National Leprosy Eradication Programme

National Strategic Plan and Roadmap for Leprosy 2023-2027

ACCELERATING TOWARDS A LEPROSY FREE INDIA

January 2023

सत्यमेव जयते

Central Leprosy Division
Directorate General of Health Services
Ministry of Health & Family Welfare
Government of India

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व रसायन एवं उर्वरक
भारत सरकार
Minister
Health & Family Welfare
and Chemicals & Fertilizers
Government of India

MESSAGE

Leprosy is an ancient disease with its earliest remains discovered at the Indus Valley Civilization. Despite India being declared "Leprosy Eliminated" in 2005, the country still accounts for over half (52%) of the world's new leprosy patients. Sincere efforts are being made to accomplish the target of leprosy eradication at sub-national level and realize Mahatma Gandhi Ji's dream of a true leprosy-free India.

National Leprosy Eradication Programme (NLEP) was launched in 1983 with the objective to eradicate the disease through early case detection, reduction in the quantum of infection in the population and reduction in sources of infection. It is an integrated programme with convergence with other health programmes. NLEP has introduced various innovative strategic initiatives since 2016 to strengthen the programme at the sub-national level.

COVID-19 in India had its severe impact on the leprosy case detection services, and resulted in hidden cases and a probable increase in G2D, which may delay attainment of the goal of zero leprosy. With a view to intensify the activities towards zero transmission of leprosy, Dte.GHS and MoHFW have drafted a roadmap for interruption of transmission of leprosy in India by 2027.

This document will serve as a guidance tool with theme-wise approaches to manage leprosy at all levels of community. I take this opportunity to applaud all the stakeholders and contributors for their active contribution in developing comprehensive guidelines towards eradication of leprosy from India.

(Dr. Mansukh Mandaviya)

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भारत सरकार

MINISTER OF STATE FOR
HEALTH & FAMILY WELFARE
GOVERNMENT OF INDIA

MESSAGE

It gives me immense pleasure to announce that Central Leprosy Division and its partners have developed a National Strategic Plan (2023-2027) to end Leprosy in India. This document provides the roadmap for interruption of transmission of leprosy in India in line with the WHO Road Map for Neglected Tropical Diseases 2021-2030 and Global Strategy 2021-2030.

India has achieved the elimination of leprosy as a public health problem, defined as less than 1 case per 10,000 population, at the National level in December 2005. However, India still continues to be one of the three prevalent countries in the world reporting approximately 52% of the new cases globally. Currently, India is keen to contribute to the global target of reducing new leprosy cases with Grade 2 Disabilities to less than 1 per 1,000,000 population.

National Leprosy Eradication Programme is a centrally sponsored health scheme and is now being implemented through the NHM. National Health Policy clearly articulates effective implementation of NLEP to realise the goal of leprosy elimination in a time-bound manner. NLEP ensures an uninterrupted supply of Multi Drug therapy (MDT) to all the leprosy patients, free of cost. Under the programme, new initiatives were introduced like leprosy case detection campaign, post exposure prophylaxis, SPARSH awareness campaign etc. to strengthen the penetration of programme in the country.

This document has been reviewed by the Leprosy Division of MoHFW including the present epidemiological scenario, existing activities, identified gaps and suggested advanced public health tools and techniques for future implementation.

As our Prime Minister, Shri Narendra Modi ji has said that the effort to eliminate leprosy from this country is a tribute to Mahatma Gandhi's vision, I am confident that the stated strategies in this tool will be useful to the states and district level officials for strengthening the leprosy services in India along with introduction of new initiatives to achieve the zero leprosy target and in its elimination.

BP~

(Dr. Bharati Pravin Pawar)

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स्वास्थ्य एवं परिवार कल्याण मंत्रालय
Government of India
Department of Health and Family Welfare
Ministry of Health and Family Welfare

Message

Ministry of Health & Family Welfare (MoHFW) is committed to achieve United Nation's Sustainable Development Goals (SDGs) and has been strategizing policies to achieve these goals in a time-bound manner. Sustainable Development Goal (SDG)-3, which is "good health & wellbeing", commits to end transmission of all communicable disease including leprosy. India has been progressing steadily towards the vision of Leprosy free India. MOH&FW with its flagship program National Leprosy Eradication Program (NLEP) has been making continuous efforts by drafting policies and strategies for effectively combating the disease and associated conditions.

India continues to contribute a little more than 50% of new global cases annually. With a view to address this challenge a need was felt to revamp the existing strategies and include advanced tools and techniques to strengthen the existing implementation strategies and to create a robust surveillance system. With various newer interventions launched under National Leprosy Eradication Program (NLEP) since 2014, the program has geared its pace of transition to eradication of disease.

Accordingly, the Government of India has prepared the "National Strategic Plan 2023-27 for achieving zero transmission of leprosy in India by 2030. This document provides framework of implementation of different strategies, which is envisioned to accelerate NLEP towards the vision of zero transmission.

I hope that these guidelines will help the States & UTs, Mission Directors, Program Officers and service providers in planning & operationalizing key services. This would strengthen the quality of NLEP service care delivery for the patients and strategizing activities to curb the disease transmission in communities to arrest the spread and contain disease. It will also help us to pave the way towards disease eradication.

Place : New Delhi
Date : 27th January 2023

(Rajesh Bhushan)

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Government of India
Department of Health and Family Welfare
Ministry of Health and Family Welfare

Azadi Ka Amrit Mahotsav

MESSAGE

India has entered an exciting phase where it is making rapid strides towards realizing the nation's vision for all round development. The unprecedented growth and investment in the nation's infrastructure including health infrastructure requires continued commitment across the government and private sectors.

India being an endemic country for leprosy, is committed to its eradication. The National Leprosy Eradication Programme was launched in 1983 by Government of India with the objective to arrest the disease activity in leprosy patients in all the known cases of leprosy. In 1983 the prevalence rate of leprosy was 57.8 per 10,000 population which has come down to 0.40 per 10,000 population in 2022 at national level. The goal now is to achieve the elimination target (less than 1 per 10,000 population) at sub-national level.

To achieve the SDG goals and global targets for leprosy eradication, there was a felt need to modify strategies and add newer interventions to bring about acceleration towards achieving zero transmission of leprosy by 2027. National Leprosy Eradication Programme embarked upon this and developed a new strategy document to accelerate the efforts towards leprosy control.

I wish to compliment all the individuals and development partners involved with this exercise who have worked together to develop this National Strategic Plan 2023-27 to move towards ending the scourge of Leprosy in the country. I am hopeful that the mentioned strategies will come in handy to stop the transmission of leprosy in India.

(S Gopalakrishnan)

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Directorate General of Health Services

MESSAGE

Although India has made progress in improving leprosy care services in recent years and has been steadily progressing towards leprosy eradication, there is a lot more to be done through National Leprosy Eradication Program (NLEP), Ministry of Health and Family Welfare (MOH&FW) has ensured leprosy eradication planning and policy development, as well as guiding implementation of key interventions. As India strives to eradicate leprosy, progress in reducing transmission becomes important.

The National Leprosy Eradication Program (NLEP) places a significant emphasis on early detection and treatment to prevent deformities and alleviate individual physical, mental, and social suffering. The introduction of MDT in 1983 marked a significant strategic shift in leprosy treatment and a reduction in the disease's prevalence. In addition, programs like ABSULS, Active case detection strategies, a special plan for hard-to-reach areas, contact surveys, Post exposure prophylaxis (PEP), a Grade 2 disability (G2D) investigation, and an urban area plan for leprosy have significantly improved provision of services to society's most disadvantaged members.

The National Strategic Plan for Leprosy and Roadmap aims to provide program-specific strategies.

I am sure that of states and Union Territories, Mission Directors, and Program Managers will find this guideline useful in planning and carrying out the provision of standard service delivery care services. These guidelines will assist in achieving the goal of disease eradication and establishing a sustainable and empowered surveillance system to further reduce transmission.

(Atul Goel)

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Message

It gives me immense pleasure to be apprised that Central Leprosy Division has developed the National Strategic Plan for the achievement of goal of Zero transmission by 2030 under National Leprosy eradication programme(NLEP).

Leprosy, as a public health problem, was eliminated at the national level in 2005. The agenda of eliminating leprosy at Sub-national is still unfinished; there are still a few States/UTs, Which have yet to achieve the elimination of leprosy as a public health problem. Having achieved the target of elimination of leprosy as a public health problem at the national level, the next goal to be achieved under NLEP is to Zero transmission by 2030.

In order to achieve this target, it is considered important to first focus on sub-national zero transmission of disease. Success at the sub-national level would eventually aggregate to success at the national level. For the achievement of this goad, Dte.GHS and MoHFW have prepared a roadmap, which will surely motivate and help the officials under NLEP to work in more holistic as well as streamlined way. This document will act as a reverence to the officials and will help them during the implementation of the activities at the ground level.

I am confident that this initiative will help us in focusing our efforts on leprosy elimination an achieve the goal of zero transmission by 2030.

I take this opportunity to applaud all the stakeholders and contributors for their contribution in developing such a comprehensive Reference Document.

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(Roli Singh)

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दिनांक / Dated.....

Message

Leprosy is considered a significant public health problem in India as the country contributes almost 52% to the annual global new caseload. National Leprosy Control Programme, began in 1955 with Survey, Education and Treatment as the main strategy. In 1983, it got the much-deserved boost with the redefinition of strategy, with the introduction of MDT and with a new name, National Leprosy Eradication Programme, the active participation of leprosy specific field workers a large number of leprosy cases were detected and treated with MDT. Later years, NLEP had been integrated with General Health System and 2005 onwards it is a centrally sponsored scheme under National Health Mission.

Leprosy was eliminated in 2005 at national level as per the criteria of prevalence less than 1 case per 10,000 population, however the subnational elimination has to be achieved. 2015 onwards, many initiatives have been taken to accelerate the unfinished agenda of leprosy elimination at the subnational level, namely Leprosy Case Detection Campaigns (LCDC), ASHA-Based Surveillance for Leprosy Suspects (ABSULS), Sparsh Leprosy Awareness Campaign (SLAC), Grade-2 Disability Investigation, Post Exposure Prophylaxis (PEP) and Nikusth. The priority of the programme is to achieve the zero transmission of leprosy in time bound manner and to reach the desired goal, there is always a need of developing the specific path and guidance. Central Leprosy Division in consultation with many stakeholders worked extensively to develop the National Strategic Plan and Roadmap for zero transmission of leprosy in India. The priority wise activities have to be rolled out in Immediate, Midterm and Long Term manner.

States/UTs may also develop their own State Specific Roadmap to achieve the desired ultimate goal of leprosy free India.

Anil Kumar

(Dr. Anil Kumar)

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आज़ादी का अमृत महोत्सव

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January 27, 2023

MESSAGE

India has achieved elimination of leprosy in December, 2005 as a public health problem which is defined as less than 1 incidence of leprosy case per 10,000 population at the National level. The prevalence Rate has been declining since then and the same has come down to 0.57 per 10,000 population in 2019-20.

As visible, significant progress has been made in reduction of incidence of leprosy at national level. However, Chhattisgarh and Dadra & Nagar Haveli continue to report cases of leprosy more than 1 per 10,000 population despite continued reduction in prevalence. This is because of concerted efforts at every level to ensure that the prevalence rate of leprosy comes down at the state / district level less than 1 per 10,000 population and Grade II disability is brought down to less than 1 per million population by 2025.

India is committed to eliminate leprosy and reduce contribution of leprosy cases to the minimum possible by the end of 2027. Consid-ering the current challenges and the learning experiences of National Leprosy Eradication Programme (NLEP), a revised strategic plan has been put in place with clearly delineating the timeline. The revised strategy focusses on involving IEC with emphasis on (a) promotion of self-reporting (b) targetted early case detection (c) collaborate with partners and introduce Anti-Microbial Resistance surveillance with the objective to achieve zero leprosy cases by 2030.

(Rajiv Manjhi)

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Message

Leprosy (Kushtha) has been known to be prevalent in India from ancient time and the oldest disease known to mankind. Despite advances in all spheres of medical science, leprosy continues to be a public health challenge in India. Government of India initiated its fight against Leprosy with the launch of National Leprosy Control Programme in **1955**. Further, with the introduction of the Multi Drug Therapy (MDT), the **Leprosy Eradication Programme** was envisioned. Since then remarkable progress has been achieved in reducing the disease burden and India achieved leprosy elimination at National Level in December 2005.

In last 22 years, India has achieved significant reduction in the total registered cases of leprosy from 4.95 lakh cases to 1.3 lakh cases; and the prevalence rate has dropped down from 5/10,000 to 0.45/10,000. However, India still contributes 52% of new cases globally.

Sub-nationally, 32 States/UTs and 666 districts (88.6%) out of total 748 districts had achieved the leprosy elimination target. Among the states namely Arunachal Pradesh, West Bengal, Bihar, Jharkhand, Odisha, Chhattisgarh, Maharashtra, Uttar Pradesh, Delhi, Madhya Pradesh, Gujarat and Dadar & Nagar Haveli & Daman & Diu have either one or more districts (total 82 districts) which are yet to achieve the leprosy elimination target and contributes to more than 90% cases in the country.

Further, to achieve the target of making the country leprosy free with zero transmission, and zero new cases of leprosy, Central Leprosy Division (CLD) took the initiative to develop the National Strategic Plan and Roadmap (2023-2030) which is envisioned to give the clear guidance to the States/UTs to rollout the activities towards achieving this goal. I expect States/UTs to implement all the activities as per NSP to achieve the goal of Zero leprosy transmission by 2030.

(Dr. Sudarsan Mandal)

Abbreviations

ABSULS	ASHA Based Surveillance of Leprosy Suspects
AMR	Antimicrobial Resistance
ANCDR	Annual New Case Detection Rate
ANM	Auxiliary Nurse Midwife
ASHA	Accredited Social Health Activist
BNLW	Block Nodal Leprosy Worker
CHC	Community Health Centre
CLD	Central Leprosy Division
DHS	District Health Society
DLO	District Leprosy Officer
DPMR	Disability Prevention and Medical Rehabilitation
EDPAL	Eliminating Discrimination Against Persons Affected by Leprosy (Act)
EHF	Eye Hand Foot
FEFO	First Expiry, First Out
FHW	Female Health Worker
FLC	Focused Leprosy Campaign
G1D	Grade-1 Disability
G2D	Grade-2 Disability
GMSD	Government Medical Store Depot
GOI	Government of India
GPZL	Global Partnership for Zero Leprosy
HRC	Human Rights Council
IADVL	Indian Association of Dermatologists, Venereologists and Leprologists
ICMR	Indian Council of Medical Research
IEC	Information, Education, Communication
IHIP	Integrated Health Information Platform
ILEP	International Federation of Anti-Leprosy Associations
LCDC	Leprosy Case Detection Campaign
MAS	Mahila Arogya Samiti
MB	Multibacillary
MMU	Mobile Medical Unit
MCR	Microcellular Rubber
MDT	Multidrug Therapy
MoHFW	Ministry of Health and Family Welfare
MPW	Multipurpose Worker
NGO	Non-Governmental Organization
NFA	Nerve Function Assessment
NHM	National Health Mission
NLEP	National Leprosy Eradication Programme
NMS	Non-Medical Supervisor
NMA	Non-Medical Assistant
NRHM	National Rural Health Mission
NTDs	Neglected Tropical Diseases
NUHM	National Urban Health Mission
PB	Paucibacillary
PEP	Post-Exposure Prophylaxis
PHC	Primary Health Care
PIP	Programme Implimentation Plan
PMW	Paramedical Worker
POC	Point of Care
RBSK	Rashtriya Bal Swasthya Karyakram
RKS	Rogi Kalyan Samiti
RLTRI	Regional Leprosy Training and Research Institute
RoP	Record of Proceedings
RPWD	Rights of Persons with Disabilities (Act)
Rs	Indian Rupees
SDG	Sustainable Development Goals
SDR	Single-Dose Rifampicin
SLAC	Sparsh Leprosy Awareness Campaign
SLO	State Leprosy Officer
SSS	Slit Skin Smear
UN	United Nations
UT	Union Territory

Executive Summary

Leprosy has been associated with mankind since time immemorial. Reference to leprosy can be traced back to earliest medical texts i.e. the Sushruta Samhita and the Charaka Samhita (dating from 600 BC and 300 BC respectively). India being an endemic country for leprosy, is committed to its eradication. The National Leprosy Control Programme (NLCP) was launched in 1955. Multi Drug Therapy (MDT) for leprosy was introduced and the NLCP was renamed as National Leprosy Eradication Programme (NLEP) in 1983 and implemented as a Centrally Sponsored Scheme which significantly accelerated the elimination of leprosy as a public health problem. In 1983 the prevalence rate of leprosy was 57.8 per 10,000 population and by 1992 it was reduced to 24 per 10,000 population.

As India stepped into the new millennium, the prevalence rate of leprosy was 3.7 per 10,000 in March 2001. The country adopted the strategy of decentralization of the leprosy programme to States and Union Territories and integration of leprosy into the general health care services. With this, treatment of leprosy became more accessible and leprosy patients received treatment from health facilities of the general health care system. The peripheral staff was involved in delivering of MDT to the patients. The MDT comprises of the antibiotics, Rifampicin, Clofazimine and Dapsone.

In 2005, India achieved the goal set by the National Health Policy, 2002 of elimination of leprosy as a public health problem, defined as less than 1 case per 10,000 population at the national level. However, prevalence rate remained above 1 per 10,000 population in several districts and blocks and new cases continued to occur. In March 2020, 114,451 annual new cases were reported and 610 out of 717 districts had achieved prevalence rate of less than 1 per 10,000 population. Among the new cases detected, 2.41 percent had reported with visible deformities. With Covid pandemic that occured in 2020, case detection dropped by 43 percent in 2020-21 and by 34 percent in 2021-22 in comparison to pre-Covid year 2019-20.

National Leprosy Eradication Programme embarked upon developing a new strategy document in 2022 to accelerate the efforts towards leprosy control and overcome the impact of the Covid pandemic. The National Strategic Plan and Roadmap for Leprosy 2023-2027 has been developed by a committee comprising of more than 80 experts from the field of leprosy. This Strategy is aligned with the Global Leprosy Strategy 2021-2030 and the WHO Roadmap for Neglected Tropical Diseases 2021-2030 aiming to achieve interruption of transmission of leprosy by 2030. The Strategy focuses on interruption of transmission and achieving zero indigenous cases by accelerating case detection activities in high endemic districts and sustaining a strong surveillance system in low endemic districts.

Strategies to be adopted are: acceleration of new case detection by targeted approach; stronger surveillance systems; digitalization; introduction of advanced tools and techniques for early diagnosis; provide the most effective chemoprophylaxis to all contacts of cases; introduce a potential safe and effective vaccine; introduction of surveillance of anti-microbial resistance and adverse drug reactions; post treatment surveillance of treated cases and provide them care after cure; sustain leprosy expertise and move towards multi-disease service integration; improved treatment outcomes by introduction of new treatment regimes; and widespread awareness with impactful behavioural change communication methods. In addition, strengthening existing partnerships, adding more partners and repealing the existing discriminatory laws against leprosy is also required.

The implementation of the National Strategic Plan and Roadmap for Leprosy 2023- 2027 for leprosy aims to achieve interruption of transmission at district level evidenced by zero occurrence of new child cases for at least five consecutive years. After achieving interruption of transmission, districts shall move on to achieve elimination of leprosy as a disease with zero new cases reported for at least three consecutive years.

Background

Leprosy or Hansen's disease is a chronic infectious disease caused by a bacillus, Mycobacterium leprae (m leprae), which multiplies slowly and has a long incubation period, on an average, 5-7 years. Symptoms may occur within 1 year but can also take as long as 20 years or even more. It is an ancient disease and has been endemic in India. The earliest remains of the disease have been discovered at the Indus Valley Civilization. Infection can lead to involvement of the nerves, respiratory tract, skin, and eyes. The nerve damage may result in a lack of ability to feel touch, pressure, pain, heat and cold, which may lead to the loss of parts of a person's extremities from repeated injuries or infection. An infected person may experience muscle weakness and poor eyesight. Persons affected and their families also experience stigma and discrimination.

There was no effective treatment for leprosy till the discovery of Multi-drug therapy (MDT) in the 1980s. Early diagnosis and treatment may prevent damage to the soft tissues and bones of hands, feet and face. Since the introduction of MDT, the incidence and prevalence of the disease has remarkably decreased.

Present Global Scenario

There were 202,256 new leprosy cases registered globally in 2019, according to official figures from 161 countries (WHO weekly epidemiological record 2020). Of these, 14,893 were children below 14 years and the new case detection rate among child population was recorded at 7.9 per million child population. Based on 178,371 cases at the end of 2019, the prevalence corresponds to 22.9 per million population. Among the new cases, 10816 new cases were detected with Grade- 2 disabilities (G2D) and the G2D rate was recorded at 1.4 per million population. India contributed 57% of the total new cases detected world-wide in the year 2019-20, comprising of 26% of G2D cases and 43% of new child cases.

Sustainable Development Goal (SDG) pertaining to Health

"Good Health and Well Being" is one of the 17 Sustainable Development Goals (SDGs) established by the United Nations in 2015. SDG -3 encompasses good health for all. It states, "To ensure healthy lives and promote well-being for all at all ages." It encompasses the entire spectrum of health issues ranging from maternal health to deaths caused due to pollution.

