, skills training 17. Engage people affected by leprosy in community-based rehabilitation 18. Identify international training locations for surgeons in the region and provide proper training for reconstructive surgeons, senior registrars in managing leprosy-related disabilities 19. Identify and train a surgeon who could commit his services to ALC 20. Expand the training to other districts 	<p>District disability management centres established</p> <p>National Centre of Excellence for disability care established</p> <p>Percentage of persons with disability provided with satisfactory rehabilitative services</p> <p>Number of training programme conducted for physiotherapists</p> <p>Number of physiotherapists trained per year</p> <p>Number of districts with GIS mapping of disability data</p> <p>Number of districts with GIS mapping of disability services data</p> <p>Number of overseas trained staff at central level per year</p> <p>Number of trained staff at district level per year</p>

CORE ISSUES	STRATEGIES TO ADDRESS THE CORE ISSUES
<p>Increase number of defaulters</p> <p>Increase number of reactions</p> <p>Increase number of relapses</p>	<p>Strengthen the mechanism for defaulter tracing</p> <p>Develop mechanisms to promote privacy and confidentiality of patient information</p>

ACTIVITIES	MONITORING AND PERFORMANCE INDICATORS
<ol style="list-style-type: none"> 1. Provide training to improve the use of district register 2. Strengthen the use of district register to trace patients missing an MDT dose 3. Develop SMS reminder system for patients who are missing doses 4. Follow up mechanism to be introduced utilizing PHI with adequate emphasis on privacy and confidentiality 5. Develop a mechanism to inform the relevant MOH regarding the defaulters in his/her area 6. Developing a defaulter notification form 7. Develop a quarterly return on defaulter tracing 8. Initiate incentive schemes for defaulters returning to treatment 9. Develop a guide emphasizing causes for defaulting and possible remedies 10. Strengthening the mechanism to keep track of patients and send them back for treatment before they default treatment 11. Improve the counseling methods 12. Increase knowledge of patients and collect proper contact numbers 13. Improve lab facilities with services of Microbiologists 14. Maintain a separate relapse register at clinic level 15. Ensure availability of Thalidomide/ROM/Azathioprine therapy through ALC 	<p>Number of defaulters restarting treatment</p> <p>Number of relapses reported in a year</p> <p>Number of reactions reported in a year</p> <p>Treatment completion percentage</p>

CORE ISSUES	STRATEGIES TO ADDRESS THE CORE ISSUES
<p>Poor contact tracing and disease surveillance</p>	<p>Strengthen the role of Regional Epidemiologist and PHI LC in surveillance</p> <p>Policy for contact tracing of households, neighbors and social contacts</p>

ACTIVITIES	MONITORING AND PERFORMANCE INDICATORS
<ol style="list-style-type: none"> 1. Provide orientation and guidelines to health staff 2. Provide formats prepared by ALC to conduct surveillance activities 3. Develop an incentive system for patients bringing contacts for screening (incentive scheme for families bringing all contacts for contact examination) 4. Improve knowledge on counseling among health workers 5. Improve the current disease notification system 6. Train ICNOs, Medical officers and in-charge nursing officers on leprosy notification 7. Train MOHs, SPHII/Range PHII on importance of contact tracing 	<p>Percentage of contacts screened among the household contacts registered in each district</p> <p>Average number of visits to the households by the Range PHII in each district</p>

CORE ISSUES	STRATEGIES TO ADDRESS THE CORE ISSUES
<p>Poor quality of leprosy services provide in some dermatology clinics</p> <p>Problems in MDT supply (shortages, record keeping, distribution and extended treatment)</p>	<p>Ensuring prompt start and adherence to treatment, including working towards improved treatment regimens</p>

ACTIVITIES	MONITORING AND PERFORMANCE INDICATORS
<ol style="list-style-type: none"> 1. Development of standards for record keeping at individual level, clinic level, regional level and central level 2. Establish a computerized record keeping system at all dermatology units 3. Ensure availability of free-of-charge WHO distributed MDT for all leprosy patients, including those cared for by the private sector and implement A-MDT, when required 4. Update the operational guidelines/manual for leprosy with the help of SLCD 5. Issue a circular making chief pharmacist responsible for MDT stock management 6. Adopt National Treatment Guidelines prepared by SLCD / Ministry of Health on the duration of treatment 7. Disseminate information on treatment guidelines to all dermatologists/ pharmacists 8. Implementation of a reaction guideline 9. Consider the introduction of direct observation of treatment by the health-care workers (DOT) for all leprosy cases or at the very least for all paediatric cases 10. Use digital health technology to observe treatment and/or assist health-care workers in providing good quality of care close to the patient residence 11. Strengthen the use of disability assessment forms, contact tracing forms, clinic registers, district registers, referral forms, supervision forms, etc 12. Checklist to be developed for conducting onsite district/ provincial reviews 	<p>Updated guidelines are available</p> <p>Percentage of dermatologists implementing the updated guidelines</p> <p>Number of instances where out of stock notifications arise in each district</p> <p>Number of institutions maintaining MDT registers properly</p> <p>Web-based/online MDT drug management system is available</p> <p>Percentage of institutions with dermatology clinics entering data to online web- based MDT drug management system</p>