The targets of SDG 3 cover and focus on various aspects of healthy life and healthy lifestyle. Progress towards the targets is measured using twenty-one indicators. SDG target 3.3, which calls to "end the epidemics of AIDS, tuberculosis, malaria and neglected tropical diseases (NTDs) and combat hepatitis, water-borne diseases and other communicable diseases" by 2030, as part of Goal 3 (Ensure healthy lives and ensure well-being for all at all ages) which includes the attainment of leprosy elimination. Without tackling NTDs, achievement of the SDGs seems impossible. NTDs are formally recognized as targets for global action. SDGs can therefore be achieved only if the NTD goals are met.

WHO NTD Roadmap 2030

The WHO has unveiled a NTD roadmap of 2021 to 2030. The NTDs prioritized by WHO are a diverse set of 20 diseases including leprosy with a singular commonality: their devastating impact on impoverished communities, living predominantly in tropical and subtropical areas. Lack of access to affordable treatment leaves millions of people severely disabled, disfigured or debilitated and may result in social exclusion, stigmatization, and discrimination.

Tackling NTDs supports WHO's vision of Universal Health Coverage, which means that all individuals and communities receive the health services they need without suffering financial hardship. The NTD roadmap, has targeted leprosy for elimination (interruption of transmission) by 2030. As for most NTDs, elimination of leprosy will occur in a number of stages.

Global Leprosy Strategy 2021–2030

This strategy is aligned with broader global health trends, including the move towards multi-disease service integration, digitalization and accountability, and addresses key challenges, such as human resource capacity, surveillance and antimicrobial resistance. The burden of disease now also includes those in need of mental health support. The Strategy promotes innovative approaches such as the use of targeted active case detection and the potential introduction of a safe and effective vaccine and calls on countries to develop "zero-leprosy roadmaps" and provide chemoprophylaxis to all contacts of confirmed cases.

Interruption of transmission in a country or a sub-national area is defined as no local transmission of M. leprae, evidenced by zero occurrence of new indigenous (autochthonous) cases among children ≤15 years for at least 5 consecutive years. Elimination of leprosy is achieved when a country or a sub-national area reports zero new indigenous leprosy cases for at least 3 consecutive years after interruption of transmission. Once a country has met the criteria for elimination of disease, it can request verification of elimination of leprosy. After elimination has been verified by WHO, the country begins post-elimination surveillance for ≥10 years.

WHO 2030 Target, Sub-Targets and Milestones

INDICATOR	2020	2023	2025	2030
Number of countries with zero new autochthonous leprosy cases	50 (26%)	75 (39%)	95 (49%)	120 (62%)
Annual number of new leprosy cases detected	184,000	148,000	123,500	62,500
Rate (per million population) of new cases with grade 2 disability	1.3	0.92	0.68	0.12
Rate (per million children) of new pediatric cases with leprosy	7.81	5.66	4.24	0.77
Source: the NTD roadmap: WHO				

Rationale behind NSP and Roadmap 2023- 2027

India and the entire world were severely impacted by COVID-19 pandemic during 2020-21 for major parts of the year. This resulted in a large focus on Covid related issues by the public health services and leprosy case detection activities came to a stand-still during imposition of lockdowns and restriction of movement. A significant decline of about 43% in new case detection was reported in 2021. This interruption in case detection may have resulted in hidden cases and a probable increase in G2D. This setback shall delay attainment of the goal of zero leprosy [1].

The National Leprosy Eradication Programme has achieved considerable success in leprosy control, but India continues to be one of the three countries in the world reporting more than 10,000 new cases annually. Besides case detection, country also faces several challenges on account of its large population, high disease burden and competing health priorities and emergencies.

Major challenges faced in the Programme are as follows:

i. Delay in detection on account of low awareness, pandemic, and other health emergencies.
ii. Increasing Human Resource under new programmes requiring training.
iii. Limited laboratory services and diagnostic tool.
iv. Coordination with partners and stakeholders is still limited.
v. Need for strengthening resistance to first-line drugs and expansion of AMR surveillance especially as post-exposure prophylaxis is scaled up.
vi. Paper based reporting system.
vii. Migration and Urbanization.
viii. Stigma and discrimination are deeply embedded in many communities.

The Government of India is strongly committed to face the challenges of achieving interruption of transmission of leprosy, prevention of disabilities, providing preventive, therapeutic and rehabilitative services and stop stigma & discrimation.

To achieve the SDG goals and global targets for leprosy, there was a felt need to modify strategies and add newer interventions to bring about an acceleration towards achieving interuption of leprosy transmission.

[1] WHO-weekly epidemiological record- 10th Sept. 2021- No. 36, 2021

National Strategic Plan and Roadmap for Leprosy 2023-2027

Central Leprosy Division, WHO and ILEP along with participation of the National Leprosy Eradication Programme (NLEP) partners, experts and representatives of persons affected by leprosy have drafted the National Strategic Plan and Roadmap for Leprosy 2023-2027 for moving towards achieving interruption of transmission of leprosy in India. This is in line with the WHO Roadmap for Neglected Tropical Diseases 2021-2030 and Global Strategy 2021-2030.

This roadmap aims to provide a clear path and guidance to all key stakeholders and provide a blueprint for focussed interventions to achieve the goals of NLEP (National Leprosy Eradication Programme) for the period 2023-2027.

The roadmap aims to facilitate alignment with NLEP objectives, improve the sense of ownership, ensure involvement of relevant stakeholders in putting together an effective IEC and advocacy plan. This strategy is written for use by government officials at the national, state, district level and development partners, and proposes interventions at the national, state, district, health facility, community, and household levels.

Vision: Leprosy free India with zero infection and disease, zero disability, zero stigma and discrimination.

Goal: Accelerate towards achieving Interruption of Leprosy Transmission in India.

Specific objectives:

1. Strengthen leadership, commitment, and partnerships
2. Acceleration of Case Detection
3. Provision of Quality Services
4. Enhanced measures for Prevention of Disease, Disabilities, Stigma, Discrimination and Violation of Human Rights
5. Digitalization of Surveillance Systems

Strategic Pillars

2023-2025
- **Accelerated case finding**
- **Quality Services to all patients**

2025-2026
- **Sustain gains & continue surveillance**
- **Sustain expertise Targetted active case detection**

2026-27
- **Sustain gains & continue surveillance**

At a glance: National Strategic Plan and Roadmap for Leprosy 2023-2027

This section is a summary of Strategic Pillars, key components, and interventions.

Goal: Accelerate towards achieving Interruption of Leprosy Transmission in India.

Strategic Pillar 1: Strengthen leadership, commitment, and partnerships

Key components	Interventions
Programme Leadership	• Sustained political commitment at national and state levels. • Preparation of State and UT specific Roadmaps. • Dedicated State and District Leprosy Officers in high disease burden states and districts respectively. • Greater accountability of programme implementation at State/UT • Programme Monitoring Units at national and state level. • Technical Resource Group (TRG). • Periodic Monitoring Mission & Evaluations
Human Resource	• Ensure filling of vacant positions under NLEP. • Human resource mapping, pooling and redistribution. • Continued assessment of training requirement. • Maintain a pool of trainers at national, state and district level. • Mandatory Training of all staff at least once every three years. • Integrate NLEP training with trainings under other programmes. • Review and update training materials and ensure uniformity of curriculum & training modules. • Promote blended (mix of virtual and physical) trainings.
Programme Financing	• Effective utilization and enhancement of budget at Central and State levels for acceleration. • Conduct resource mapping, pooling and redistribution.
Surveillance	**Disease Surveillance** • Enhance surveillance systems. • Integrate with Integrated Disease Surveillance Programme. • Strengthen surveillance in hard-to-reach areas and migrant population. **AMR Surveillance** • Enhance detection and management of drug resistance cases. • Build capacity of staff to suspect resistance, collect and transport samples to AMR labs. • Develop collection and transportation systems • Strengthen AMR labs for improved testing, confirming and reporting of drug resistance. • Enhance contact screening of cases with resistance

Global and national new evidence and research	• Adopt the global and national new evidence and research (if any). • Introduction of molecular tests for early diagnosis especially confirmation of leprosy in early / atypical cases as seen for CB NAAT test like Truenat for TB.
Partnerships	• Strengthen existing partnerships and collaboration with new partners and donors. • Leverage Corporate Social Responsibility (CSR) activities for leprosy affected persons and their families for support in education, socio-economic rehabilitation, etc.

Strategic Pillar 2: Accelerate Case Detection

Key components	Interventions
Community Awareness	• Develop Behavioural Change Communication plan. • Develop and rollout mobile App for supporting self-examination and voluntary reporting. • High Intensity Awareness Campaigns for self-examination and voluntary reporting in high endemic settings. • Focused High Intensity Awareness Campaigns for self- examination and voluntary reporting in low endemic settings. • Provision of Incentive for any person reporting a confirmed case of leprosy. • Facility of Tele-helpline to support self-reporting.
New case detection under NLEP Programme	• Active case detection through Leprosy Case Detection Campaigns (LCDC), Focused Leprosy Campaigns (FLC), Special plans for hard-to-reach areas and ASHA Based Surveillance for Leprosy Suspects (ABSULS). • Continue with incentives for case detection to health staff and any other person reporting a case of Leprosy.
Other Health Programmes and non-Health institutions and individuals.	• Integrate case detection activities with house-to-house case detection and service delivery activities of other health programmes. • Integration and Coordination with other National Health Programmes for case detection. • Inter-sectoral coordination with other Govt. departments and engagement of private sector.
Case detection through contact tracing	• Contact Tracing and follow up of traced contacts biannually for 5 years for signs and symptoms of leprosy. • Retrospective Contact Tracing of index cases of last 5 years. • Reverse contact tracing-linking index case with probable source of infection.

Strategic Pillar 3: Provide Quality Services

Key components	Interventions
Comprehensive services to persons affected by leprosy	• Develop a checklist for complete package of services and ensure access and availability of services. • Coordination with other National Health Programmes for case management and counselling. • Physiotherapists, psychiatrists and counsellors of other programmes may be utilised for Leprosy services.. • Adding leprosy diagnostics to diagnostic facilities provided by other programmes. • Coordination with Medical Colleges, Private Practitioners, NGO and Private Clinics / Hospitals etc. • Orientation of Non-Govt. stakeholders to follow NLEP guidelines. • Provide Medical Rehablitation and mental well-being services to persons affected by leprosy.
Criteria for diagnosis, clinical assessment, classification, treatment and management of complications	• All treatment centres to classify and treat patients as per national guidelines (public & private sector). • Treatment and follow up to be provided by health staff / health facility nearest to place of residence of patient. • Private practitioners and institutions to be linked with nearest Govt. health facility for delivery of drugs free of cost, counselling and follow up during and after completing treatment. • Availability of second line drugs in cases of drug contraindications, lepra reactions and confirmed cases of resistance with evidence of active disease after MDT therapy. • Child leprosy and leprosy during pregnancy to be given special attention and follow up services.
Specialised services for persons affected by leprosy	• Counselling of patient and family members • Services for mental health concerns of patient and family members. • Provision of Self Care Kits and counselling for promotion of Self-care. • Provide assistive devices. • Reminder calls for the subsequent doses. • Flag high risk cases for reaction and follow up. • Monitor and manage steroid regimes for reactions. • Detect early nerve damage, treat promptly and monitor. • Defined referral pathways for management of complications. • Patients to be provided with a treatment card linked with AADHAR, helpline numbers, contact details of local health worker and District Leprosy Office, a checklist of package of leprosy services to be provided during and after completing treatment. • Patients to be provided registration under Ayushman Bharat Scheme. • Coordination with Ministry of Social Justice and Empowerment for rehabilitation. • Involvement teaching institutions to support leprosy programme activities-capacity building, diagnostics, tertiary level of care, indoor hospitalization, reconstructive surgery, management of ulcers etc.

Supportive treatment	• Treatment for anaemia • Treatment for worm infestation before starting prednisolone for lepra reaction. • Nutritional advice and medicines. • Suspect, diagnose and manage co-morbidities like diabetes, hypertension, anaemia, helminthiasis, TB etc.
Pharmacovigilance	• Setup pharmacovigilance for adverse drug reactions in patients under treatment.
Post-treatment follow-up	• Follow up for patients released from treatment for at least 5 years. • Counselling to be done for warning signs of lepra reaction and appearance of new lesions/ visible deformities. • Provide and link for DPMR services in cases of disabilities.

Strategic Pillar 4: Prevention of Disease, Disabilities, Stigma, Discrimination and Violation of Human Rights

Key components	Interventions
Disease prevention	• Expand coverage of contacts with post exposure prophylaxis (PEP). • Introduction of any newer and more efficacious PEP regimens, vaccines etc.
Immuno-prophylaxis	• Research on more effective immune-prophylaxis options • Introduction of newly available effective and approved vaccines.
Prevention of Stigma, discrimination, and violation of Human Rights	• Community education by modern mass media methods. • Tap resources for dissemination of messages around Anti-Leprosy Day. • Sparsh Leprosy Awareness Campaign (SLAC) • Sensitization of leaders, policy makers, faith-based leaders, gram panchayat leaders, Gram Pradhans (PRI reps), Ward members, Members of Legislative Assemblies, Members of Parliament, Resident Welfare Associations, Council members of Municipal corporations, Members of Social Welfare Organizations etc.

Strategic Pillar 5: Develop Digital Systems for NLEP

Key components	Interventions
Digitalization	• Digitalization of reporting and recording systems of Programme and integrate with Integrated Health Information Platform (IHIP). • Digitalize anti-leprosy drug management on IHIP platform.
Nikust	• Launch and Rollout new version of Nikust 2.0 for digitalization of individual patient records.

Activities and Timelines under NSP & Roadmap 2023-2027

No.	Activities	2023	2024	2025	2026	2027
Pillar 1: Strengthen leadership, commitment and partnerships						
1	Launch and Rollout of NSP & Roadmap 2023-2027					
2	States and UTs Specific Roadmap					
3	Continued political commitment (National, State and District level)					
4	Ensure availability of dedicated programme managers at National, State, and high burden districts' level					
5	Resource mapping, pooling and redistribution (at National, State & District level)					
6	Increase investment at Central and State levels for acceleration, enhancing coverage and addition of new components as per NSP 2023-2027					
7	Training of healthcare service providers at least once in 3 years					
8	Fill up vacant positions under Programme					
9	Involvement of AYUSH for NLEP					
10	Launch of Guidelines for AMR Surveillance for Leprosy					
11	Rollout of AMR Surveillance					
12	Adopt the global and national new evidence and research (if any)					
13	Strengthen partnership with existing partners and add new partners and donors					
Pillar 2: Accelerate Case Detection						
14	Develop Behavioural Change Communication Plan					
15	Develop and Rollout Mobile App for self-examination and voluntary reporting					
16	High Intensity Awareness Campaigns in high endemic settings and Focused High Intensity Awareness Campaigns in low endemic settings for self-examination and voluntary reporting					

No.	Activities	2023	2024	2025	2026	2027
17	Continued LCDC, FLC, ABSULS, Special plans for hard-to-reach areas					
18	Coordination with other National Health Programmes for case detection					
19	Inter-sectoral coordination with other govt. departments and private sector for case detection					
20	Long term follow-up of contacts of leprosy cases (for 5 years)					
Pillar 3: Provide Quality Services						
21	Develop too (checklist) for complete package of services and ensure access and availability					
22	Coordination with other National Health Programmes for case management and supportive care					
23	Provision of nutritional support and supportive medicines					
24	Coordination with Medical Colleges, Private Practitioners, NGO and Private Clinics/Hospitals etc.					
25	Orientation of Non-Govt. stakeholders for following the NLEP guidelines					
26	Introduce & roll out pharmacovigilance for adverse reactions to drugs					
Pillar 4: Prevention of Disease, Disabilities, Stigma, Discrimination and Violation of Human Rights						
27	Expand coverage of Post Exposure Prophylaxis (PEP)					
28	Implementation Research for improved PEP, vaccines, reaction management and disability prevention etc.					
29	Introduction of leprosy vaccine					
30	Integrate counselling services for self-care, mental health issues, diabetes and other co-morbidities for leprosy patients					
31	Monitor availability and quality of assistive devices (aids and appliances)					
32	Post treatment surveillance for 5 years, identify high risk cases at time of RFT					
33	Repealing and amendment of all existing discriminatory laws on leprosy					

No.	Activities	2023	2024	2025	2026	2027
Pillar 5: Develop Digital Surveillance Systems for NLEP						
34	Launch of Nikusth 2.0					
35	Rollout of Nikusth 2.0					
36	Integration of reporting on IHIP					

Roles and Responsibilities of Stakeholders

No.	Activities	Responsibility	Supporting stakeholders
Pillar 1 Strengthen leadership, commitment and partnerships			
1	Launch and Rollout of NSP & Roadmap 2023-2027	MoHFW	WHO, ILEP
2	States and UTs Specific Roadmap	Govt. of State and UT	CLD,WHO,ILEP, local experts,medical colleges
3	Continued political commitment (National, State and District level)	MoHFW,Govt. of State and UT	
4	Ensure availability of dedicated programme managers at National, State, and high burden districts' level	MoHFW,Govt. of State and UT	
5	Resource mapping, pooling and redistribution (at National, State & District level)	MoHFW,Govt. of State and UT	
6	Increase investment at Central and State levels for acceleration, enhancing coverage and addition of new components as per NSP 2027	MoHFW,Govt. of State and UT	
7	Fill up vacant positions under Programme	MoHFW,Govt. of State and UT	
8	Involvement of AYUSH for NLEP	MoHFW	AYUSH
9	Training of healthcare service providers at least once in every 3 years	CLTRI, RLTRI,Govt. of State and UT	WHO, ILEP
10	Launch of Guidelines for AMR Surveillance	MoHFW, CLD	WHO and ILEP
11	Rollout of AMR Surveillance	Govt. of State and UT	CLTRI, RLTRI,WHO, ILEP
12	Adopt the global and national new evidences and researches (if any)	MoHFW, CLD	WHO
13	Strengthen partnership with existing partners and add new partners and donors	MoHFW	WHO, ILEP, local NGOs
Pillar 2 Accelerate Case Detection			
14	Develop Behavioural Change Communication Plan	CLD	WHO, ILEP, BCC Experts
15	Develop and rollout Mobile App for self-examination and voluntary reporting	CLD, WHO,	ICMR. ILEP and IT experts

16	High Intensity Awareness Campaigns in high endemic settings and Focused High Intensity Awareness Campaigns in low endemic settings for self-examination and voluntary reporting	CLD	Govt. of State and UT
17	Continued LCDC, FLC, ABSULS, Special plans for hard-to-reach areas	MoHFW and Govt. of State and UT	WHO,ILEP, local experts,medical colleges
18	Coordination with other National Health Programmes for case detection	MoHFW and Govt. of State and UT	
19	Inter-sectoral coordination with other govt. departments and private sector for case detection	MoHFW and Govt. of State and UT	
20	Long term follow-up of contacts of leprosy cases (for 5 years)	CLD, MoHFW, Govt. of State and UT	WHO,ILEP, medical colleges, local NGOs
Pillar 3 Provide Quality Services			
21	Provide complete package of services (ensure access and availability as per a checklist)	MoHFW, CLD,Govt. of State and UT	All stakeholders
22	Coordination with other National Health Programmes for case management and supportive care	MoHFW, CLD,Govt. of State and UT	All stakeholders
23	Provision of nutritional support and supportive medicines	MoHFW, CLD	All stakeholders
24	Coordination with Medical Colleges, Private Practitioners, NGO and Private Clinics/ Hospitals etc.	MoHFW, CLD,Govt. of State and UT	WHO,ILEP, medical colleges, local NGOs
25	Orientation of Non-Govt. stakeholders for following the uniform government guidelines	CLD	Dept. of Medical Education, WHO, ILEP, IADVL, IMA
26	Introduce pharmacovigilance for adverse reactions to drugs	Govt. of State and UT	CLTRI, RLTRI, Medical Colleges
Pillar 4 Prevention of Disease, Disabilities, Stigma, Discrimination and Violation of Human Rights			
27	Expand coverage of Post Exposure Prophylaxis (PEP)	MoHFW, CLD,Govt. of State and UT	All stakeholders
28	Implementation Research for improved PEP, vaccines, reaction management and disability prevention etc.	MoHFW, CLD	CLTRI,RLTRI, WHO, ILEP
29	Introduction of leprosy vaccine	MoHFW, CLD	Govt. of State and UT
30	Integrate counselling services for self- care, mental health issues, diabetes and other co-morbidities for leprosy patients	MoHFW	CLD, Other Health Programme Units in Ministry
31	Monitor availability and quality of assistive devices (aids and appliances)	MoHFW, Ministry of Social Justice and Empowerment	
32	Post treatment surveillance for 5 years, identify high risk cases at time of RFT	ICMR, MoHFW	WHO, ILEP
33	Repealing and amendment of existing discriminatory laws on leprosy	ICMR, MoHFW, Ministry of Social Justice and Empowerment	WHO

Pillar 5 Develop Digital Surveillance Systems for NLEP			
34	Launch of Nikusth 2.0	CLD, ICMR, MoHFW	
35	Rollout of Nikusth 2.0	CLD, ICMR, MoHFW Govt. of State and UT	WHO
36	Integration of reporting on IHIP	CLD, MoHFW Govt. of State and UT	WHO