13. Conduct monthly & quarterly review meetings to strengthen the reporting
14. Develop an online/web-based MDT drug management system
15. Encourage research related to MDT drug bioavailability and compliance
16. Emphasize peripheral pharmacist feedback to ALC regarding MDT consumption
17. Improvement of PHI returns regarding MDT
18. Improve changes of MDT register including sticker for mentioning the necessary information
19. Issue a circular for any referred patient suspected with leprosy to get direct access to dermatology clinic by- passing the OPD
20. Allocate one MO to provide leprosy patient care for each dermatology clinic (at least in high endemic areas)

CORE ISSUES

- Limited research related to leprosy treatment
- Limited research on prophylaxis
- Limited local evidence available on transmission of the disease

STRATEGIES TO ADDRESS THE CORE ISSUES

Promoting research on transmission of the disease, leprosy treatment, and chemoprophylaxis

ACTIVITIES

1. Establish a central research committee
2. Identify priorities for research
3. Establish collaborative partnership with universities for leprosy research
4. Allocate funds for research
5. Reevaluate cost-effectiveness of interventions
6. Pilot/participate in multi-country research activities on chemoprophylaxis for leprosy contacts (SDR)
7. Plan research studies on existence of viable bacteria to generate evidence on transmission

MONITORING AND PERFORMANCE INDICATORS

- Number of research done per year
- Percentage of funds allocated for research out of total ALC funds
- Number of papers published from research on leprosy

CORE ISSUES	STRATEGIES TO ADDRESS THE CORE ISSUES
<p>No proper referral system</p> <p>Poor follow up of referred cases</p>	<p>Promoting innovative approaches to training, referrals and sustaining expertise in leprosy</p> <p>Identification of specialists for the management of specific complications and establishment of a proper referral system</p>

ACTIVITIES	MONITORING AND PERFORMANCE INDICATORS
<ol style="list-style-type: none"> 1. Encourage the follow-up of all cases of leprosy up to 5 years of commencement of treatment 2. Development and distribution of a follow-up register to all dermatology units 3. Issuing of a circular giving the responsibility to each dermatology clinic 4. Development of referral card for the clinics 5. Develop and implement a web-based Information Management System 6. Provide training for district level staff for web-based data entry 7. Incorporation referral system in the HIMS of leprosy 8. Map the training needs of doctors, nurses, and public health officers 9. Ensure availability of training course either at national level or through collaboration of a regional and/or of a global centre (including online courses) 10. Develop proposals for innovative approaches to diagnosis and referral 11. Reintroduce referral system with the feedback to the clinics 12. Include referral forms to the patient files for referral to each specialty 	<p>Number of specialist referrals done in each dermatology clinics in each district</p> <p>Web-based/online HIMS system available</p> <p>Referral forms are available in patient files</p>

CORE ISSUES	STRATEGIES TO ADDRESS THE CORE ISSUES
<p>Inadequate human resources</p>	<p>Strengthen human resources at ALC and districts</p>

ACTIVITIES	MONITORING AND PERFORMANCE INDICATORS
<ol style="list-style-type: none"> 1. Develop an HRD plan 2. Obtain official approval of the HRD plan from the Ministry of Health 3. Appoint more staff by the Ministry of Health to the centre and provinces according to the HRD plan 4. Establish an approved cadre position for PHI LC in each district 5. Implement cadre revisions to the dermatology clinics including a MO for leprosy, physiotherapists, nursing officer on health education and MLT / PHLT 	<p>HRD plan available</p> <p>Number of districts with approved cadre of PHI LC</p>

CORE ISSUES	STRATEGIES TO ADDRESS THE CORE ISSUES
<p>Quality of SSS and laboratory services</p> <p>No proper coordinated effort for relapse investigations and anti-microbial resistance testing</p>	<p>Strengthening the current SSS and laboratory services</p> <p>Strengthening surveillance for antimicrobial resistance including the laboratory network</p> <p>Strengthening the relapse investigation system</p>