Projections of Key indicators for the priority strategic areas

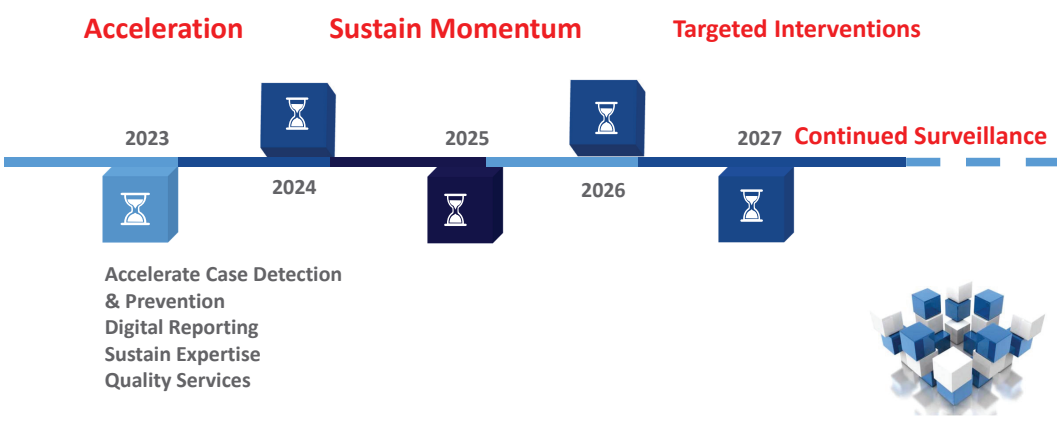
	Strategic Pillar	Status			Projections				
	Pillar 1 Strengthen leadership, commitment and partnerships								
	Indicator	**2019-20**	**2020-21**	**2021-22**	**2022-23**	**2023-24**	**2024-25**	**2025-26**	**2026-27**
1	No of States/UTs Specific Roadmap developed	NA	NA	NA	NA	36	NA	NA	NA
2	Percent increase in annual budget for leprosy at National level against baseline budget of 2022					20%	20%	20%	10%
3	Percent increase in annual budget for leprosy at State level against baseline budget of 2022					20%	20%	20%	10%
	Pillar 2 Accelerate Case Detection								
	Population	1347121000	1361343000	1373761000	1387498610	1401373596	1415387332	1429541205	1443836617
4	Annual no. of new leprosy cases detected	114451	65147	75394	115000	110000	80000	65000	50000
5	Proportion (percentage) of districts covered under active case detection under LCDC in leprosy prevalent States/UTs	42%	NA	NA	47%	50%	55%	60%	60%
6	Number (percentage) of new cases detected by active case detection	23985 (21%)	NA	NA	21000 (18%)	22000 (20%)	16000 (20%)	13000 (20%)	10000 (20%)
7	Proportion (in percentage) of annual new cases reported voluntarily	30%	22%	20%	21%	22%	24%	26%	28%
8	Proportion (in percentage) of annual new cases detected through ASHA	65%	74%	77%	65%	65%	65%	65%	65%
9	Proportion of new cases detected through other health programmes and community	5%	4%	3%	14%	13%	11%	9%	7%
10	Annual no. of child cases with Grade 2 disabilities	63	35	41	55	45	35	25	15
11	Proportion of new cases with Grade 2 disabilities among child cases	0.80%	0.93%	1%	0.92%	0.90%	0.88%	0.83%	0.75%
	Pillar 3 Provide Quality Leprosy Services								
12	Proportion (in percentage) of medical officers trained in the year against total number	60%	30%	35%	50%	70%	90%	100%	100%
13	Proportion (in percentage)of paramedical staff trained in the year against total number	16%	20%	15%	40%	60%	70%	80%	100%
14	Proportion (in percentage)of ASHAs trained in the year against total number	46%	50%	55%	60%	70%	80%	90%	100%

15	Proportion (in percentage)of new cases treated for lepra reactions against total number of new cases	NA	NA	NA	NA	20%	20%	20%	20%
16	Proportion (in percentage) of new cases treated for adverse reactions against total number of new cases	NA	NA	NA	NA	2%	2%	2%	2%
17	No. of patient sample sent for AMR testing	NA	NA	NA	75	500	1000	3000	4000
18	Proportion (in percentage)of persons affected eligible for RCS undergone reconstructive surgery in the year	65%	47%	78%	80%	85%	90%	95%	100%
Pillar 4 Scale up Prevention of Disease, Disabilities, Stigma, Discrimination and violation of human rights									
19	Proportion (in percentage) of new cases for which contact tracing and screening done					70	80	90	90
20	Proportion (in percentage) of screened contacts who received SDR/ newer PEP regimen against					80	90	90	90
21	Proportion (in percentage) of new cases of last 5 years for whom contact tracing for screening done					30	40	50	70
22	No. of new cases detected among contacts								
Pillar 5 Develop Digital Surveillance Systems for monitoring programme implementation and leprosy services									
23	No. of states and UTs generating monthly progress report through digital surveillance system	NA	NA	NA	Pilot testing Successfull	36	36	36	36
24	Proportion of newly detected cases entered on Nikusth 2.0	NA	NA	NA	Pilot testing Successfull	50%	75%	100%	100%
25	No. of Joint Monitoring Investigation and Advisory Group visits to states	5				12	15	15	15
26	Independent Evaluation					1			1
27	No. of states to be covered for validation of indicators					5	10	10	10

Impact Indicators

Projections of Overall Impact Indicators									
	Strategic Pillar	**Status**			**Projections**				
Pillar 1 Strengthen leadership, commitment and partnerships									
	Indicators	**2019-20**	**2020-21**	**2021-22**	**2022-23**	**2023-24**	**2024-25**	**2025-26**	**2026-27**
	Projected Population of Country	1,347,121,000	1,361,343,000	1,373,761,000	1,387,498,610	1,401,373,596	1,415,387,332	1,429,541,205	1,443,836,617
	Annual no. of new leprosy cases detected	114451	65147	75394	115000	110000	80000	65000	50000
	Proportion of annual new cases detected in the year against annual new cases of Year 2019-2020	100	57	66	100	96	69	56	43
1	**Drop in annual new cases against baseline of 2020**	**0**	**43**	**34**	**0**	**4**	**30**	**43**	**56**
	Child Population	343455000	347081000	350247000	353749470	357286965	360859834	364468433	368113117
	Child Cases (Annual new)	7859	3753	4107	6000	5000	4000	2000	1000
	Child Cases with G2D	63	35	41	55	45	35	25	15
2	Grade 2 Disability Rate in newly detected child cases with leprosy per million child population	0.18	0.10	0.12	0.16	0.13	0.10	0.07	0.04
3	Grade 2 Disability Rate in new cases of leprosy detected per million population	1.96	1.1	1.36	1.7	1.8	1.2	1	0.5
	Total no. of districts in the country	718	724	733	754	754	754	754	754
4	No. of districts with zero new indigenous child cases for last 5 consecutive years	135	142	158	190	220	250	300	350
5	No. of districts with zero new indigenous child cases for last 5 consecutive years followed by zero new indigenous cases for 3 years	35	40	40	40	50	60	80	120

Timeline 2023-2027



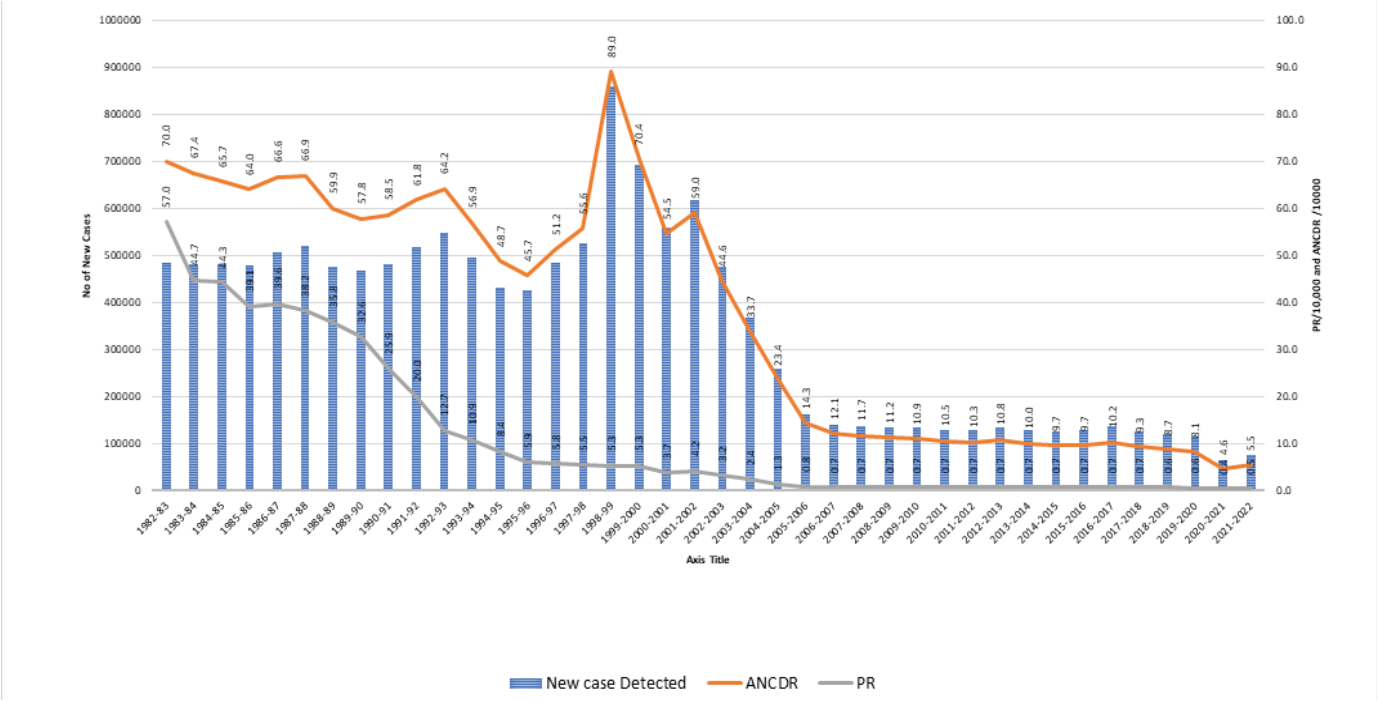
Current Epidemiological Scenario - India

Epidemiological Status of since 2005:

National Level:

- India has achieved the elimination of leprosy as a public health problem i.e., defined as less than 1 case per 10,000 population, at the National level in December 2005. Thereafter, the trend is gradually declining. Prevalence Rate (PR) at National level was 0.84 per 10,000 population in 2005-06 which has been reduced to 0.66 per 10,000 population in 2015-16 which further reduced to 0.57 per 10,000 population in 2019-20. Due to COVID-19 pandemic, case detection was compromised, which led to sudden downward trend of Prevalence Rate (PR) to 0.40 and 0.45 per 10,000 population in 2020-21 and 2021-22 respectively.
- In the year 2021-22 a total of 61,678, leprosy cases were under treatment. PR was 0.45/10,000 population as on 31st March 2021. 34 States/ UTs (out of 36 States/UTs) and 645 districts (88%) out of total 733 districts achieved elimination by March 2022.
- A total of 75,394 new cases were detected during the year 2021-22, which gives Annual New Case Detection Rate (ANCDR) of 5.09 per 100,000 population. ANCDR was 14.27 per lakh population in 2005-06 which has reduced to 10.93 per lakh population in 2009-10 followed by 9.71 in 2015-16 and 5.52 per lakh population in 2021-22. Due to COVID-19 pandemic sudden decline in case detection has been noted. ANCDR declined from 8.13 in 2019-20 to 4.56 per lakh in 2020-21. Thereafter an upward trend is noted with 5.52 per lakh population in 2021-22.

Trends of New cases detected, ANCDR and PR



- In 2009-10, Grade 2 Disability cases among new cases were 4,117 (3.08%) which increased to 5,794 (4.61%) in 2014-15. Subsequently with introduction of innovative activities in the programme, good results were observed in declining of the G2D cases and G2D% among new cases i.e., 5245 (3.87%), 4552 (3.61%) and 3666 (3.05%) in 2016-17, 2017-18 and 2018-19 respectively.
- A total of 1,863 Grade 2 Disabilities detected amongst the new Leprosy cases during 2021-22, indicating the G2D Rate of 1.36 / million population and 2.47% G2D among new cases.
- Trends of cases among children at national level shows a steady decline over the decade from 16112 (9.98%) in 2005-06 to 13,331,11389 (8.94%) in 2015-17 to 4107 (5.45%) in 2021-22.

Indicators	2005-06	2021-22
Proportion of Multibacillary cases	45%	61%
Female cases	33%	40%
Schedule Tribes (ST) population	11%	18%
Schedule Castes (SC) population	11%	17%

State level

- A total of 23 States/UTs have sustained the elimination status (PR <1 per 10,000 population) at state level since 2009-10 until 2021-22. These States are Andhra Pradesh, Arunachal Pradesh, Assam, Gujarat, Haryana, Himachal Pradesh, Jammu& Kashmir, Karnataka, Kerala, Madhya Pradesh, Manipur, Meghalaya, Mizoram, Nagaland, Punjab, Rajasthan, Sikkim, Tamil Nadu, Tripura, Uttar Pradesh, Uttarakhand, A&N Islands and Puducherry. In addition to above, Telangana and Ladakh (UT) are sustaining the status of leprosy elimination since 2014-15 and 2019-20 respectively.
- As on 2021-22, Chhattisgarh and Dadra & Nagar Haveli are yet to achieve leprosy elimination.
- 22 States/UTs have ANCDR less than 10 per lakh population since 2009-10 to 2021-22 and these are Andhra Pradesh, Assam, Goa, Haryana, Himachal Pradesh, Jammu & Kashmir, Karnataka, Kerala, Madhya Pradesh, Manipur, Meghalaya, Mizoram, Nagaland, Punjab, Rajasthan, Sikkim, Tamil Nadu, Tripura, Uttarakhand, A&N Islands, Daman &Diu and Puducherry. In addition to above, Ladakh (UT) has ANCDR less than 10 per lakh population since 2019-20 to 2021-22.
- Data from 2009-10 to 2021-22 indicates major contributing States for average new leprosy cases per year are Uttar Pradesh (20,492) followed by Bihar (17,471) and Maharashtra (15,812) whereas, lowest being Lakshadweep which reported an average of 6 new leprosy cases per year.
- Bihar has 2,383 number of average cases among children from 2009-10 to 2021-22, followed by Maharashtra (1,699) and Uttar Pradesh (1,106).
- Uttar Pradesh has highest average of 519 G2D cases per year from 2009-10 to 2021-22, followed by Bihar (475), Chhattisgarh (467).

a) **Districts:** There were 310 District with G2D% >=2 in 2018-19. There has been reduction to 221 Districts in 2020-21

Sl. No.	Year	No. of District	No. of Districts with G2D%>=2
1	2018-19	708	310
2	2019-20	717	263
3	2020-21	724	221

b) **Status of G2D% in Block:** There were 1458 blocks with G2D% >=2 in 2018-19. There has been reduction to 794 blocks in 2020-21.

Sl. No.	Year	No. of Blocks	No. of Blocks with G2D%>=2
1	2018-19	6922	1458
2	2019-20	7038	1088
3	2020-21	6984	794

SWOT Analysis of Leprosy Program in India

S	W	O	T
• Strong Politcal Commitment • Robust Policy & Planning • Adoption of Innovations • Committed staff • Support of Partners	• Leprosy is not notifiable disease • Regular Monitoring & Supervision • Continued Research and Development • Varied Standard protocols for case managment • Paper based reporting	• Existing Healthcare infrastructure • Integrated program activities • Research • Realtime/Web-based reporting & tracking system (MIS) • Introduction of e-health program • Disability care • Collaborations with National & International NGOs/ stakeholders • Capacity building of staff • Advocacy for rights & entitlements	• Dynamic program priorities (Emergency response) • Area specific strategies (Service delivery based on geographical situation) • Stigma & Discrimination

Source: Recommendations from NLEP independent evaluation 2014, 2019 & Common Review Mission (CRM) report 2019.

Strategic Pillars, key components and interventions

Strategic Pillar 1: Strengthen leadership, commitment, and partnership

A) Programme Leadership

Government of India is committed to achieve interruption of transmission of leprosy and elimination at subnational level. India has continued to adopt approaches and strategies to combat the challenges and making efforts to provide preventive, therapeutic and rehabilitative services.

Major interventions planned:

i. Sustained political commitment at national and state level.
ii. Preparation of States and UT specific Roadmaps.
iii. Dedicated State and District Leprosy Officers in high disease burden states and districts respectively.
iv. Greater accountability of programme implementation at State/ UT level.
v. Programme monitoring cell at national and state level to
   - monitor programme performance in terms of activities carried out against those scheduled
   - to ascertain the quality, extent and significance of the progress towards the goal
   - to generate best evidence and translate evidence into implementation improvements and redefining policy recommendations.
   - to ascertain effective utilization of resources
   - to carry out cost-benefit analysis
vi. Constitute a technical working group TRG at national level to provide technical guidance to the programme from time to time.
vii. Periodical Joint Monitoring Missions may be conducted. Independent evaluation may be conducted for mid-course corrections in the NSP in Year 2024-25.

B) Human Resources

The ambitious goals of interruption of leprosy transmission can only be achieved with a workforce in sufficient numbers with right knowledge, skills, and motivation. There is a need to ensure that competent and dedicated staff is available for providing care to leprosy patients particularly in high endemic blocks and districts. High endemic districts should maintain a complete programme management unit at the headquarter with full strength of staff for effective programme implementation, monitoring and supervision. There has been progressive improvement in the integration of NLEP with General Health Care and National Health Mission (NHM). The ASHAs in the villages identify leprosy suspects and refer them to the nearest health facility where the medical officer confirms the diagnosis. Under NHM, following categories of staff have been instituted at block level to strengthen programme management: Block Programme Manager, Block Accounts Manager, Data Manager, Block Community Process Manager and Data Entry Operator. The recently recruited Community Health Officers (CHOs) at Health and Wellness Centres under the Ayushman Bharat Scheme should be oriented on providing comprehensive preventive, promotive, therapeutic, and rehabilitative services.

Training status of all categories of staff should be maintained by the Programme units and ensure that newly recruited health staff receive guidance on their roles and responsibilities and training at the earliest. The remaining staff should receive refresher training at least once every three years. The trainings curriculum should be made uniform and consist of options for both virtual and physical trainings for speedy coverage of untrained staff. Blended training packages should be developed

using available video lessons and physical skill building and patient demonstration sessions as per requirement of trainees and availability of trainers. Audio visual aids should be used for holding refresher trainings at more frequent intervals. Trainings should be integrated with trainings of other health programmes. Districts should make continued assessment of human resource available, distribution and training needs

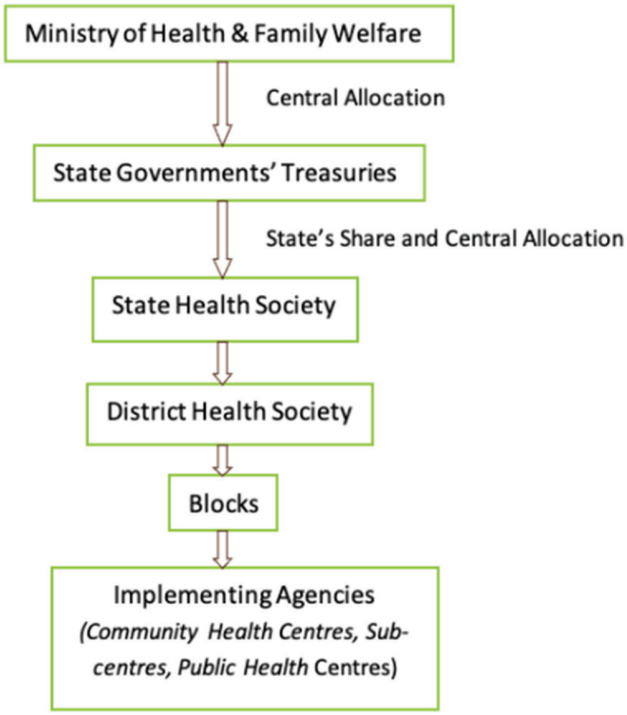
Major interventions planned:

- Filling of vacant positions under General Health Care system and contractual positions under leprosy programme.
- States should conduct human resource mapping, pooling and redistribution.
- Update the roles and responsibilities of newly recruited staff under different health programmes for providing services to persons affected by leprosy.
- Continued assessment of training requirement.
- Training all health staff at least once every three years and maintain records of persons trained.
- Impart training to programme managers and staff in programme planning, implementation, monitoring and supervision.
- Integrate NLEP training with trainings under other health programmes.
- Review and update training materials and ensure uniformity of curriculum.
- Promote blended (mix of virtual and physical) trainings. Rollout e-modules extensively with easy accessibility.
- Maintain a pool of trainers at national, state and district level.
- Integrate trainings on leprosy with trainings under other health programmes.

C) Programme Financing

Being a Centrally Sponsored Scheme (CSS), the funding for NLEP under NHM is split between the centre and states in the ratio of 60:40 (60% central funding, 40% state funding) for general states and 90:10 (90% central funding,140% state funding) for special category states eg. North-East states following the 14th Finance Commission. The funds are transferred to flexible funds (called flexi-pools) under each of the programmatic components to provide financial flexibility and promote efficient fund utilisation. The states are provided flexibility to allocate funds across programmes as per local needs and broad national priorities. The release of funds is conditional and is made on the basis of utilisation of funds in the previous year. The Ministry inspects the performance of states by reviewing the utilisation certificates and audits while deciding on sanctioning further grants.

Fund Devolution Pathways (Source: Operational Guidelines for NHM)



Increased investment is required by both Central and State Governments for implementing Programme as per interventions laid down in the Leprosy NSP and Roadmap 2023-27. States should conduct resource mapping, pooling and redistribution of funds.