ACTIVITIES	MONITORING AND PERFORMANCE INDICATORS
<ol style="list-style-type: none"> 1. Assign at least one trained PHLT for smear testing in all dermatology clinics 2. Training of laboratory technologists in skin smear testing 3. Development of practical skills in skin smear testing among MLT/ PHLTs 4. Assure the availability of necessary equipment 5. Develop a form to identify site of SSS test to be included in the IPF 6. Strengthen the maintenance of SSS register 7. Establish a system with a centre of excellence locally/abroad to detect drug resistance among non-responding cases and relapses 8. Develop structured operational plans for sampling for PCR 9. Train laboratory technicians for sample collection for drug resistance 10. Ensure access to a testing centre for performing drug-resistance testing 11. Promote and sustain national capacity to perform skin smears in, at least, one centre in the country in order to be able to confirm diagnosis in doubtful cases and to identify samples suitable for drug-resistance testing 12. Provide a permanent Microbiologist for the CLC Lab 13. Start PCR for surveillance on anti-microbial resistance for all relapse cases 	<p>Number of trained PHLT/MLT on SSS per year</p> <p>Number of PHLT's in each dermatology clinic New SSS form available</p> <p>Number of dermatology clinics using new SSS forms to identify the sites</p> <p>Percentage of relapses PCR performed</p> <p>Percentage of cases with anti-microbial resistance</p>

PILLAR 2

STOP DISCRIMINATION AND PROMOTE INCLUSION

CORE ISSUES	STRATEGIES TO ADDRESS THE CORE ISSUES
<p>Discriminatory legislations for leprosy (Lepers Ordinance and E Code Chapter 23)</p> <p>Prevailing stigma due to leprosy</p> <p>Poor awareness of the public causing stigma</p>	<p>Working towards abolishing discriminatory laws and promote policies facilitating inclusion of persons affected by leprosy</p> <p>Promoting societal inclusion through addressing all forms of discrimination and stigma</p> <p>Involving communities in actions for improvement of leprosy services</p>

ACTIVITIES	MONITORING AND PERFORMANCE INDICATORS
<ol style="list-style-type: none"> 1. Amending the Establishment Code by working with Ministry of Public Administration 2. Repealing the Lepers Ordinance through a cabinet paper 3. Once any other discriminatory laws, policies and practices have been identified, make detailed plans to get these repealed or changed in line with the resolution also through high-level advocacy 4. Ensure the availability of contextualized information, education, communication (IEC) materials and their use to provide correct information and address specific fears and beliefs related to leprosy 5. Include at least one other stigma reduction strategy besides provision of information, such as contact with affected persons, in all leprosy programme plans 6. Include interventions to promote empowerment and provide psycho-social support to persons affected by leprosy in all leprosy programme plans 7. Involvement of religious leaders/community leaders to reduce stigma and discrimination in the community 8. Structural discrimination should be addressed through the integration of services within existing ones such as social and health services. 9. Involve an agency and primary stakeholders to come up with a coordinated Social Marketing Campaign 10. Appoint brand ambassadors for leprosy 11. Involve primary stakeholders in producing and creating awareness (Contacting existing popular film teledrama producers and include a character or story to address leprosy) 12. Celebrate Leprosy day every year 13. Declare the month of January as the month for leprosy awareness 14. Organize art competitions for school children to increase awareness 15. Organize street dramas in districts to address stigma 16. Develop short video clips on stigma to put on Facebook and other 	<p>Number of discriminatory legislation repealed</p> <p>Number of stigma awareness programmes conducted in each district</p> <p>Number of activities conducted for Leprosy day in each district</p> <p>Number of IEC material developed to address stigma</p> <p>Number of short advertisements, TV commercials, social media clips developed each year</p> <p>Number of public displays stigma related advertisements are displayed in every district</p> <p>Number of public places in the country displaying leprosy advertisements</p> <p>Number of high endemic districts displaying street dramas</p> <p>Number of districts conducting school art competitions on leprosy</p>

social media 17. Display the videos addressing stigma in the Bus TV's 18. Organize campaigns on social media for young generation 19. Involve corporates for creative awareness campaigns on prevention of stigma and discrimination 20. Ensure availability of IEC materials on stigma prevention 21. IEC materials to be displayed in public areas in each village without just inside hospitals 22. Place advertisement videos on public LED screens on prevention of stigma and discrimination 23. Inter and intra-sectoral awareness programmes on stigma 24. Initiate family member awareness on supporting the leprosy patient	
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CORE ISSUES	STRATEGIES TO ADDRESS THE CORE ISSUES
Poor awareness of the health staff causing stigma	Promoting societal inclusion through addressing all forms of discrimination and stigma Involving communities in actions for improvement of leprosy services

ACTIVITIES	MONITORING AND PERFORMANCE INDICATORS
1. Declare month of January each year as a month for Leprosy awareness 2. Celebrate leprosy day at the national level to increase awareness in all health institutions 3. Develop material to be distributed to all MOHs, Hospitals, RDHS and private hospitals 4. Involve donors and NGOs to increase awareness in hospitals 5. Develop IEC for public, target groups such as school children, migrants and distribute it 6. Develop curriculums and incorporate leprosy stigma awareness 7. Incorporate awareness on leprosy in in-service training 8. Involve dermatologist to guide his / her hospital staff in conducting leprosy awareness programmes 9. Address leprosy stigma at Annual General meetings	Number of programmes conducted to mark the leprosy day in hospitals in each district Number of programmes conducted to mark the leprosy day in MOH's in each district Types of curricula leprosy stigma awareness is incorporated Number of IEC material developed to address stigma

CORE ISSUES	STRATEGIES TO ADDRESS THE CORE ISSUES
Non-availability of counseling services	Strengthen counseling services and health education

ACTIVITIES	MONITORING AND PERFORMANCE INDICATORS
<ol style="list-style-type: none"> 1. Entrust a designated staff member to engage in counseling of leprosy patients and families in the clinic and MOH 2. Provide hands-on training in counseling to relevant staff 3. Develop a counseling guide and flash cards 4. Develop and publish a code of ethics for public health staff 5. Prepare training materials for counseling 	<p>Number of training material developed for counseling services</p> <p>Number of counseling training programmes conducted in each district</p> <p>Number of patients provided with counseling services in each district</p>

CORE ISSUES	STRATEGIES TO ADDRESS THE CORE ISSUES
<p>Non-availability of PAL groups</p> <p>People affected by leprosy losing the voice and self-stigmatization</p>	<p>Empowering persons affected by leprosy and strengthen their capacity to participate actively in leprosy services</p> <p>Promoting coalition-building among PALs and encourage the integration of these coalitions and their members with other community-based organizations</p> <p>Promoting access to social and financial support services for persons affected by leprosy and their families</p>

ACTIVITIES	MONITORING AND PERFORMANCE INDICATORS
<ol style="list-style-type: none"> 1. Create PAL groups at district level with NGOs and CBOs 2. Pilot the group that is starting in the North and then roll it out across the country 3. Provide training to PALs to improve public awareness and to secure their rights 4. Develop a web-based portal for the people affected by leprosy to post details 5. Create a 'Whatsapp' group for those affected by leprosy 6. Initiate community self-help groups to assist PALs involving 	<p>Number of districts with PAL groups</p> <p>Number of training programmes conducted for PAL groups per year</p> <p>Web-based portal for PAL groups established</p> <p>Number of PAL's supported by</p>

<p>community leaders, religious leaders, and philanthropists</p> <ol style="list-style-type: none"> 7. Promote appropriate income generation activities for PALs 8. Involve relevant NGOs, CBOs, government organizations to assist PALs in income generation projects 9. Promote empowerment of former patients and build their capacity to contribute to the quality of leprosy services and to advocate for changes in legislation, policies, and practices, where needed 10. Educate health and social service providers regarding stigmatizing attitudes and practices towards persons affected by leprosy and, rights of PAL groups 	<p>NGOs, CBOs or government organizations in each district</p>
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CORE ISSUES	STRATEGIES TO ADDRESS THE CORE ISSUES
<p>Limited local research about stigma and how it affect the community</p>	<p>Facilitating and conducting research in stigma and maximize the evidence base to inform policies, strategies, and activities</p>

ACTIVITIES	MONITORING AND PERFORMANCE INDICATORS
<ol style="list-style-type: none"> 1. Allocate sufficient funds for stigma-related research 2. Establish partnerships with local or international universities for such research 3. Utilize the evidence generated from such research in developing policies 	<p>Number of research studies conducted on stigma and discrimination</p> <p>Number of papers published from research studies</p>