Major interventions planned that would require additional funds:

- Introduction of data digitization systems
- Accelerated active case search activities
- Trainings of all staff every once every three years
- Improving coverage of post-exposure prophylaxis activities
- Research
- Introduction of newer diagnostic tools (when available and included in programme)
- Introduction of vaccine, newer treatment and post exposure prophylaxis regimens, etc. (when available and included in programme)

D) Disease Surveillance

Disease surveillance is an epidemiological practice by which the spread of disease is monitored. Sentinel surveillance sites, periodic or ongoing surveys, reporting by laboratories, recording and reporting, and secondary analysis of data sets are the mainstay of disease surveillance and should be ongoing for impactful disease surveillance outcomes.

A robust surveillance system is indispensable for prevention and interrupting transmission. It not only helps in obtaining the relevant information in a timely manner but also guides and indicates the suitable action required for the desired output.

Following activities are essential

- real time reporting & data analysis up to district/block level
- monitor programme indicators and give regular feedback
- measure progress towards interruption of transmission
- validation of data and indicators
- investigation of Child and G2D cases

Currently, the monthly reporting system covers almost all of the public health institutions. But still the reporting from Tertiary hospitals, Medical College hospitals, Defence and other public sector undertaking (PSU) hospitals are not streamlined. Development of digital data recording and reporting / surveillance systems for NLEP is need of the hour.

Establishment of a strong surveillance system with linkage of Integrated Disease Surveillance Programme (IDSP) department for effective reporting and identification of suspects may be taken up.

Laboratory diagnosis and application of molecular tools for early diagnosis

Leprosy guidelines in India emphasize diagnosis based on the skin patches with sensory loss. Slit-skin smear facility is available only in a few secondary-level and most tertiary-level health facilities of government and several hospitals of NGOs.

As country has the goal of moving towards interruption of transmission of leprosy, new diagnostic tools and tests for early laboratory diagnosis need to be introduced. Molecular tests (RLEP PCR) may be considered for differentiation of indigenous and non-indigenous strains of M. leprae.

Strengthening Surveillance in Hard-to-Reach Areas

In hard to reach areas, such as tea gardens of Assam, international borders with immigration and areas which have poor coverage of health services, surveillance could be strengthened with the help of different local personnel such as forest personnel, border security force, police, district administration, local administration, representatives of the unorganized settlements and students' organizations etc. They should be sensitized and engaged in screening. Flash cards and mobile phone-based communication methods may be adopted. Screening of in-migrants and returning migrants may be considered and provision of incentives may be planned. Mobilse Leprosy suspects to a nearby health facility or a designated spot where health staff may come over for diagnosis and providing treatment. First dose may be given here and remaining doses to be given to volunteers of

search/support teams for giving further doses and ensuring completion of treatment. Leprosy task force units may be constituted in each locality with local Block Circle Officer, local police and medical officer in-charge, Gram Chairperson, Self Help Groups, ASHA Supervisors, ASHAs. Volunteers should be given necessary orientation on the standard operating procedures for the activities. Random household sample screening may be undertaken in "zero case areas".

Special Focus on Migrant Populations

In India, the key source states of migration are Uttar Pradesh, Bihar, Rajasthan, Madhya Pradesh, Andhra Pradesh, Chhattisgarh, Jharkhand and Odisha. The key destination states are Delhi, Maharashtra, Gujarat, Haryana, Punjab and Karnataka. As per census 2011, almost 88% of all internal migration was intra-state migration. It numbered up to 39.6 crore persons. The migrant populations in their new residences are subjected to different conditions that effect their health situation including poor levels of hygiene, unsanitary working and living conditions, nutritional and structural barriers to health services. Besides these problems; migrants suffer from psychological problems. In addition to the loneliness, homesickness and low social integration, the migrants suffer in their new communities. Migrant populations may bring with them diseases from their places of origin into the places where they work. A defaulter from treatment due to migration should be identified and provided treatment as usual, according to the calculation of time when the treatment were stopped.

Surveillance for Anti-microbial Resistance

A nationwide robust surveillance system for AMR in leprosy should be set up through laboratories in both government and NGO sector. A database should be developed to capture essential information on every relapse case, including treatment details and the criteria used to diagnose relapse. All relapse cases should be adequately treated. Capacity of district hospitals (including public, private, medical college) should be built to function as secondary-level referral hospitals for leprosy-related services.Laboratories in medical colleges and NGO hospitals should be identified for histopathological and molecular diagnosis of leprosy.Regular meetings should be held with ICMR, NLEP, ILEP and WHO to develop AMR surveillance for leprosy.The laboratory strengthening shall happen through creation and maintenance of diagnostic laboratory network for AMR, molecular epidemiology and other laboratory needs of leprosy. The laboratories will be strengthened in terms of the infrastructure of the labs and technical capacity in specimen collection, processing and reporting of the laboratory tests. Though the main focus of the laboratory strengthening will be to improve the laboratory capacity for conducting molecular AMR testing, attempts shall also be made to create and sustain laboratory capacity for innovative rapid diagnostics to make the leprosy laboratory testing as part of the standard leprosy care.

The laboratories shall be shaped into a network of primary, secondary and tertiary levels coordinated by the district, state and national level programmes respectively. The laboratory network operates with uniform standard of procedures with inbuilt internal and external quality assurance mechanisms. Collection and transportation of slit skin smear (SSS) will also be a part of AMR activities. These trainings and re-orientation can be done partially online as well as with hands on.Synergies with the National TB Elimination Programme shall be explored for laboratory testing and networking. Offices of the Regional Directors shall be engaged for training of health workers and laboratory personnel for diagnosis of leprosy.

The following apex laboratories (from government and NGOs) are functional:

- Government labs
  - National JALMA Institute for Leprosy and Other Mycobacterial Diseases, Agra, Uttar Pradesh;
  - Central Leprosy Teaching and Research Institute, Chengalpattu, Tamil Nadu;
  - Regional Leprosy Training and Research Institute (RLTRI), Raipur, Chhattisgarh.
- Private/CSO labs
  - Schieffelin Institute of Health – Research and Leprosy Centre, Karigiri, Tamil Nadu.
  - Blue Peter Public Health and Research Centre, Hyderabad, Telangana; and
  - Stanley Browne Research Laboratory, New Delhi

Major interventions planned

1. **Strengthen laboratory capacity for detection of cases and drug resistance**
    a. Laboratory needs assessments to develop infrastructure strengthening plan
    b. Review and finalize SOP for leprosy diagnosis, including quality systems
    c. Diagnostic protocol for case detection (linked with case management)
    d. Innovative/molecular/PoC diagnostics (linked with research)
2. **Networking of leprosy laboratories**
    a. Review of reference/referral laboratories network
    b. Develop network strengthening plan
    c. Leprosy laboratory network annual meeting/consultation
    3. Strengthen surveillance of AMR in leprosy
    a. Leprosy AMR surveillance tool for data/ information management
    b. NLEP standards for surveillance of AMR
4. **Training/capacity development (Labs/AMR) – linked with training**
    a. Training needs assessment at all levels
    b. Develop training/capacity development plan

Indicators to be monitored for disease surveillance and programme performance

The list of indicators to be monitored for disease surveillance and programme performance including routine as well as new indicators for new interventions are enumerated below. Essential and Additional Epidemiological indicators include epidemiological indicators monitored over many years and express the results obtained due to activities. Performance indicators express how well the activities that are planned are implemented. Impact indicators express the extent of realization of goals under Roadmap 2023-27.

I. Essential Indicators (with Routine Programme Targets):

1. Annual New Case Detection Rate (ANCDR) per 1,00,000 population (<10)
2. Rate of new cases with Grade II disabilities per million population per year (<1)
3. Treatment Completion Rate (TCR) as a proxy to cure rate (>90%)
4. Prevalence Rate (PR) per 10,000 population (<1)

II. Additional Epidemiological Indicators (with Routine Programme Targets):

5. Proportion of Grade II disabilities among new cases (%) (<2)
6. Proportion of females among new cases
7. Proportion of MB among new cases
8. Proportion of PB among new cases
9. Proportion of Children (0- 14 years) among new cases
10. Child rate per million child population
11. Scheduled Caste New Case Detection Rate
12. Scheduled Tribe New Case Detection Rate.

III. Quality of Service Indicators:

13. Patient Month Blister Calendar Pack Stock
14. Absolute number of patients made RFT (Released from Treatment)
15. Number of Relapses reported.
16. Proportion of cases who developed new or additional disability after starting MDT
17. Proportion of treatment defaulters
18. Proportion of new cases correctly diagnosed

IV. New performance indicators for implementation of Roadmap 2023-27

19. No. of States/UTs Specific Roadmap developed
20. Percent increase in annual budget for leprosy at National level against baseline budget of 2021-22
21. Percent increase in annual budget for leprosy at State level against baseline budget of 2021-22
22. Proportion of population covered under

active case detection under LCDC in leprosy prevalent States/UTs

23. Number (percentage) of new cases detected by active case detection
24. Proportion of annual new cases reported voluntarily
25. Proportion of annual new cases detected through ASHA
26. Proportion of new cases detected through other health programmes and community
27. Proportion of new cases with Grade 2 Disabilities among child cases
28. Proportion of medical officers trained in the year against total number of medical officers in Govt. health facilities and institutions
29. Proportion of paramedical staff trained in the year against total number of paramedical staff in Govt. health facilities and institutions
30. Proportion of ASHAs trained in the year against total number of ASHAs
31. Proportion of new cases treated for lepra reactions against total number of new cases detected in the year
32. Proportion of new cases treated for adverse reactions against total number of new cases detected in the year
33. No. of patient samples sent for AMR testing
34. Proportion of persons affected by leprosy eligible for RCS undergone reconstructive surgery in the year
35. Proportion of new cases (in percentage) for whom contact tracing and screening done
36. Proportion of screened contacts (in percentage) who received SDR/ newer PEP regimen
37. Proportion of new cases of last 5 years (in percentage) for whom contact tracing for screening done
38. No. of new cases detected among contacts in the year
39. No. of states and UTs generating monthly progress report through digital surveillance system
40. Proportion of newly detected cases entered on Nikusth 2.0 in the year
41. No. of Joint Monitoring Investigation and Advisory Group visits to states in the year
42. Independent Evaluation conducted in the year
43. No. of states to be covered for validation of indicators in the year

V. Impact indicators:

44. Drop in percentage of annual new cases detected against baseline of 2019-20
45. Grade 2 Disability Rate in newly detected child cases with leprosy per million child population
46. Grade 2 Disability Rate in new cases of leprosy detected per million population
47. No. of districts with zero new indigenous child cases for last 5 consecutive years
48. No. of districts with zero new indigenous child cases for last 5 consecutive years followed by zero new indigenous cases for 3 years

Major interventions planned:

- Digitalization of reporting and recording systems of Programme and integrate with Integrated Health Information Platform (IHIP).
- Digitalize anti-leprosy drug management on IHIP platform.
- Launch and Rollout new version of Nikusht 2.0 for digitalization of individual patient records.
- Programme monitoring cell to be established at National and State level.
- Introduction of new indicators for new components.
- Validation of indicators.
- Periodical Joint Monitoring Mission and Independent evaluation may be conducted for mid-course corrections in the NSP.

E) Adoption of Global and National new evidence and research

In addition to sustained research funding by ICMR for leprosy research, other national / international agencies may be tapped for strengthening of research. There is a need to encourage central/ state/ non-government institutions to establish molecular diagnostic & research facilities for leprosy. In partnership with laboratory networks for tuberculosis, by providing reagents and additional human resources, leprosy research and diagnostic work may be taken up. Establishing/ strengthening well defined referral networks for diagnostic and management work with focus on local networks of medical colleges, NGOs, state health systems, other locally relevant stakeholders with priority for endemic districts should be undertaken. Research Advisory Committee may be constituted to play a larger role by stronger partnerships with research agencies to develop common/template protocols for different research questions and find funding for research projects aimed at providing solutions in strategic areas identified in this report. Operational Research and Observational Research have critical role to play, these need to be strengthened. Research Advisory Committee may be constituted to play larger role by stronger partnerships with research agencies to develop common/template protocols for different research questions and find funds for research projects aimed at providing solutions in strategic areas identified in this report.

To arrest the disease transmission, it is important to understand the disease dynamics, strengthen the host immune response of those who are proven to be more prone in contacting the disease. Both chemoprophylaxis and immuno-prophylaxis have a different mechanism of action, these could be complementary to each other and shouldn't always be considered in isolation. This is more so as SDR-LPEP is already being implemented in several endemic districts. Since effectiveness of SDR in reducing risk of transmission is less than 25% among the blood relatives/close contact (family members) of index cases, hence improved PEP regimes may be adopted in the future. Similarly, MIP which is used as an immunoprophylactic agent in leprosy, is proven to be effective and safe, used in field studies with 9-10 years of follow-up needs to be administered to contacts of index leprosy cases and followed up. MIP is FDA and DGCI approved vaccine for immunomodulation and is freely available in India. Addition of Clofazimine in PB regimen has been shown to improve therapy, decrease the incidence as well as severity of reactions, well accepted by the patients and should be implemented across the country.

Besides, there are other agents like MIP which when combined with MDT helps in faster bacterial clearance, granuloma clearance, decreases the incidence and severity of reactions, is well studied across several tertiary care centres as well as in the field and well accepted by the patients. It has also been shown to reduce the persisting activity and loss of sensation after stoppage of therapy. This should also be tried in Medical College settings for better patient outcomes. By better clinical outcomes, reducing reactions and their severity, disabilities can be prevented and treated which will further reduce the burden of leprosy and stigma associated with leprosy. Combining MIP vaccination in newly detected cases as well as providing immune-prophylaxis to their contacts has been studied and observed to be a very cost-effective strategy in India. Other alternate drugs for treatment and vaccines are still under investigation and the search should continue.

F) Partnership

Partnership is a key criterion for achieving public health goals. The focus is on more formal collaborative ventures and not exclusively on public-private partnerships, although these constitute the majority. Establishment of public–private partnerships has vastly facilitated progress towards the elimination and control of various diseases of public health importance.

It is essential to work with the private healthcare providers as they form the largest pool of trained medical practitioners. Thus, feedback from them regarding leprosy patients needs to improve. It is important to understand patients preferences for approaching different private healthcare practitioners. This will enable the CLD to devise and obtain a better feedback mechanism.

It will be necessary to get into a partnership with the Indian Association of Dermatologists,

Venereologists and Leprologists (IADVL), Indian Medical Association (IMA), AYUSH etc. The IADVL is the National association of Indian Medical Specialists who manage patients with skin disorders, sexually transmitted infections (STIs) or leprosy. The IADVL at present has 10766 members spread all over the country. Partnership with the Indian Medical Association will be helpful as many patients are receiving treatment from doctors at tertiary care hospitals and dispensaries. Collaboration is required with empanelled Private Sector Hospitals, CGHS and diagnostic centres: A number of private hospitals are already in collaboration with the government for providing medical support to poor patients through the AB-PMJAY scheme which provides health cover up to Rs. 5 lakh per family per annum for secondary and tertiary hospitalization care. Steps will be taken to include diagnosis, treatment of leprosy patients and to provide specialist consultations and for the management of reactions. In addition, the collaboration with the empanelled hospitals will include persons affected by leprosy with grade 1 and grade 2 disabilities who often require lifelong protective support and tools to prevent further disability and for reconstructive surgery.

Over the last 15-20 years, there has been an acceleration in the setup of corporate hospitals especially in the metropolitan cities and the other fast-growing cities. In fact, a large number of private patients also utilise their services. In fact, some of them would already be included in the list of empanelled hospitals. They may also be willing to collaborate with the government in the areas of diagnostics, diagnosing referrals patients, and disability care and management. This would include support for ulcer treatment, reconstructive surgery, self-help kits etc.

Persons affected by leprosy and their organizations and associations are a resource whenever the Government is formulating policies for the programme as they have vast experience of the challenges faced by them and can give suggestion for providing services and care.

Major interventions planned:

- Strengthen existing partnerships and add new partners and donors.
- Involve private practitioners and AYUSH practitioners.
- Explore new partners for improved coverage and services for community awareness, early case detection, socio-economic and medical rehabilitation services.
- Leverage Corporate Social Responsibility (CSR) activities for leprosy affected persons and their families for support in education, socio-economic rehabilitation etc.

Strategic Pillar 2: Accelerate Case Detection

Passive case detection and treatment with MDT alone is not sufficient to bring about interruption of transmission. Active case detection needs to be accelerated, self-examination to be promoted, chemoprophylaxis scaled up with more rigorous contact tracing, screening of contacts repeatedly and improved coverage with single dose rifampicin (SDR) is the strategy at hand for achieving interruption of transmission. In addition, active case-finding campaigns should be implemented in targeted populations such as areas of higher endemicity, 'silent' areas that are difficult to reach, or among high-risk groups. Where possible, contact tracing and case-finding should be undertaken in combination with other skin NTDs such as lymphatic filariasis and kala-azar or other relevant diseases and accompanied by training for peripheral health workers. Effective case-finding may result in an initial rise in new case numbers.

Case-finding campaigns should be accompanied by innovative and well-targeted community information and awareness activities that combat myths and encourage early self-referral and positive attitudes towards persons affected by leprosy. Ideally, opinion leaders and persons affected by leprosy should be involved in these activities. Special attention should be given to ensuring that information and programmes are reaching women and girls, who may have less access to diagnosis and treatment due to cultural and other barriers. Data should be desegregated by gender to verify this. States reporting fewer than 100 new cases per year, and states/districts with low-incidence areas, need effective surveillance systems to respond to and investigate every new case. Contact screening, with the administration of preventive chemotherapy, should be routinely undertaken in these settings, and active case-finding may be considered in any clusters. These measures will enable low-incidence states/districts/areas to achieve and sustain the goal of interruption transmission.

Majority of these new cases currently are diagnosed passively. Self-reporting in leprosy, especially in initial stages of the disease is still very low. The modalities for case detection for leprosy in the country are Passive Case Detection – At Government health facilities and medical colleges patients report voluntarily. A small fraction of annual new cases of leprosy report at private health institutions and practitioners including dermatologists. An even smaller fraction reaches out to traditional healers and faith healers.

Active Case Detection – This is done through house-to-house visit by ASHA/Volunteers/MPWs. The active case detection activities ongoing in NLEP are under following names LCDC (Leprosy Case Detection Campaign), ACDRS (Active Case Detection Campaign), ABSULS (Asha Based Surveillance for Leprosy Suspects), FLC (Focussed Leprosy Campaign), SAP (Special Action Plan) etc.

Integrated Case Detection for leprosy cases is also conducted in partnership with other active case finding campaigns under programmes for TB-Tuberculosis / NCD-Non-communicable Diseases / LF lymphatic filariasis / Kala-azar/ COVID-19 etc.

An appropriate and feasible mix of different modalities for case detection should be used based on local situations. Vulnerability mapping should be used to guide what and when an activity is to be planned.

A) Community Awareness

Information Education Communication (IEC) is the cornerstone for detection of leprosy cases in the community as the disease does not cause symptoms that requires immediate attention to begin with. Leprosy usually starts as a patch with loss of sensation or as numbness and tingling in hands or feet. Deformities and disabilities are remnant conditions of leprosy which can be avoided if reported early. Hence, early detection is essential. To create awareness of early signs and symptoms of disease, there is a need to work with individuals, communities and societies to develop communication strategies to promote positive health seeking behaviour. Social Behaviour Change Communication and Advocacy (SBCC) hence is one of the most important components of NLEP. It encourages early case detection and treatment completion, reduces stigma and discrimination, reduces disability, builds capacity of people affected by leprosy and mobilizes political commitment and resources for achieving NLEP goals.

Major interventions planned

- Develop Behavioural Change Communication plan.
- Develop and Rollout mobile App for self-examination and voluntary reporting.
- High Intensity Awareness Campaigns for self-examination and voluntary reporting in high endemic settings.
- Focused High Intensity Awareness Campaigns for self-examination and voluntary reporting in low endemic settings.
- Give incentive to any person reporting a confirmed case of leprosy.
- Facility of helpline numbers to support self-reporting.

B) New case detection under NLEP Programme

Major interventions planned:

1) Passive Case Detection:
   a. Public Health Facilities: All the public health facilities starting from PHCs and above should be capable to diagnose and treat a case of Leprosy.
   b. Private Sector Hospitals: Although cases are being diagnosed in some of the private hospitals/clinics, their reporting needs to be strengthened. The facilities unable to deal with presumptive Leprosy cases should have a mechanism in coordination with the local Government Health authorities to refer such cases for quality diagnostic services.
2) Intensified Case Detection: The health facilities provide an opportunity not only to address the presenting symptoms/complain but also to screen a population for priority health issues. Every patient seeking health services, especially in the high endemic areas should be screened for sign & symptoms of leprosy. To start with, general OPD and Dermatology OPD may initiate this approach.
3) Active Case Detection: The absence of symptoms and its severity in the initial stages of disease warrants active search. Early detection and treatment are proven effective tools to reduce the source of infection in the community and interrupt the transmission of the disease agent to achieve zero transmission of Leprosy.

Active case detection may be conducted in different modes such as in campaign mode or a prolonged routine mode. The target should be to thoroughly screen the entire population. The three-pronged strategy for moving forward towards zero leprosy area:

i. **Leprosy Case Detection Campaign (LCDC):** House-to-House surveys in villages and urban areas in identified high burden districts
ii. **Focused Leprosy Campaign (FLC):** Active case search where a new case with G2D is detected, this search targets 300 surrounding households in urban areas or the entire village in rural areas and
iii. **Special plan for active case search in hard-to-reach areas:** Provision of leprosy services through community participation.