PILLAR 3

STRENGTHEN GOVERNMENT OWNERSHIP, COORDINATION, AND PARTNERSHIP

CORE ISSUES	STRATEGIES TO ADDRESS THE CORE ISSUES
Poor political commitment to control leprosy	Ensuring political commitment and adequate resources for leprosy programmes

ACTIVITIES	MONITORING AND PERFORMANCE INDICATORS
<p>1. Seek commitment for support within the overall plan of action</p> <p>2. Request to provide adequate human resources for every district for leprosy control activities</p> <p>3. Advocacy to allocate more financial resources for leprosy control</p> <p>4. Secure adequate funds through resource mobilization from diverse international and national sources by using a well-budgeted national action plan</p> <p>5. Collaboration across public health programmes to promote joint planning and share programmatic policies and strategies</p> <p>Strengthen the current programme through specific activities mentioned below,</p> <p><u>At Central level</u></p> <p>6. Establishing a Steering/ Technical Advisory Committee with DGHS (since multidisciplinary stakeholders need to be involved)</p> <p>7. Advocacy programmes for administrative, planning and treasury sectors to ensure continuous fund allocation for regular training and mobilizing adequate resources</p> <p>8. Lobbying for Parliamentary Oversight Committee to gain attention for leprosy</p> <p>9. Utilize 'Leprosy day' as an event to attract political and social attention</p> <p><u>At Provincial level</u></p> <p>10. Ensure continuous provincial allocations earmarked for neglected tropical diseases</p> <p>11. Increase the awareness of leprosy among 'Pradeshiya Sabha' authorities</p> <p>12. Identify leprosy control activities as a priority component in District Action plans</p> <p>13. Create a permanent cadre position for PHI LC for every district and retain human resource for a stipulated duration</p> <p>14. Create a MO post attached to RDHS to support RE for neglected tropical diseases or leprosy</p>	<p>Steering / Technical Advisory Committee established</p> <p>Number of advocacy programmes conducted per year</p> <p>Number of permanent cadre positions created for 26 districts</p> <p>Number of MOs appointed for neglected tropical diseases or leprosy</p>

CORE ISSUES	STRATEGIES TO ADDRESS THE CORE ISSUES
Universal health coverage (UHC) and underserved populations	Contributing to universal health coverage with a special focus on children, women and underserved populations

ACTIVITIES	MONITORING AND PERFORMANCE INDICATORS
<ol style="list-style-type: none"> 1. Establish new Satellite clinics in underserved areas (Identification of places to establish new satellite clinics should be based on the need / sustainability of the Satellite clinics need to be ensured / comprehensive service provision through these skin clinics need to be ensured / service provision should be regularly monitored) 2. Conduct special clinics in estate sector 3. Provide facilities for skin clinics in underserved areas 4. Allocate more human resources to skin clinics in underserved areas 5. Coordinate with other programmes/institutions working to provide health care to such groups to ensure access to diagnosis, treatment and prevention/management of disabilities 6. Involve community leaders and persons affected by leprosy belonging to vulnerable groups in planning and decision-making 7. Ensure adequate supply of MDT, ancillary drugs and materials in these areas 8. Identify and reach marginalized groups in estate sector and migrant population (identification of geographical locations for mobile clinics/community screening programmes by PHI LC or RE, migrant population can be identified and located by discussions with local authorities) 9. Make MDT available in selected institutions for patients who provide treatment cards irrespective of the site of diagnosis 10. Provision of accompanied MDT (A-MDT) for difficult patients and foreign travelers 11. Strengthen the screening of children through SMIs 12. Establish a mechanism for patients diagnosed in private sector (whom to take responsibility for MDT / forms, records and returns maintenance etc.) 13. Routine screening of prisoners 	<p>Proportion of female cases among new cases</p> <p>Proportion of paediatric cases among new cases in estate sector/migrant population</p> <p>Number of dermatology clinics per population</p> <p>Number of Medical officers trained for leprosy per population</p> <p>Number of PHI trained for leprosy per population</p> <p>Number of Nursing officers trained for leprosy per population</p> <p>Number of MDT packed issued per year in estate sector/migrant population</p> <p>Number of new satellite clinics established in estate sector/migrant population</p> <p>Number of child / female cases diagnosed through satellite clinics per annum</p> <p>Percentage of satellite clinics monitored by ALC</p>

CORE ISSUES	STRATEGIES TO ADDRESS THE CORE ISSUES
Non-utilization of other important stakeholders	<p>Promoting partnerships with state and non-state actors</p> <p>Promote intersectoral collaboration and partnerships at the national level and within districts</p>