Other initiatives introduced in the programme which needs to be continued are:

i. **ASHA-based surveillance for leprosy suspects (ABSULS)** in districts not covered under LCDC to be integrated in the routine activities and continued.

ii. **Epidemiological investigation of occurrence of G2D** in patients detected with visible deformities investigation

iii. **Sparsh Leprosy Awareness Campaign (SLAC)** is an activity under NLEP organized across the country for general awareness upto village level and reducing stigma and discrimination.

New activities to be included are

i. Follow-up visits to contacts for five years

All cases during treatment, PB or MB, should be followed up at least once in a month by a health staff through home visit. This home visit should not only ensure the complains to treatment but also screen the case for side effects and incidence of lepra reaction. This home visit will also provide an opportunity for the health provider to screen the household contacts of the leprosy case repeatedly every month. The follow up visits need to be recorded and reviewed periodically. Patients should be followed up for at least five years from the time of release from treatment. This activity should also be utilized for screening of contacts as leprosy has a long incubation period.

Major interventions planned:

- Active case detection through Leprosy Case Detection Campaigns (LCDC), Focused Leprosy Campaigns (FLC), Special plans for hard-to-reach areas and Asha Based Surveillance for Leprosy Suspects (ABSULS).
- Continue giving incentives to health staff for case detection to health staff and any other person reporting a case.

- Repeated screening of contacts
- Respond to and investigate every new case

Criteria of Focussed Active Case Detection activities

- Active Case Detection activities shall be carried out based on following prioritization criteria.

Prioritization of Districts:

Districts are classified into 4 prioritization categories on the basis of annual case detection rate per 100000 population (ANCDR) and percentage of Grade-II Disability cases among new cases (G2D%) during the F.Y - 2019-20. The 4 categories are, Highest Priority Districts, High Priority Districts, Moderate Priority Districts and Low Priority districts. The prioritization has been done for deciding in which districts which set of activities are required, at what frequency.

Steps followed in district segregation are as follows.

- **Step-1:** Index value of ANCDR for each district has been calculated by subtracting the ANCDR of that district from average ANCDR of all 717 districts. Similarly, Index value of G2D% for each district has been calculated.
- **Step-2:** Each district has been given a score ranging between 0 to 2. If index value of ANCDR is less than zero, then score assigned to it is zero and if index ANCDR is more than zero then score assigned to it is 2. Similarly, if index value of G2D% is less than zero then score assigned to it is 1 and if index G2D% is more than zero then score assigned to it is 2.
- **Step-3:** Scores calculated in Step-2 are added to get a composite score for each district. These scores are ranging from 1 to 4.
- **Step-4:** Districts with composite Score=1 are highest priority districts. Districts with composite score=2, 3 & 4 are high, moderate and low priority districts.
- No. of districts in each category is given in the cross-table below.

Districts with		High	Low
		ANCDR	ANCDR
High	G2D%	45	196
Low	G2D%	112	364

Method of Block Classification

Blocks are also classified into four categories by following the similar methodology as districts. No. of blocks in each category is given in the cross-table below

Highest Priority High Priority Moderate Priority Low Priority

Block with		High	Low
		ANCDR	ANCDR
High	G2D%	488	1833
Low	G2D%	531	4186

State/UT wise distribution of blocks as per prioritization categories (2019-20):

S. No.	State/UT	No. of highest priority blocks	No. of higher priority blocks	No. of moderate priority blocks	No. of low priority blocks
1	Andhra Pradesh	62	326	36	550
2	Arunachal Pradesh	0	3	3	178
3	Assam	3	4	40	103
4	Bihar	68	140	21	72
5	Chhattisgarh	55	64	13	24
6	Goa	0	2	1	26
7	Gujarat	4	61	21	172
8	Haryana	0	1	3	108
9	Himachal Pradesh	0	3	11	58
10	Jharkhand	39	106	12	53
11	Jammu & Kashmir	0	0	1	115
12	Karnataka	7	7	28	138
13	Kerala	2	0	27	147
14	Madhya Pradesh	59	89	45	134
15	Maharashtra	43	243	43	155
16	Manipur	0	2	2	94
17	Meghalaya	5	2	3	3
18	Mizoram	0	0	0	9
19	Nagaland	0	0	1	10
20	Odisha	54	157	27	76
21	Punjab	0	5	2	151
22	Rajasthan	0	0	8	238
23	Sikkim	0	0	0	26
24	Tamil Nadu	20	47	48	270
25	Telangana	19	307	8	361
26	Tripura	5	0	17	36
27	Uttar Pradesh	29	189	70	526
28	Uttarakhand	0	1	0	88
29	West Bengal	5	71	25	240
30	A & N Islands	0	0	0	0
31	Chandigarh	0	0	0	0
32	D & N Haveli	0	2	0	0
33	Daman & Diu	0	0	1	1
34	Delhi	8	1	10	14
35	Lakshadweep	0	0	0	0
36	Ladakh	0	0	0	0
37	Puducherry	1	0	4	10
India		**488**	**1833**	**531**	**4186**

Aspirational Districts

There are 112 aspirational districts in the country. Among these 112 districts, 25 districts are having PR/10000 population more than 1.

51 districts have grade II disability rate per one million population more than 1 and 47 districts have grade II disability rate among new cases more than 2%.

Prioritization of the districts is as follows in the table given below.

Highest Priority High Priority Moderate Priority Low Priority

Aspirational Districts			
Districts with		High	Low
		ANCDR	ANCDR
High	G2D%	11	52
Low	G2D%	12	37

Tribal Districts

Among the 182 tribal districts in country 43 districts are having PR/10000 population more than 1.

73 Districts have grade II disability rate per one million population more than 1 and 63 districts have grade II disability rate among new cases more than 2%. Prioritization of the districts is as follows in the table given below.

State wise distribution of Aspirational and Tribal Districts 2019-20

S. No.	State/UT	Tribal Districts				Aspirational Districts			
		Total No. of Districts	Districts with PR>1	Districts with G2D%>2	Districts with G2D/ million>1	Total No. of Districts	Districts with PR>1	Districts with G2D%>2	Districts with G2D/ million>1
1	Andhra Pradesh	1	0	0	0	3	0	0	0
2	Arunachal Pradesh	16	1	0	0	1	0	0	0
3	Assam	8	0	5	4	7	0	4	3
4	Bihar	6	0	1	1	13	1	5	5
5	Chhattisgarh	19	11	13	15	10	6	7	8
6	Goa	0	0	0	0	0	0	0	0
7	Gujarat	10	6	2	3	2	1	0	0
8	Haryana	0	0	0	0	1	0	0	0
9	Himachal Pradesh	3	0	1	1	1	0	1	1
10	Jharkhand	20	8	16	16	19	6	14	14

S. No.	State/UT	Tribal Districts				Aspirational Districts			
		Total No. of Districts	Districts with PR>1	Districts with G2D%>2	Districts with G2D/ million>1	Total No. of Districts	Districts with PR>1	Districts with G2D%>2	Districts with G2D/ million>1
11	Jammu & Kashmir	3	0	0	0	2	0	0	0
12	Karnataka	0	0	0	0	2	0	1	1
13	Kerala	0	0	0	0	1	0	0	0
14	Madhya Pradesh	19	3	10	11	8	1	3	4
15	Maharashtra	5	5	1	4	4	4	1	2
16	Manipur	5	0	1	1	1	0	0	0
17	Meghalaya	8	0	0	0	1	0	0	0
18	Mizoram	9	0	0	0	1	0	0	0
19	Nagaland	11	0	2	2	1	0	0	0
20	Odisha	14	8	7	11	10	6	6	8
21	Punjab	0	0	0	0	2	0	0	0
22	Rajasthan	7	0	1	0	5	0	0	0
23	Sikkim	4	0	0	0	1	0	0	0
24	Tamil Nadu	0	0	0	0	2	0	2	2
25	Telangana	1	0	0	0	3	0	0	0
26	Tripura	5	0	1	1	1	0	1	1
27	Uttar Pradesh	1	0	1	1	8	0	2	2
28	Uttarakhand	0	0	0	0	2	0	0	0
29	West Bengal	2	0	1	1	0	0	0	0
30	A & N Islands	1	0	0	0	0	0	0	0
31	Chandigarh	0	0	0	0	0	0	0	0
32	D & N Haveli	1	1	0	1	0	0	0	0
33	Daman & Diu	0	0	0	0	0	0	0	0
34	Delhi	0	0	0	0	0	0	0	0
35	Lakshadweep	1	0	0	0	0	0	0	0
36	Ladakh	2	0	0	0	0	0	0	0
37	Puducherry	0	0	0	0	0	0	0	0
India		**182**	**43**	**63**	**73**	**112**	**25**	**47**	**51**

Highest Priority | High Priority | Moderate Priority | Low Priority

Activities to be conducted as per the prioritization criteria			
Activities		**High** ↑	**Low** ↓
		ANCDR	**ANCDR**
High ↑	**G2D%**	• LCDC (Twice a year) • PEP • ABSULS • SLAC • G2D Investigation • High intensity IEC • Intensified Surveillance for hidden cases • DPMR	• LCDC (Twice a year) • PEP • ABSULS • SLAC • G2D Investigation • High intensity IEC • Intensified Surveillance for hidden cases and backlog cases • Collaboration for case detection under other programmes • DPMR
Low ↓	**G2D%**	• Targeted Active Case Detection • FLC • ABSULS • PEP • Focused IEC • Sustained Surveillance • DPMR • Validate G2D status	• Targeted Active Case Detection • FLC • ABSULS • PEP • Focused IEC • Sustained Surveillance • Sustained DPMR • Collaboration for case detection under other programmes • Validate G2D and ANCDR Status

Urban Areas- Coverage for community awareness and case finding in urban settings:

Districts reporting leprosy cases from urban areas need to focus on the screening of population living in the endemic pockets of given Urban areas. These pockets include urban slums and other key focus areas such as construction sites, colonies inhabited by migrants, mining areas, brick kilns etc. All districts must map such locations for the purpose of active case detection and surveillance.

Minimum one round of screening must be conducted in such areas even if no case of leprosy or G2D is reported. Second round of screening would be conducted if the criteria for two rounds of screening given above for high endemic blocks are fulfilled.

Mapping of areas covered and not covered by staff and location of vulnerable population (migrants, slum, etc), inaccessible apartment complexes.

- More IEC activities like print media, social media and mobile based methods.

- Active Case Detection to be to be done with other health programmes operational in urban areas like NVBDCP, NTEP, RBSK, RKSK, NPCDCS, IDSP etc.
- Surveillance and screening through Mahila Arogya Samiti (MAS) and ASHA.
- Involve Residential Welfare Associations (RWAs) /co-operative societies for case detection.
- Awareness through school health programmes in a way that teachers act as nodal officer for leprosy, students are screened by visiting MOs on a regular basis and thereby referred to the nearest health facility. Anganwadi workers to be involved in case detection among children in urban areas.
- Active community screening and case finding in urban areas by ANMs/ASHA/MAS.
- Empower local communities by strengthening their participation in identifying the suspects of leprosy in their own family and local community.
- This can be achieved by training and engaging women (self-help) groups members of Community Based Organizations, youth clubs and mandals, which could serve as a platform for creating public awareness and behaviour change promotion about leprosy and related issues.
- These trained community groups could also strengthen linkage with service providers, thereby increasing utilization of services, coverage of dropouts and improved referrals
- Involvement of private medical practitioners for special drives and campaigns.
- Conduct institutional awareness and screening at healthcare facilities where all individuals attend OPDs like the U-PHCs/U-CHCs, municipal dispensaries / UHCs / FRUs / general hospitals and multi-speciality hospitals. This should also be done in congregate settings where active screening of population groups can take place such as shelters / old age or orphanage homes / labour camps / construction sites / LIG & MIG colonies / housing societies / industries / prison inmates / metro workers / labour groups and mass transit system.
- Identify and designate at least one health centre in each urban location as referral centre for confirmation of diagnosis and treatment.

New Case Detection in Areas with Special Needs:

Special strategies may be planned by the states/ UTs at their own level for ensuring the screening of total population in areas with special needs, e.g., Hard to Reach areas (H T R A) / geographically far-flung areas where the frontline workers do not reside on a permanent basis. The States/UTs may consider training some local female and male community volunteers including persons affected by leprosy residing in such areas for active Leprosy case detection on regular basis. Capacity building of volunteers has to be conducted and education material may be provided for future reference. Incentive should be paid to volunteers for the search activity. Local leaders should also be involved to provide support to volunteers during their work and to ensure full co-operation of the community.

C) Other Health Programmes and Non-health programmes and individuals

Active case detection needs to be integrated with case detection activities such as house-to-house case detection of other health programmes. Integration and coordination with other national health programmes, various govt. departments and private sector shall be useful. Staff of other health programmes and organizations and policy makers/influencers have to be provided orientation on common signs and symptoms of leprosy and encourage them to refer any suspects identified by them.

D) Case Detection through contact tracing

Passive case detection and treatment with MDT alone have proven insufficient to interrupt transmission. To boost the prevention of leprosy, with the consent of the index case, NLEP undertaken tracing of household contacts along with 25-50 neighbours and social contacts of each patient, accompanied by the administration of a single dose of rifampicin as preventive chemotherapy. Ongoing research may produce a more effective regimen during the period of the strategy. Up to five years' retrospective contact tracing will boost opportunities for case finding and prevention. Defined populations (such as islands, institutions, urban slums, villages or even districts) with known high transmission may benefit from 'blanket' preventive chemotherapy. Introduction of SDR chemoprophylaxis has proven to strengthen several routine programme components such as counselling, training, supervision, contact tracing etc.

Alongside its role in the prevention of leprosy, contact tracing is the most productive tool for finding new cases, and may be the key to leprosy control in the next ten years. In addition, active case-finding campaigns should be implemented in targeted populations such as areas of higher endemicity, 'silent' areas that are difficult to reach, or among at-risk groups. Where possible, contact tracing and case-finding should be undertaken in combination with other skin NTDs or other relevant diseases and accompanied by training for peripheral health workers. Effective case-finding may result in an initial rise in new case numbers.

Case-finding campaigns should be accompanied by innovative and well-targeted community information and awareness activities that combat myths and encourage early self-referral and positive attitudes towards persons affected by leprosy. Ideally, opinion leaders and persons affected by leprosy should be involved in these activities. Special attention should be given to ensuring that information and programmes are reaching women and girls, who may have reduced access to diagnosis and treatment due to cultural and other barriers. Data should be disaggregated by gender to verify this. Countries reporting fewer than 100 new cases per year, and countries with low-incidence areas, need effective surveillance systems to respond to and investigate every new case. Contact screening, with the offer of preventive chemotherapy, should be routinely undertaken in these settings, and active case-finding may be considered in any clusters. These measures will enable low-incidence countries and areas to achieve and sustain the goal of zero transmission.

Contact Tracing: Screening of contacts of a known case of Leprosy is an important tool to enhance case detection. Ideally, the contact tracing activity should cover –

i. Household Contacts

ii. Neighbourhood Contacts

iii. Social/Workplace Contacts

The contact tracing for Leprosy can be classified in different types on the basis of when it is to be executed. Such as:

a. **On diagnosis of a new case** - All types of contacts should be screened within a week of diagnosis of the index case. The target should be at least 25 houses for a PB and 50 houses for a MB case. The numbers may vary depending on the density of population and contacts between the households of the particular area.

b. **Repeat Contact Tracing** – The activity of contact tracing should not be a onetime activity. It should be repeated of every follow up visit and on treatment

completion for the household contacts.

c. **Retrospective Contact Tracing** – The entire family of a known case of Leprosy are at highest risk of contracting Leprosy for a prolonged period. It is worth screening the household contacts of all the Leprosy cases of last five years of a given geography at least once or preferably twice in a year excluding the screening in ACF rounds. Up to five years retrospective contact tracing will boost opportunities for case finding and prevention activities.

d. **Reverse Contact Tracing** – The target is to identify the index case from whom the new case of Leprosy can be linked on the basis of history and available record of new and old cases of that area.

The NLEP shall be scaling up contact tracing considerably to boost the prevention of leprosy and modifying the guidelines issued in this regard to cover contacts of all cases detected in the past 5 years. With the consent of the index case, tracing of household contacts along with 25-50 neighbours and social contacts of each patient, will be carried out. This will be accompanied by the offer of a single dose of rifampicin as preventive chemotherapy. The index case will be registered and linked to the treatment register, i.e., their registration number should be the same in all records and reports. Contact details (Address and phone numbers) should also be recorded. The list of index cases will be maintained by the reporting year, i.e., a 12-month period. This list will be consulted every year. All contacts will be screened annually for a period of five years to ensure good follow up. In addition to doing contact tracing of all new cases, retrospective contact tracing of all cases detected in the last 5 years will be carried out and this will boost opportunities for case finding and prevention.

Major interventions planned

- Contact Tracing and follow up of traced contacts biannually for 5 years for signs and symptoms of leprosy.
- Retrospective Contact Tracing of index cases of last 5 years.
- Reverse contact tracing-linking index case with probable source of infection.

Strategic Pillar 3: Provide quality and comprehensive services

Early case detection and prompt treatment with multidrug therapy (MDT) for 6 or 12 months with the drugs dapsone, clofazimine and rifampicin, continues to be the mainstay of effective control of leprosy. For treatment leprosy patients reach out to medical staff of Government health facilities, dermatologists, private practitioners, and traditional healers. All health staff need training in sensory testing and nerve function assessment to be able to recognise signs and symptoms of leprosy reactions and neuritis. Patients need to be treated promptly or referred to the higher health facility. Well-organised referral systems should provide access to fully resourced and Major events that may occur after completion of treatment include leprosy reaction, neuropathic pain, recurrence of disease (relapse) and worsening of disabilities or occurrence of new disabilities. Although relapse is relatively rare, laboratory facilities are needed to confirm it and track relapse trends. Reactions, worsening of disabilities and new disabilities (particularly grade-1 progressing to grade-2) are relatively common, and negatively affect the quality of life and social participation of persons affected by leprosy.

Thorough examinations including nerve function assessments and Eye-Hand-Foot (EHF) scores should be undertaken at the beginning and end of MDT treatment, followed by post-treatment surveillance, to identify, record, monitor and provide customised support for persons who at higher risk of developing reactions or worsening disability and need ongoing care and access to referral facilities. Ideally, prevention of disabilities should start with maintaining Grade-0 (no disability) status by early recognition and treatment of leprosy reactions and neuritis. Nerve function impairment (Grade-1) often manifests in eyes, hands and feet which are most used in daily activities of life and are prone to injuries and ulcer formations. These, if neglected, lead to infection, tissue loss and disfiguration. Persons at risk, and their family members, need to be informed about the signs of nerve involvement, trained in self-care and lifestyle equipped facilities that can manage reactions, offer wound care, deal with other complications such as recurrent reactions, damage to the eye, supply assistive devices such as customized footwear along with training and advice on self-care, and offer reconstructive surgery with associated supportive physiotherapy services. Careful attention needs to be given to ensuring equitable access to services by women and girls and if necessary, supporting the costs of travel to the referral centre. A good understanding of referral pathways is essential, along with efficient communication between primary health units and referral services.

Modifications to prevent injuries and protect limbs and eyes, and encouraged to report to health facilities if assistance is required. These interventions may be integrated with similar services for other disabling NTDs.

Access to clean water is important for routine self-care including daily soaking of hands and feet to prevent secondary disabilities. Leprosy frequently causes emotional distress in affected persons and their family members and carers, and this can sometimes lead to more severe mental, neurological and social problems. Psychological care should be available at all points of care, supported by referral to therapeutic counselling and other services promoting mental wellbeing. These services play a crucial role in enabling persons affected by leprosy and their family and community members to better understand the diagnosis and its impact, cope with stigma-related events and provide a supportive environment.

A) Comprehensive services to persons affected by leprosy

Major challenges faced in providing comprehensive and quality services to patient at the time of diagnosis are nerve function assessment not conducted skilfully, co-morbidities not addressed simultaneously, special populations managed as mainstream patients whereas they need special care, diagnostic tools not available, slit skin smear testing available in few health facilities. Health education and counselling needs to be conducted by subject experts and provided to patients and their families.

During treatment, the gaps identified are that nerve function assessment and counselling is not conducted at every visit, adverse reactions

are not paid attention and not recorded, reaction management needs to be taken up with greater expertise. Physiotherapy advice has to be patient specific and cannot be generalized. Similarly protective/micro-cellular (MCR) rubber footwear, aids and appliances provided should be customized if necessary for the best fit. Procurement and supply chain of self-care kits, prednisolone, splints, aids, appliances and MCR footwear should be uninterrupted. After Treatment there is a need for regular follow-up for a few years as lepra reactions and deterioration/ worsening of disabilities and deformities continue to occur even after completing full course of treatment. MCR footwear, splints, aids, appliances, self-care kits may be needed lifelong. Since Slit Skin Smear is not done for most cases it is difficult to diagnose relapse, if it occurs, in future.

Major interventions planned

- **Improving and retaining clinical expertise:** Currently clinical examination is patch/ skin lesion oriented. Capacity building of all stakeholders involved in screening is required. Confirmation of diagnosis and classification must be done through nerve function assessment by voluntary muscle testing and sensory testing (VMT/ST). This should be implemented in undergraduates and postgraduate medical curriculum, training of Medical Officers/AYUSH, Physiotherapists, Laboratory technician courses and Front-line Health Workers (ASHA) training programs for skill development. Validation of diagnosis, classification and grading of disabilities to be ensured by the programme. Involvement of medical colleges, corporate setups, ESI, Defence and Railway Hospitals etc., dermatologist, and private practitioners in diagnosis and patient management as per NLEP guidelines.
- **Laboratory support to diagnosis and eligibility to start MDT:** Monitoring Haemoglobin, Routine Urine and Stool, Sputum examination for AFB at MDT initiation is needed to assess any associated comorbidities. Capacity building of laboratory technicians at Block/ District level and above to perform and report SSS for improved diagnosis and classification.
- **Health education and counselling modules** (like flip chart/pictorial booklet/Audio-visual Aids etc.) to be developed for all stakeholders, like patients and Health-Care-Providers in local language for improved awareness and education about treatment and disease. Sparsh Programme and Sapna Mascot to be utilized for community education. Existing counsellors in the infrastructure to be utilized for leprosy counselling and follow-up.
- Register the case in Online Nikusth Platform as per **Upgraded Simplified Information System (USIS) guidelines**
- **Ensuring prompt start and adherence to treatment:** Treatment (MDT) initiated on the same date of diagnosis and completion at the respective sub centres/health facility. Uniform MDT of 3 Drugs for 6 months in PB and 12 months in MB may be considered.
- **Pharmacovigilance:** Protocols must be followed and reporting formats for monitoring adverse drug reactions should be in place. Management guidelines and referral to manage such events should be readily available. All training courses for doctors to have a session on ADR management, health education modules for patients to cover recognition and self-reporting of ADRs at an early stage.
- **Complication management:** Reactions (Type 1 Reaction /Type 2 Reaction) and neuritis to be diagnosed and managed appropriately. Frequent Nerve Function Assessments to prevent new and worsening of existing disabilities and POID services. Undergraduate and Postgraduate Medical Curriculum updated, Training Courses for Medical Officers and other Front-line health workers to be conducted regularly to build and retain capacity. Secondary and Tertiary care centre have expertise to manage complicated cases. Ensuring availability of steroid and steroid-sparing drugs (Clofazimine, Thalidomide).
- **Physiotherapy and counselling:** Utilize the Physiotherapist/Occupational therapist in the existing infrastructure for DPMR services.
- **Care after Release from Treatment (RFT):** Nerve function Assessment/VMT/ST) for all cases and laboratory investigations at the end of treatment may be conducted if suspicion of non-response to treatment and signs of active disease seen. Counselling and functional Helpline may be used for

reporting late reactions and relapse. Robust post RFT surveillance program including complication and disability management and rehabilitation services should be maintained. All cases to be followed up for 5 years. Utilize the Physiotherapist/Occupational therapist in the existing infrastructure for DPMR services. Accurate diagnosis and efficient management of relapse cases must be done by dermatologist and by utilizing diagnostic support eg. slit skin smear test and biopsy.

- **Other interventions:** Other activities for quality service delivery are developing a checklist for complete package of services and ensure access and availability of services, coordination with other National Health Programmes for case management and counselling, adding leprosy to responsibilities of physiotherapists, psychiatrists and counsellors of other programmes, adding leprosy diagnostics to diagnostic facilities provided by other programmes, coordination with Medical Colleges, Private Practitioners, NGO and Private Clinics/Hospitals etc., orientation of Non-Govt. stakeholders for following the uniform government guidelines, facilitate contributions, supportive facilities, incentives, pensions, housing etc. from other Government departments for the well-being of persons affected by leprosy, closely integrate with universal health coverage/ primary health care and community health worker efforts; coordinate with other relevant programmes for case detection, management and surveillance, engage with private sector and traditional healers, engage with communities to combat stigmatization and discrimination. Resistance / Relapse cases should be diagnosed by Bacteriology and Molecular Techniques. If they are found to have active leprosy after completing full course of MDT, they should be treated with second-line anti-leprotic drugs (Ofloxacin, Minocycline, Clarithromycin as per WHO guidelines).

The salient elements of an ideal package of services are given below.

- Skin and nerve examination by medical officer for confirmation of diagnosis and classification.
- Slit Skin Smear examination in case diagnosis could not be made clinically with a strong suspicion of leprosy.
- Voluntary Muscle Testing, Sensory Testing, examination of Eyes, Hands and Feet (EHF) scoring,
- Provide MDT drugs at health facility nearest to home of patient.
- Counselling for administration of drugs, self-care, exercises for hands/feet/eye and warning signs of lepra reactions Type 1 and 2.
- Follow up and encouragement for completing treatment and self-care.
- To family members -Single dose rifampicin (only to those eligible), counselling for supporting treatment of patient and stop stigma and discrimination.
- Tracing of all contacts of patient and administration of single dose rifampicin (only to those eligible).
- Provide self-care kit, microcellular rubber footwear, aids/appliances eg. splints if patient has Grade 1 or 2 disability.
- Management of ulcers and reactions (if they occur) and timely referral for management if services cannot be provided at the health facility.
- Refer for reconstructive surgery.
- Provide subsequent doses of MDT blister calendar packs.
- Follow up visits to patient and contacts.

B) Criteria for diagnosis, clinical assessment, classification, treatment, and management of complications to be followed in both public and private sector

Major interventions planned

- All treatment centres in public and private sector to classify and treat patients as per NLEP guidelines. Capacity for diagnosis, treatment, and management to be increased.
- Private practitioners and institutions to be

linked with nearest Govt. health facility for delivery of drugs free of cost, counselling and follow up during and after completing treatment. Contact tracing for the patients and administration of SDR should be undertaken by staff of Govt. health facility.

- Treatment and follow up to be provided by health staff / health facility nearest to place of residence of patient
- Contacts of all patients whether treated in public or private sector to be provided post exposure prophylaxis
- Increase laboratory capacity to support clinical diagnosis and resistance monitoring
- Ensure access to wound care, reconstructive surgery and rehabilitation to all patients
- Counselling and mental health care services as per requirement of patients
- Availability of second line drugs in cases of drug contraindication and confirmed cases of resistance with evidence of active disease after MDT therapy to be ensured.
- Child leprosy and leprosy during pregnancy to be given special attention and follow up services.
- Bring drug supply chain systems in line with annual leprosy data
- Ensure supply of MDT, prophylactic medicines, second-line drugs and drugs to treat leprosy reactions
- Ensure availability of wound dressing materials
- Ensure access to assistive devices including customized footwear
- Ensure unrestricted access to leprosy services for women and girls

C) Specialized services for persons affected by leprosy

Major improvements planned

- Counselling of patient and family members
- Services for mental health concerns of patient and family members.
- Provision of Self Care kits and counselling for promotion of self-care.
- Provide assistive devices.
- Reminder calls for the subsequent doses.
- Flag high risk cases for reaction and follow up.
- Monitor and manage steroid regimes for reactions.
- Detect early nerve damage, treat promptly and monitor.
- Defined referral pathways for management of complications.
- Patients to be provided with a treatment card linked with AADHAR, helpline number, contact details of local health worker and District Leprosy Office, a checklist of package of leprosy services to be provided during and after completing treatment.
- Patients to be provided registration under Ayushman Bharat Scheme.
- Coordinate with Ministry of Social Justice and Empowerment for rehabilitation.
- Involve teaching institutions to support leprosy programme activities-capacity building, diagnostics, tertiary level of care, indoor hospitalization, reconstructive surgery, management of ulcers etc.
- Engage specialists including dermatologists and reconstructive surgeons
- Engage with private sector and traditional healers for ensuring right treatment for leprosy
- Provide support to patients with mental health issues, geriatric concerns etc.

D) Supportive treatment

Major interventions planned

Provision for :

- Treatment for anaemia
- Treatment for worm infestation before starting prednisolone for lepra reaction.
- Nutritional advice and medicines.
- Suspect, diagnose and manage co-morbidities like diabetes, hypertension, anaemia, helminthiasis, TB etc.

E) Pharmacovigilance

Adverse drug reactions such as dapsone hypersensitivity are rare but potentially serious. Pharmacovigilance systems should monitor adverse reactions to anti-leprosy drugs, reaction treatments, post-exposure prophylaxis and potential vaccines. Pharmacovigilance system

in place to report on adverse drug reactions. Integrated with other pharmacovigilance systems, data should be collected and reported on adverse reactions to drugs used in leprosy prevention, treatment and reaction management, as well as potential vaccines.

Major interventions planned

- Setup pharmacovigilance for adverse drug reactions in leprosy patients under treatment, contacts administered PEP, drugs for management of lepra reactions or any other complications or any other drugs/ vaccines/ newer PEP regimens or vaccines etc.

F) Post-treatment follow-up

Major interventions planned

- Follow up for patients released from treatment for at least 5 years.
- Counselling to be done for warning signs of lepra reaction and appearance of new lesions.
- Provide and link for DPMR services in cases of disability.

G) MDT Drugs Supply Chain Management and Supply of other logistics

As the country shall accelerate active case detection, the availability of drugs shall concomitantly increase to support the requirement of the program. With the planned strategies and its rapid implementation, the procurement and supply chain management which is the backbone of the NLEP should provide quality, sustainable and efficient services for the benefit of all leprosy patients.

In a phased manner, country should take up procurement of all anti-leprosy drugs including those required for management of reaction, neuritis and relapse.

There is need for introduction of structured SOP and training modules for programme managers and staff involved in logistics management at National and subnational level.

Methodology of drug storage and supply should be robust and First Expiry, First Out (FEFO) policy should be enforced and regularly monitored.

Drug cartons must have their batch/lot number and expiry date clearly identified on them

(Shown in diagram above) to ensure product quality, loss due to expiry and save on labour costs wasted on frequent spot checks and monitoring of expiry dates. Digital platforms for reporting under NLEP should include drug supply chain management, for real time status of stocks at storage and dispensing sites along with dashboard reflecting patient-month stock positions. Information of indents and releases should be available real-time. There is need to strengthen and upgrade drug store infrastructure at state, district, and block levels for meeting optimum storage conditions.

Transportation system through third party logistics should be strengthened and keep provision of funds for timely relocation of un-utilized short expiry drugs. Advisory should be shared with State offices for uniform implementation of policies of disposal of expired medicines at the earliest. There is need to make provision for procurement of diagnostics and infrastructure for implementing Antimicrobial Resistance Surveillance network in the country and scaling up in phased manner.

Centralised procurement of items for DPMR services and provision to states. Procurement of equipment for physiotherapy at district level. There is need to make provision of budget for procurement of second line drugs for management of relapse, reactions etc. 'Good Manufacturing Practices' and mechanism of 'quality assurance' of drugs and logistics not pre-qualified should be introduced. Waste inertization at medium and high temperature incineration and waste encapsulation (liquid medicines) may be opted for expired MDT drugs.

Diagram 1. Drug cartons must have their batch/lot number and expiry date clearly identified on them

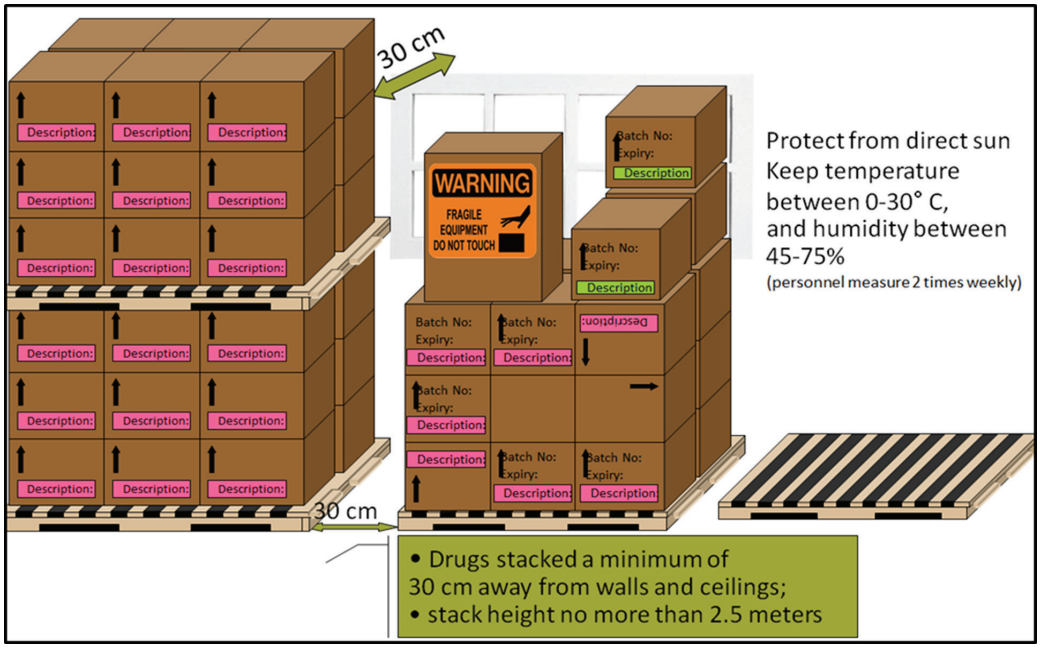
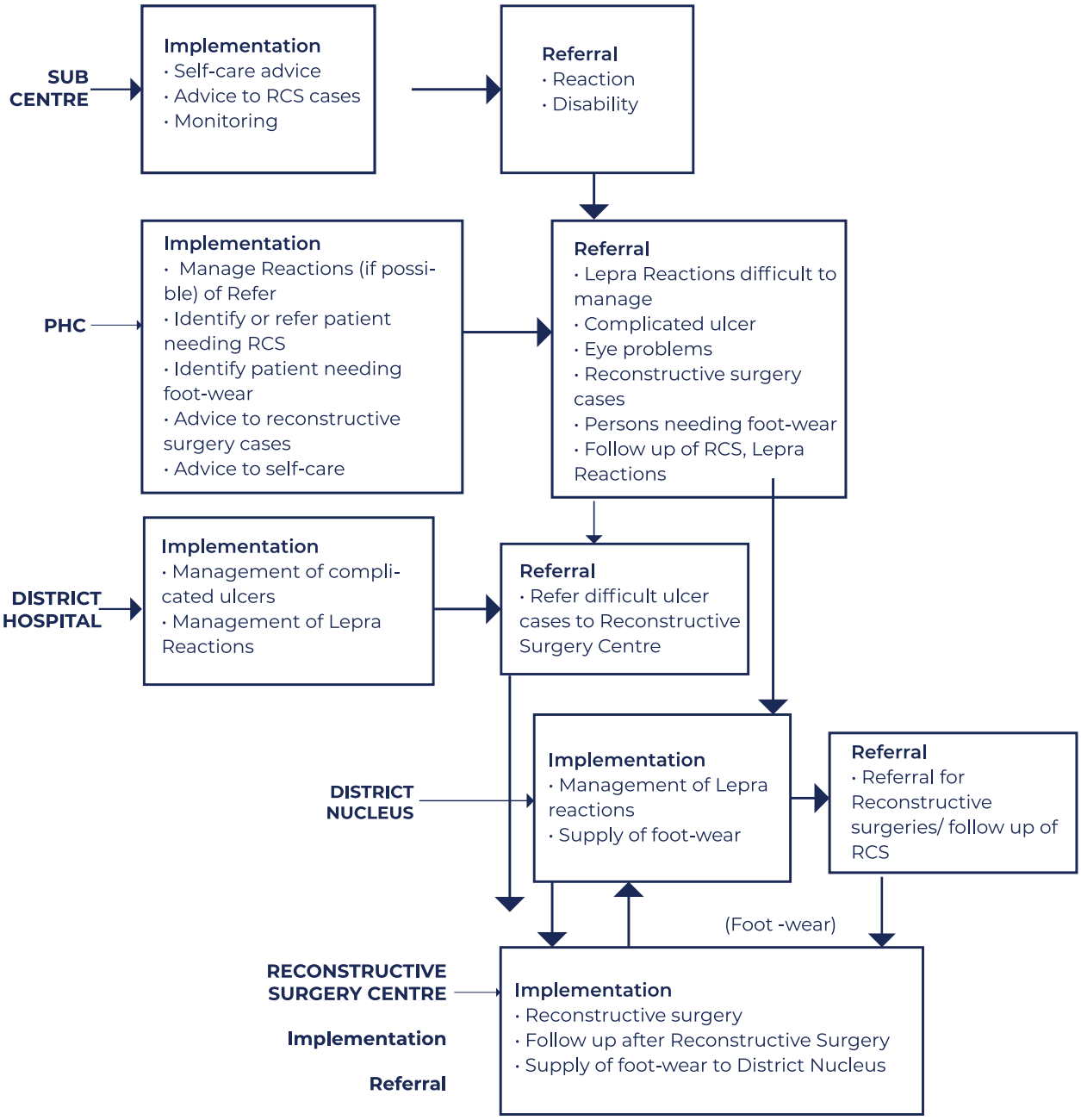


Diagram 2. MDT Drug Storage best practices.

DPMR REFERRAL SYSTEM



Strategic Pillar 4: Prevention of Disease, Disabilities, Stigma, Discrimination and Violation of Human Rights

A) Prevention of Disease

Prophylaxis: Both Chemo- and Immuno-prophylaxis alone and in combination.

To interrupt the disease transmission, it is important to understand the disease dynamics, strengthen the host immune response of those who are proven to be more prone in contacting the disease. This is more so as SDR-LPEP is already being implemented in several endemic districts. Since effectiveness of SDR to reducing risk of transmission is less than 25% among the blood relatives/close contact (family members) of index cases, hence, to improve effectiveness to 80-90%, studies such as PEP++ are being carried out, in India it is in study phase.

There is a need today to scale up leprosy prevention alongside integrated active case detection. Introduction of SDR chemoprophylaxis with single dose rifampicin has been proven to strengthen several routine programme components such as counselling, training, supervision, contact tracing etc. This may be the key to leprosy control in the next few years. This could combine with the contact tracing activity and should be completed within a week of new case detection. Defined populations (such as islands, institutions, urban slums, villages or even districts) with known high transmission may benefit from 'blanket' preventive chemotherapy.

Similarly, MIP vaccine which is used as an immunoprophylactic agent in leprosy, is proven to be effective and safe, used in field studies with 9-10 years of follow-up. This Vaccine needs to be introduced in NLEP after approval from the competent authority to protect the contacts of Leprosy patients. More so, investigation into evidence of synergistic protective effectiveness could be taken up. As contact tracing and examination is a part of LPEP component of NLEP and is done by health workers this can be undertaken and monitored easily, and if required in select areas and followed up. MIP is FDA and DGCI approved vaccine for immunomodulation and is freely available in India This needs to be undertaken in State Health Systems as well as select Medical Colleges where leprosy cases come for treatment.

Major interventions planned

- Increase capacity to conduct post-exposure prophylaxis
- Expand coverage of contacts with post exposure prophylaxis.
- Introduction of any newer more efficacious PEP regimens, vaccines etc.
- Research on more effective immune-prophylaxis options
- Introduction of newly available effective and approved vaccines.

B) Prevention of Disabilities

Disability Prevention and Medical Rehabilitation:

The goal of the National Leprosy Eradication Program is to provide comprehensive leprosy services to those who are affected by the illness, including: early detection of leprosy cases and full treatment to prevent disabilities, follow-up of such individuals in a way that they do not develop complications. An early detection of disabilities and deformities and its management will enable mainstreaming, employment, and family maintenance. Disability Prevention and Medical Rehabilitation (DPMR) programme was started in order to accomplish these goals. The objectives of DPMR program is to prevent the development of any disability or deformity that is not already present at the time of diagnosis and to prevent the progression/worsening of existing impairments or deformities. All individuals with a leprosy diagnosis should receive: Nerve Function Assessments (NFA) at regular intervals, monitored by Eye Hand Foot (EHF) scores, and the necessary services. Patients and their families need to receive sufficient counselling so that they follow the directions given by the medical professionals. Persons with Lepra Reaction or Neuritis need to be kept under careful surveillance and monitored more regularly with appropriate steroid treatment. The services provided under the DPMR programme must include counselling for affected individuals and their families regarding the cause of their disability

and measure to protect the hands, feet and eyes.

For monitoring purposes, a thorough Nerve Function Assessment and EHF scoring must be recorded on the NFA card and Disability register. The exercises that require both active and passive participation are demonstrated and monitored with an example of how to care for an ulcer, with a focus on relaxation, a clean wound environment, hygiene, and protection, as well as keeping track of the healing process. They should be given adequate dressing supplies. Provision for Customised Protective MCR (Microcellular Rubber) footwear / CAD CAM (Computer-Aided Design and CAM stands for Computer-Aided Manufacturing) footwear to people with anaesthetic feet and periodically updating it to keep the feet safe from harm is necessary. People who require custom made MCR footwear for malformed feet should be directed to the right facilities. People who are physically capable of undergoing reconstructive surgery (RCS), those with complicated plantar ulcers, side effects from MDT, lepra reactions, cases of neuritis that does not respond to steroids, pregnant women and children who experience lepra reactions, and those with eye complications should be referred to district hospitals for further care. The objective of the DPMR activities is to provide Prevention of Disability activities like Monitoring of high-risk patients and assessing the nerve function impairment on regular basis. Sequelae of leprosy relating to the eyes and eyelids, because of loss of sensation of the eyes, lagophthalmos (paralysis of the eyelids), ulceration of the cornea, exposure keratitis and the consequent diminished vision should be prevented and managed. So, ophthalmological services should be provided from the time of diagnosis.

Further, DPMR services should also look into the mental health of people who face mental health issues on account of being diagnosed with leprosy and sequelae of the disease. Mental health and well-being of the patient should also be addressed from the time of diagnosis to prevent a denial, depression, and other sequelae. Social workers and psychological services such as counselling should be provided from the time of diagnosis.