ACTIVITIES	MONITORING AND PERFORMANCE INDICATORS
<ol style="list-style-type: none"> 1. Conduct inter-sectoral meetings with all other partners 2. Establish networks with all partners involved in leprosy control (SLCD, district authorities, NGOs, Department of Social Services, Department of Education, CBOs, IMPA, GP organizations, SLCGP, private hospitals, Estate Trust, armed forces, Ayurvedic sector) 3. Create formal links with national and regional institutions that provide high-quality care for leprosy 4. Sustain and enhance current partnerships at global level for leprosy by promoting actions and set up mechanisms to improve coordination between partners, global platforms and/or global alliances 5. Generate evidence on involvement of the private providers in leprosy care and promote implementation research to encourage their involvement through structured partnerships and collaborations 6. Ensure that affected populations are meaningfully represented in the venues to discuss national response and relevant bodies at national and local level 7. Partnerships with interfaith religious forums, Health Ministry units such as YEDD, E & UH, armed forces, private hospitals, professional colleges, universities, AGA offices <i>etc.</i> 8. Inclusion of leprosy in curricula of undergraduate students / PG students /paramedical and physiotherapy students 9. Attend district coordination committees and raise awareness among community, government and political leaders 	<p>Number of new networks established</p> <p>Number of intersectoral meetings conducted</p> <p>Number and type of partnerships establish internationally</p> <p>Number of district coordination committees attended per year</p>

CORE ISSUES	STRATEGIES TO ADDRESS THE CORE ISSUES
Inadequate attention for basic and operational research for evidence-based strategies	Facilitating and conducting basic and operational research in all aspects of leprosy and maximize the evidence base to inform policies, strategies, and activities

ACTIVITIES	MONITORING AND PERFORMANCE INDICATORS
<ol style="list-style-type: none"> 1. Establish national research priorities (national research agenda) for leprosy 2. Allocate funds for research (establish a separate research fund for leprosy, Education, and Training unit of Ministry of Health / National Science Foundation should identify leprosy as a priority area for funding, secure funds from other sources such as WHO/FAIRMED/Leprosy Mission) 3. Identify individuals and institutions who has technical capacity to conduct research in leprosy 4. Plan and implement strategic capacity building activities to increase human resources for leprosy health research 5. Facilitate availability of access to latest international evidence in relation to leprosy 6. Analyze the results and contributions of the research conducted aiming at incorporation of new technologies and strategies in services when appropriate 7. Research forum for leprosy to be established at national level and conduct 'Annual Research Symposia' 8. Promote clinical audits by dermatologists 9. Encourage other ancillary categories to conduct research such as PHIs / Nursing Officers / Physiotherapists / Pharmacists/sociology students (to conduct research on stigma and discrimination) 10. Organize research competitions among district teams 	<p>Percentage of fund allocated for research out of total ALC funds</p> <p>Number of research related to leprosy conducted per year</p> <p>Number of papers published from research on leprosy</p>

CORE ISSUES	STRATEGIES TO ADDRESS THE CORE ISSUES
Non-availability of a proper Health information management system (HIMS) and a Geographical information system (GIS) for mapping of leprosy cases	Strengthening surveillance and health information systems for programme monitoring and evaluation (including geographical information systems)

ACTIVITIES	MONITORING AND PERFORMANCE INDICATORS
<ol style="list-style-type: none"> 1. Develop an online web-based HIMS for leprosy 2. Establish a web-based Patient Management System to each dermatology clinic and integrate it with the HIMS 3. Train MO's in dermatology clinics, RE's and PHI LC's for data entry at clinic level and district level 4. Logistical support for ALC by providing desktop computers, laptops, computer servers, tablet PC's, printers, photocopiers and other required equipment 5. Provide general training on web-based system to district leprosy teams 6. Develop a GPS app based mapping system for leprosy patients (with a complete Geographical information system for leprosy) 7. Train RE's and PHI LC's / Range PHI's in GIS-based mapping of cases 8. Provide tablet computers to PHI LC to enter data at district level 9. Monitor the programme through impact, outcomes and process core indicators and take action on the basis of the results of the monitoring 10. For real-time collection of data from the hospitals identify and assign focal points 11. Development and maintenance of a comprehensive database (include follow-up of patients/defaulters details/ GPS location 	<p>HIMS for leprosy available</p> <p>Geographic information system for leprosy available</p> <p>Number of trained staff on HIMS & GIS</p> <p>Percentage of districts entering data online</p> <p>Percentage of districts mapping leprosy patients</p>

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