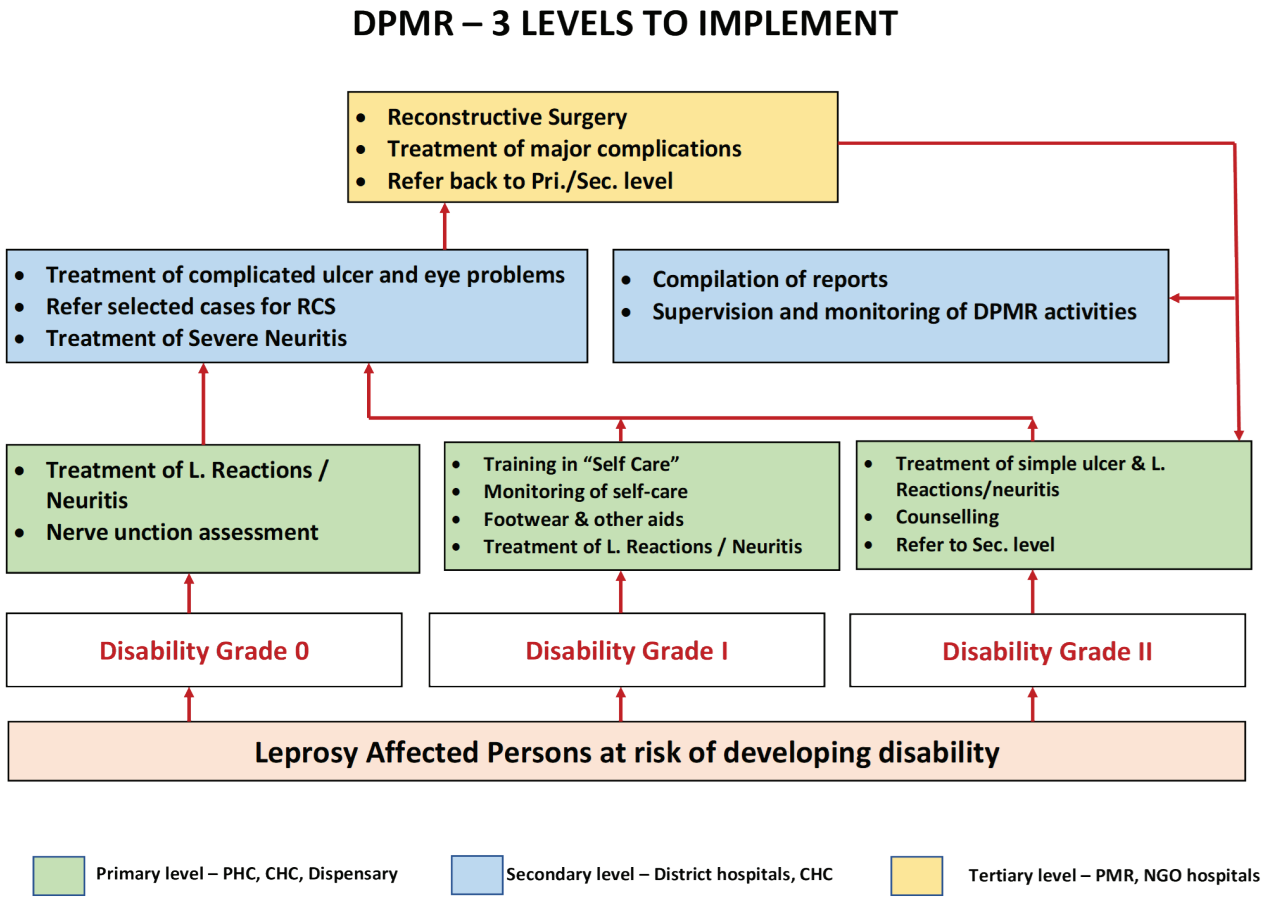
Prevention and Management of disabilities should include develop in the patients understanding of the disability, how to prevent worsening and achieve improvement, identification of signs and symptoms of early neuritis and lepra reactions and importance of seeking treatment without delay, self-care, physio-exercises, daily examination of affected parts of body (eyes/hands/feet), how to take care of ulcers, cracks and contractures, options available for surgical correction of deformities, availability of aids and appliance to assist daily chores and improves functionality and appearance of deformities. Ophthalmological services and psychological services may be required.

DPMR Clinics should be established with the required infrastructure for physiotherapy and equipment and personnel such as physiotherapists, physiotherapy technicians, orthotics technicians etc. These DPMR clinics should be responsible for providing Prevention of deformity (POD) demonstrations on regular basis as per the need of the endemic blocks. An effective referral system should include integration of DPMR services in available Physiotherapy centres in different health facilities within the General Health System.

Provision of Mobile DPMR units for the need of high-risk populations, slums and migrant population to provide both prevention and management of disabilities may be considered.

Steroid therapy should be prescribed for patients after thorough investigations for co-morbidities. Patients with diabetes, hypertension, liver disorders and other disease should be advised with a caution. The effort should be made to create a uniform algorithm for leprosy patient examination including referral to the district hospital or community health centre.

The need based basic investigation and proper referral to the medical specialist, orthopaedics, neurologist, ophthalmologist and physiotherapist should be carried out as per their availability in the endemic districts. All the leprosy patients therefore should be examined in the General OPD of health facilities on a routine basis. GIS mapping of endemic blocks for disability will encourage better utilisation of the health facilities and its resources. Grade-II disability investigation should be continued for making necessary corrections in service delivery. Challenges of Grade-II disability in child and primary neural leprosy should call for priority investigation and referral. Inclusion of Leprosy as a communicable disease resulting in different disabilities should be included in the syllabus of the Middle school education with the input for removal of stigma.



A mandatory provision of linkage of Health Department with the Department of School Education, Nagar Panchayats and Department of Social Welfare to facilitate better intra sector coordination to facilitate identification of disease and deformity load in the population.

The field level workers like ASHA and MPWs should understand the development of early and late disabilities in persons affected with leprosy.

Medical Rehabilitation

This should include the modified steroid therapy based on the duration of neuritis and muscle weakness to muscle atrophy. The steroids are useful in the early neuritis and neuritis precipitated during the lepra reaction. The steroid is of no use in cases of established muscle weakness. The long-term use should be avoided to prevent complication of development of Diabetes, Hypertension, and immunosuppression. The management of lepra reaction with neuritis calls for secondary line of drugs like thalidomide and other immunosuppressant drugs. The use of concomitant physiotherapy along with the steroid therapy gives excellent results in early neuritis as the weakness recovers faster. Addition of Clofazimine in PB regimen has been shown to improve therapy, decrease the incidence as well as severity of reactions, well accepted by the patients and should be implemented across the country.

Major interventions planned

- Strengthen disability prevention.
- Promote self-care
- Promote counselling services and follow up during and post treatment
- Marking patients at high risk of developing disabilities

- Addition of Clofazimine in PB regimen
- Introduce Second-line treatments and medicines to treat reactions

C) Prevention of stigma, discrimination and violation of Human Rights

Stigma and discrimination are deeply embedded in many communities, including healthcare settings, and result in exclusion and denial of human rights. Stigma and discrimination against persons affected by leprosy and their families are almost as old as recorded history. Effects may include social exclusion, loss of income, reduced access to healthcare and education, and reduced mental well-being. Changing beliefs and prejudices is not easy, though school children may be more receptive than adults to messages about changing behaviour and attitudes. Reduction in community prejudice promotes early detection of leprosy and improves acceptance of diagnosis and adherence to treatment and self-care practices.

Knowledge-based leprosy awareness programmes have proven insufficient to change community attitudes. The Principles and guidelines for the elimination of discrimination against persons affected by leprosy and their family members, adopted by the United Nations should be referred to for guidance.

Early diagnosis of leprosy by better/more sensitive specific tools, improving the treatment for better outcomes, identification of early signs of complications, reducing the delay and providing timely referral services are all required to reduce the stigma. Although the social stigma has drastically reduced due to curability of the disease and better treatment outcomes, self-stigma in patients is still present to a moderate extent. IEC and knowledge empowerment activities, both for patients and community at large are required. Inclusion of cured and enabled leprosy patients in the teams imparting IEC activities has a profound healing as well as destigmatizing effect on both the patients and community at large and are required. Wherever possible persons affected by leprosy should be included in such activities. By inclusion of successfully employed as well as skilled persons affected by leprosy will remove the fear from the society. Combining the leprosy disability programme with the programme of reducing disabilities in other diseases specially filaria can also help in reducing the stigma due to leprosy. This also adds to the belief that leprosy is like any other disease.

Persons affected by leprosy with or without residual disabilities would also require skill development to earn their livelihood and information about these should also be included. Several national as well as International NGOs impart such trainings, besides the Human Resource Development Ministry of the Government of India. This partnership can be further strengthened by NLEP and will help in reducing stigma both in the community as well as self-stigma of persons affected by leprosy.

Social empowerment and IEC

NLEP has come out with several print material and audio-visual videos and IEC material for social empowerment. It is suggested to have a inter-ministerial team (Ministry of Human Resource Development, Skill India Department, Ministry of Social Justice & Empowerment, Ministry of Legal Affairs along with Ministry of Health and Family Welfare), both National and International NGOs for strengthening the social empowerment.

Swachh Bharat Mission

Research has found that countries could achieve very low or nearly nil transmission of leprosy just by improving the hygienic conditions, sanitation of their countrymen and women even before the advent of MDT. It was therefore discussed that improving the sanitation, living conditions and improving the personal hygiene should also be emphasized during the IEC as this will also contribute to reducing the transmission of the disease besides all others discussed above.

Stigma

Commonly defined as attitudes and beliefs that lead people to reject, avoid, or fear those they perceive as being different. Stigma can be enacted (engaging in or experiencing stigmatization, treating people differently because they are perceived as 'different', also

called "discrimination") , endorsed (justifying and supporting the exclusion of others, but not actively engaging in the process), accepted (disagreeing with stigmatization of others, but not speaking out against it), anticipated (the anticipation of being stigmatised by others) or internalised (accepting and internalising perceived exclusionary views of others)

Manifestations of public stigma are evading or avoiding persons affected by leprosy, maintaining a distance, physical and social, between the persons who are perceived as "different" and others in society, absence of or limited social support, in the shape of acceptance, employment, financial security, and social connection. An individual affected by leprosy may develop feelings of shame or even self-hatred, expressed as low self-esteem, lack of socialization, for example because of shame, fear of social exclusion, or fear of infecting others and avoiding contact with loved ones directly or indirectly.

Impact of stigma

Stigma perpetuates health inequities despite medical advances making improved health possible. Individuals with leprosy have emotional stress and anxiety, which may lead to psychological and psychiatric morbidity as well as a decreased quality of life. Persons affected by leprosy may become isolated, may discontinue treatment because of undesirable side effects of medication (such as darkening of the skin) and when treatment is not completed, there is a risk that the disease will progress with resultant disability and complications.

Stigma disrupts social participation (work, education, participation in social events), relationships (friendships, family relations, marriage), mobility and leisure activities. Having a stigmatising disease like leprosy severely affects employment opportunities or jobs. Patients may become destitute and resort to begging as the only way of survival. Studies have shown that these effects are greater in female than male patients.

Discrimination

Discrimination occurs when individuals or institutions unreasonably deprive others of their rights and life opportunities due to stigma. It leads to exclusion or deprivation of people of their access to decent housing options, opportunities for employment, education, and full participation in civic life.

While "stigma" is an attitude or belief, "discrimination" is the behaviour manifested because of those attitudes or beliefs. People with leprosy often face discrimination and social exclusion, particularly when there is significant physical disfigurement, owing to negative public beliefs. This compounds the suffering of individuals and their families. This cycle again negatively affects their disability and recovery, as well as overall effort to eliminate and eradicate leprosy. Populations at increased risk for stigma and discrimination are vulnerable groups such as people with several health problems, women, children, and other marginalized groups. The risk factors for stigma are age, low socio-economic status, low educational level, disclosure of stigmatizing status, substance use and unemployment. Migrants and people with NTDs and/or mental health conditions living in extreme poverty or in areas of conflict are also at increased risk of stigma and discrimination.

Integrated services are both effective and provide cost-effective access to care. Integration of mental health services into all phases of NTD prevention, control, elimination, and eradication, with appropriate measures against stigma and discrimination, is feasible and effective[1].

As stigma and discrimination are found at many levels, interventions must be addressed at personal, interpersonal, community, organisational and institutional and government levels in order to bring about institutional and structural changes. There is a need to design Interventions to reduce stigma- Social contact and education are required to change stigmatizing behaviour and attitudes, supported by advocacy, particularly by people who have experienced it and their careers.

[1] Mental health of people with neglected tropical diseases: WHO

The Human Rights Approach:

The United Nations General Assembly in 2011 adopted Resolution 29/5 the "Principles and Guidelines for elimination of discrimination against individuals affected by leprosy and their family members". It recognizes the role of stigma and discrimination as a core element that perpetuates leprosy transmission. Initiatives to improve the knowledge and attitudes of the community, religious leaders, people employed in healthcare, education and social services is essential.

Interpersonal Contact[2] :

Interventions based on the core principles of interpersonal contact are the strongest evidence-based method for reducing stigma and discrimination[3]. A number of interventions have been highlighted to reduce stigma in its various forms, including discrimination.

i. The first and initial intervention is information-based interventions. This includes edification about leprosy and its treatment. It is crucial that local fears and beliefs are addressed.

ii. The second intervention consists of facilitating contact between community members and affected individuals. This can be done using a direct approach, for example, by arranging for an affected person to interact during a community meeting and engaging in dialogue with the audience. An indirect approach is also effective, using a filmed testimony or comics that tell the story of the affected person.

iii. Negative language and use of stereotypes can also be a source of stigma or can reinforce existing negative attitudes. This includes the use of the terms mentioned above, but especially denigrating terms that refer to persons affected by leprosy. The most notorious example is "leper", which has been banned long ago, but is still used in some circles. Organizations of individuals affected by leprosy have also argued against the use of the abbreviation "PAL" (person affected by leprosy) since this became a label in itself. Any terminology that identifies affected persons with their disease should be avoided in all languages. Use of positive and dignifying language should be encouraged, especially in the media.

iv. Involving the leaders of all religions in leprosy outreach programmes so that their teachings, writings and speeches contribute to the elimination of discrimination against individuals affected by leprosy by spreading awareness that leprosy is curable and stressing that there is no reason to discriminate against anyone affected by it.

v. The impact of stigma experienced by affected people, including internalized stigma, can be mitigated through counselling and activities aimed at empowerment, amongst other ways. Affected individuals with an affinity for counselling can be trained in basic listening and counselling skills and will be made part of basic health services or any other community-based organisation.

vi. Socioeconomic development (SED) activities have been shown to be effective in promoting empowerment and through this, reducing stigma and its effects on individuals. The ability to work and make contribution to the family, community, or wider society, is a very important element in people's sense of self-worth and personal dignity. It often enables people to fulfil their role (again), which is expected in given setting.

Addressing different levels of Stigma:

Stigma and discrimination are found at many levels, interventions must be addressed at interpersonal, intrapersonal and community levels to bring about institutional and structural changes. Stigma and discrimination need to be addressed at five different levels:

- Individual level (Interpersonal),
- Social environment level (Intrapersonal),
- Societal level (community),
- Health System level (Institutional),
- Government Level (Structural).

[2] Operational Manual for Global Leprosy Strategy 2016-20: WHO
[3] Mental Health and NTDs: WHO

Intervention strategies need to be devised for each level. Some intervention strategies for each level are given in the table below:

Level	Focus of Intervention	Intervention Strategies

Personal	Individuals living with disability/NTDs and mental health conditions	• Empowerment
		  · Self-help, advocacy, and support groups
		  · Counselling
		  · Cognitive–behavioral therapy
		  · Education to reduce internalized stigma and encourage access to care
		  · Enable them to access their rights and social inclusion
		• Enable them to engage in social contact

Interpersonal	Facilitating positive interaction (social contact) and increasing care and support in the person's environment.	• Social contact with people with disability/NTDs and mental health conditions • Education • Behavioural intervention (contact-based) • Peer services • Narratives of inclusion • Care and support • Home care teams • Community rehabilitation
Community	Reducing stigmatizing and discriminatory attitudes and behaviour	• Social contact with people with NTDs and mental health conditions • Education • Advocacy • Protest
Organizational & institutional	Reducing discrimination and stigma in organizations and institutions	• Training, including social contact with people with disability/mental health conditions • Person-centred, integrated institutional policies
Governmental & Structural	Establishing and enforcing legal, policy and rights-based structures	• Legislation and policy to change norms and policies that discriminate or facilitate stigma • Policies and laws to prevent and remove discrimination and stigma • Strategies and campaigns to increase understanding of impact of disability on mental health and behaviour • Design, evaluate and disseminate effective, evidence-based programmes • Improve the accountability of duty bearers using rights-based approaches (e.g. government, service providers) to people with mental health conditions and NTDs

Source: Mental health of people with neglected tropical diseases: WHO

Major initiatives planned:

1. Better Coordination between NLEP and NHM

- Promote better coordination between the NLEP and NHM to promote structural integration by providing comprehensive training covering all aspects of leprosy to the NHM staff.

2. Increased use of IEC material to reduce stigma and discrimination:

- Designing contextualized information, education, communication (IEC) materials and their use to provide correct information and address specific fears and beliefs related to leprosy at the five different levels at which communication is required.
- Involvement of religious leaders/locally influential people/ leprosy patients to reduce stigma and discrimination within the community.

3. Counselling of patients and family members

- To provide for counselling of patients and family members to mitigate stigma either through peer counselling and/or leprosy patients.
- Will include interventions to promote empowerment of patients and provide psychosocial support to patients

4. Empowerment of Patient and family

- Cooperate with other ministries and NGOs for providing socioeconomic activities in promoting empowerment. Guidelines will be framed to help state governments to carry out these activities at their level.

5. Focus Areas

- There will be greater focus on vastly endemic areas.
- Increase in attention to the urban areas due to increasing urbanisation and that a large proportion of high-risk population resides in urban areas. These include slum dwellers and migrants.

6. Involvement of People Affected by Leprosy

- It will be essential to 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. Organized efforts by persons affected by leprosy are needed to promote a positive perception and attitude regarding the disease among the public; to bring about essential changes in legal measures, policies and practices that are discriminatory in nature.

7. Repeal Discriminatory Law

All discriminatory laws, both at the national and sub-national level. In India there were number of laws both at the national and sub-national which discriminated against leprosy patients need to be repealed.

The first step in monitoring progress towards this is to make an inventory of laws and policies containing discriminatory elements in the country both at the national and sub-national level. A coordinated effort should be made to repeal all discriminatory laws and change any policies that allow discrimination on account of leprosy.

Rights of Persons with Disabilities Act:

A positive step was taken with the passing of the "Rights of Persons with Disabilities Act (2016)" for guaranteeing the rights of the people with disability. The Act came into force on the 28 December 2016. The Act guarantees certain rights and entitlements to persons with disabilities, such as the right to equality and non-discrimination, the right to community life, protection from cruelty and inhuman treatment, from abuse, violence and exploitation, equal protection and safety in situations of risk, armed conflict, humanitarian emergencies and natural disasters, home and family, reproductive rights, accessibility in voting and access to justice. The Act also requires the Central and State Governments to promote the inclusion of persons with disabilities in educational institutions, to encourage vocational training and self-employment, to devise schemes and programmes for social security and to make adequate provisions for healthcare, insurance, rehabilitation, culture and recreation and sporting activities.

Strategic Pillar 5: Develop Digital Surveillance Systems for NLEP

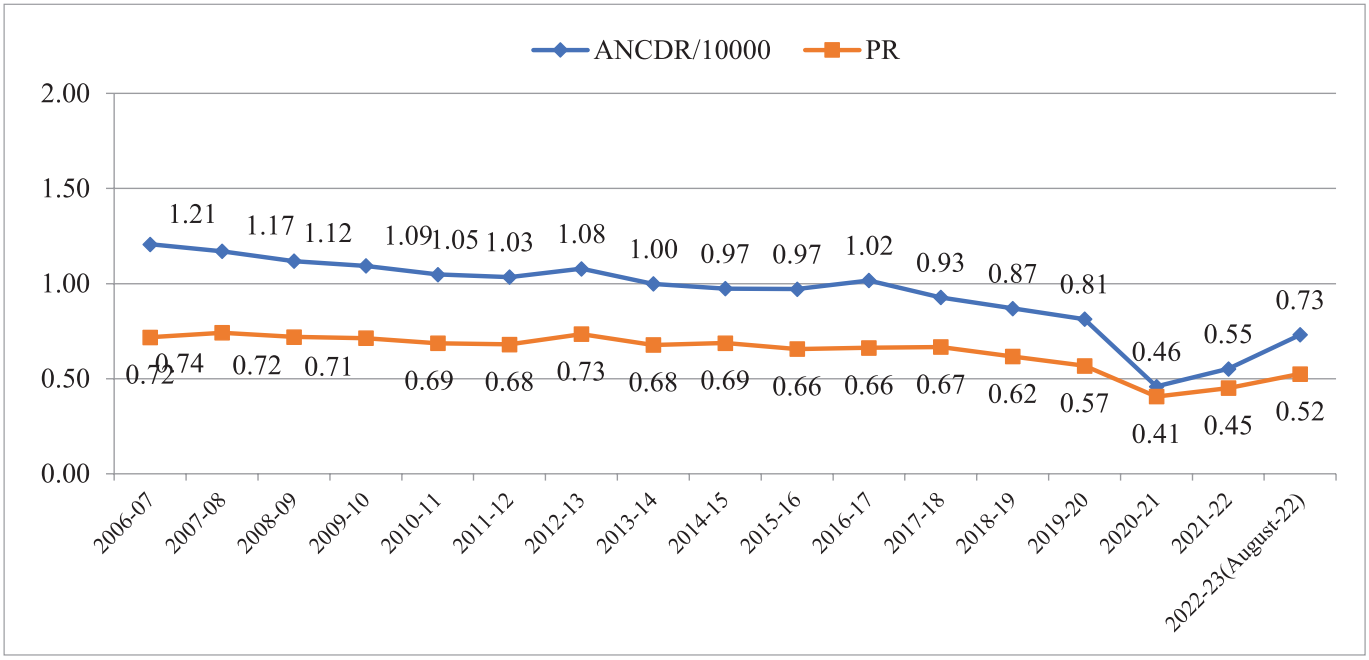
Digitalization

The Ministry of Health and Family Welfare (MoHFW) acknowledged that to achieve the aims of improved health care, India needs to digitise healthcare. Commonly referred to as the Ayushman Bharat Digital Health Mission (ABDM), its establishment was recommended by India's National Digital Health Blueprint under a committee set up by the MoHFW. Under the NSP and Roadmap 2023-27, NLEP is committed to making patient related reporting, recording, reporting of programme activities and logistics management fully digital, real-time and web-based. Roll-out digitalized case-based data management system is ongoing. Mapping of cases shall be introduced. Monitoring cells at national and state programme units shall supervise the system. The reports received shall be analysed and interpreted and translated to action points. The system shall facilitate mapping and strengthen epidemiological surveillance system to ensure detection of sporadic and hidden cases and to monitor progress. The system shall improve notification systems. The system shall bring drug supply chain systems in line with annual leprosy data. The digital reporting system shall remain a part of the Integrated Disease Surveillance Programme (IDSP). Based on inputs from the portal, validation /verification activities shall be taken up. Use of eHealth, mHealth, telehealth/ telemedicine/dermatology, skin App and artificial intelligence etc. shall be considered for improving data management, for research and development as well as interventions. Nikusth 2.0, a web-based platform for patient data entry at health facility level shall be developed in collaboration with Indian Council of Medical Research (ICMR).

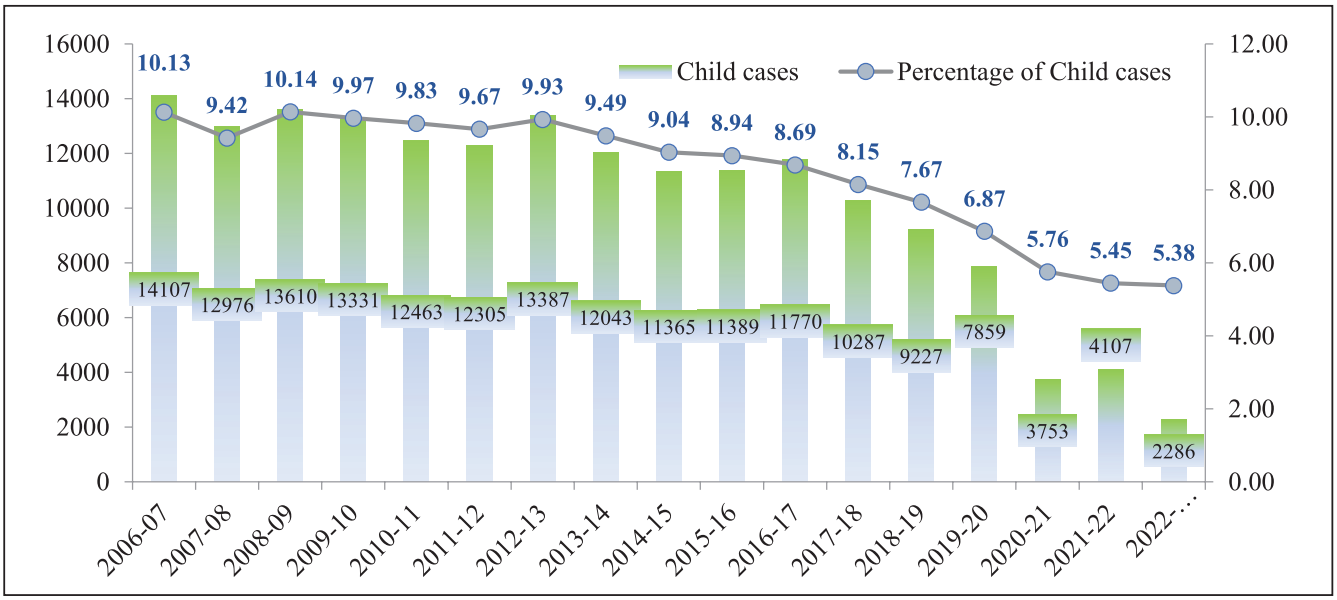
Status of focussed indicators (PR, ANCDR, Child%, MB%, Child G2D Cases, G2D% & G2D/million population) of NLEP in India as on August 2022 in F.Y. 2022-23

Year	PR	% age of Child Cases	% age of MB	G2D Cases	Child G2D Cases (Among Total G2D Cases)	G2D%	G2D Per million	ANC DR/ 100000	G1D Cases	Child G1D Cases (Among Total G1D Cases)	Reac-tion Cases from RFT	Re-lapse Cases
2003-04	2.44	13.77	39.30	5302	NA	1.44	4.87	33.73	NA	NA	NA	NA
2004-05	1.34	13.28	40.36	4145	NA	1.59	3.74	23.44	NA	NA	NA	NA
2005-06	0.84	9.98	45.31	3015	NA	1.87	2.66	14.27	NA	NA	NA	NA
2006-07	0.72	10.13	44.99	3130	NA	2.25	2.71	12.07	NA	NA	NA	NA
2007-08	0.74	9.42	47.19	3477	NA	2.53	2.96	11.70	7483	NA	NA	NA
2008-09	0.72	10.14	48.40	3763	NA	2.80	3.14	11.19	5985	NA	NA	896
2009-10	0.71	9.97	48.45	4117	NA	3.08	3.37	10.93	5509	NA	NA	670
2010-11	0.69	9.83	48.58	3927	NA	3.10	3.24	10.48	4535	NA	NA	636
2011-12	0.68	9.67	49.93	3865	NA	3.04	3.14	10.35	4817	NA	NA	557
2012-13	0.73	9.93	49.92	4650	NA	3.45	3.72	10.78	5175	NA	NA	595
2013-14	0.68	9.49	51.48	5256	NA	4.14	4.13	9.98	5932	NA	NA	664
2014-15	0.69	9.04	52.82	5794	265	4.61	4.48	9.73	6516	NA	NA	587
2015-16	0.66	8.94	51.27	5851	162	4.60	4.46	9.71	6180	NA	NA	459
2016-17	0.66	8.69	49.57	5179	156	3.82	3.89	10.17	5573	NA	NA	536
2017-18	0.67	8.15	50.88	4552	85	3.61	3.34	9.27	5188	NA	NA	457
2018-19	0.62	7.67	52.28	3666	84	3.05	2.65	8.69	4894	NA	8078	436
2019-20	0.57	6.87	54.28	2761	63	2.41	1.96	8.13	5076	NA	8014	505
2020-21	0.40	5.76	58.11	1572	35	2.41	1.10	4.56	3256	33	4340	498
2021-22	0.45	5.45	60.70	1863	41	2.47	1.36	5.52	3970	45	4223	510

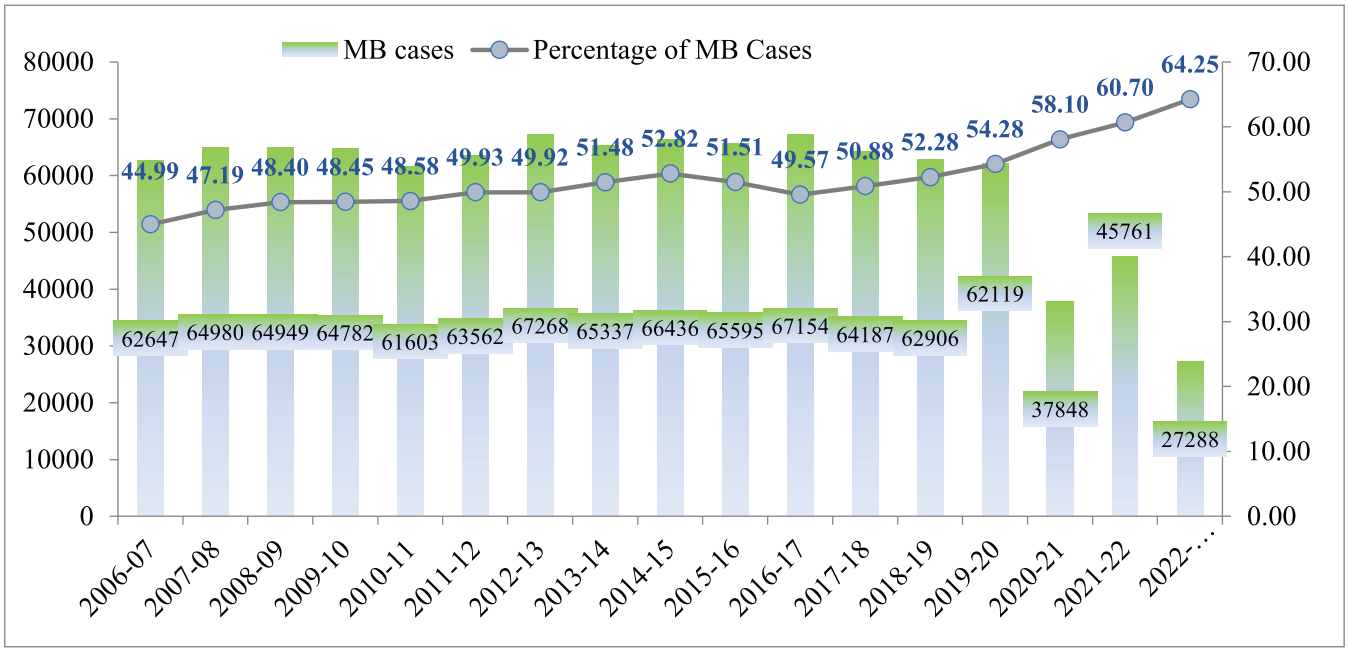
ANCDR/100000 & PR



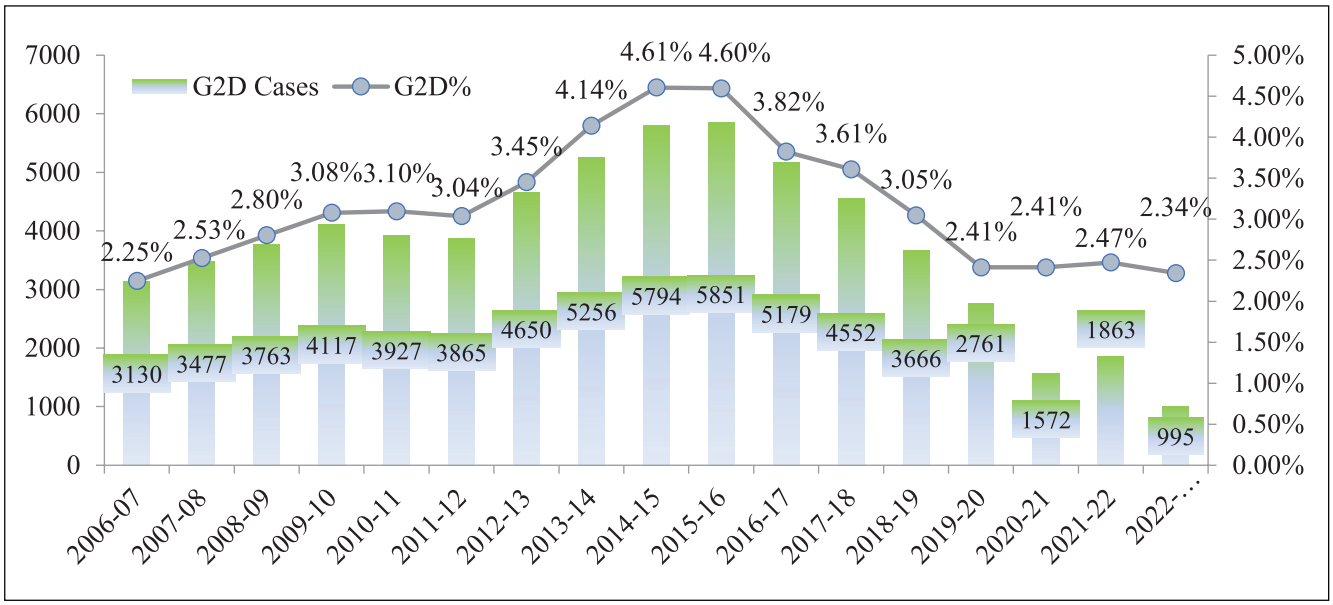
Child Cases & Percentage of Child Cases



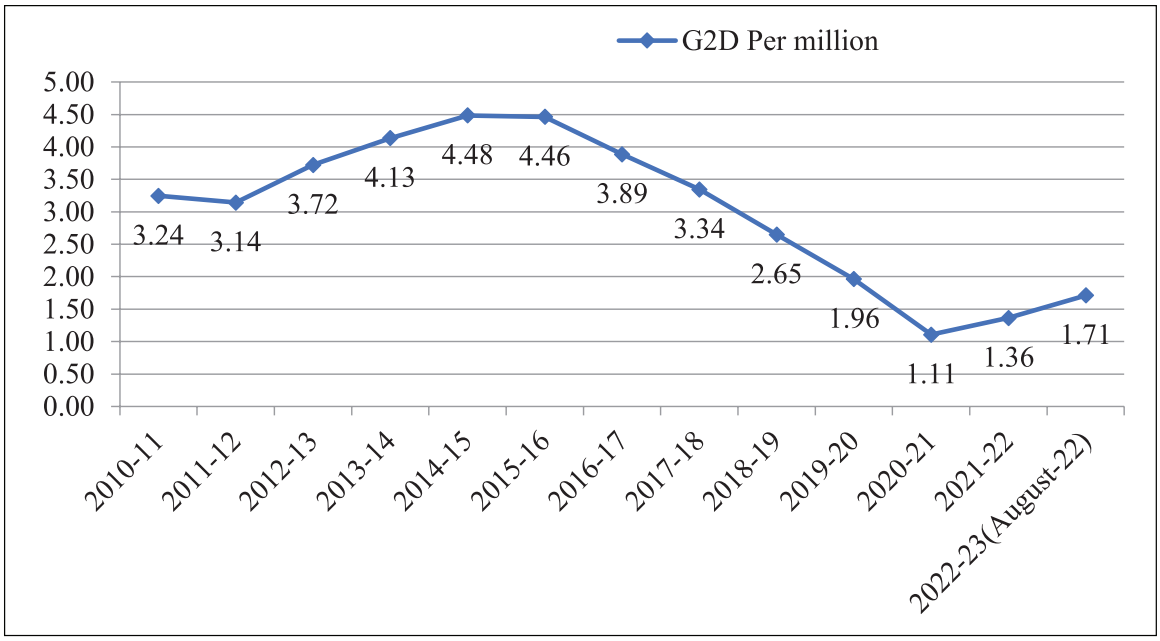
MB Cases & Percentage of MB Cases

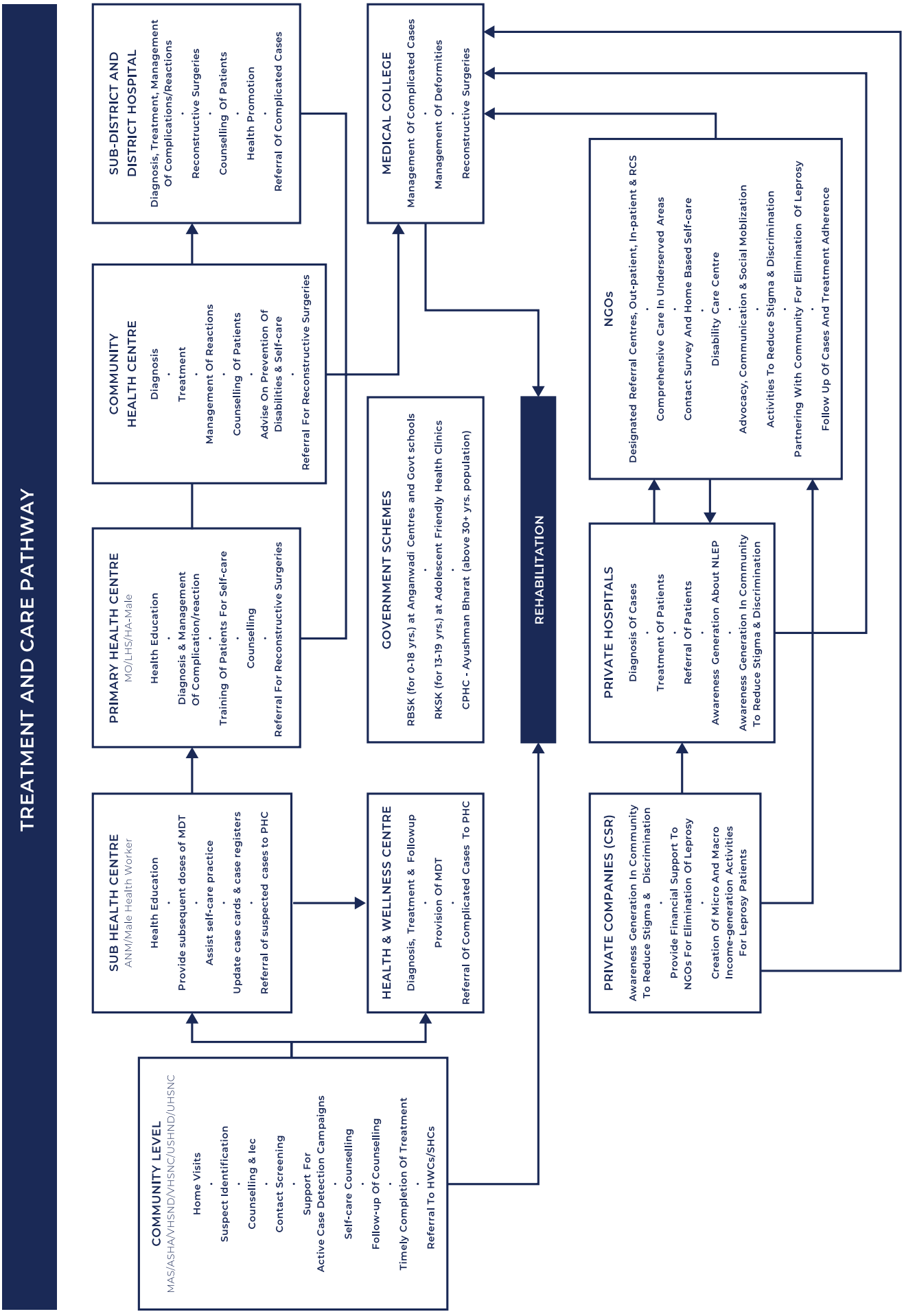


G2D Cases & Percentage of G2D Cases



G2D/million


G2D Per million
5.00
4.50
4.00
3.50
3.00
2.50
2.00
1.50
1.00
0.50
0.00
3.24
3.14
3.72
4.13
4.48
4.46
3.89
3.34
2.65
1.96
1.11
1.36
1.71
2010-11
2011-12
2012-13
2013-14
2014-15
2015-16
2016-17
2017-18
2018-19
2019-20
2020-21
2021-22
2022-23(August-22)


TREATMENT AND CARE PATHWAY
COMMUNITY LEVEL
MAS/ASHA/VHSND/VHSNC/USHND/UHSNC
Home Visits
Suspect Identification
Counselling & Iec
Contact Screening
Support For Active Case Detection Campaigns
Self-care Counselling
Follow-up Of Counselling
Timely Completion Of Treatment
Referral To HWCs/SHCs
SUB HEALTH CENTRE
ANM/Male Health Worker
Health Education
Provide subsequent doses of MDT
Assist self-care practice
Update case cards & case registers
Referral of suspected cases to PHC
HEALTH & WELLNESS CENTRE
Diagnosis, Treatment & Followup
Provision Of MDT
Referral Of Complicated Cases To PHC
PRIMARY HEALTH CENTRE
MO/LHS/HA-Male
Health Education
Diagnosis & Management Of Complication/reaction
Training Of Patients For Self-care
Counselling
Referral For Reconstructive Surgeries
COMMUNITY HEALTH CENTRE
Diagnosis
Treatment
Management Of Reactions
Counselling Of Patients
Advise On Prevention Of Disabilities & Self-care
Referral For Reconstructive Surgeries
SUB-DISTRICT AND DISTRICT HOSPITAL
Diagnosis, Treatment, Management Of Complications/Reactions
Reconstructive Surgeries
Counselling Of Patients
Health Promotion
Referral Of Complicated Cases
GOVERNMENT SCHEMES
RBSK (for 0-18 yrs.) at Anganwadi Centres and Govt schools
RKSK (for 13-19 yrs.) at Adolescent Friendly Health Clinics
CPHC - Ayushman Bharat (above 30+ yrs. population)
REHABILITATION
PRIVATE COMPANIES (CSR)
Awareness Generation In Community To Reduce Stigma & Discrimination
Provide Financial Support To NGOs For Elimination Of Leprosy
Creation Of Micro And Macro Income-generation Activities For Leprosy Patients
PRIVATE HOSPITALS
Diagnosis Of Cases
Treatment Of Patients
Referral Of Patients
Awareness Generation About NLEP
Awareness Generation In Community To Reduce Stigma & Discrimination
NGOs
Designated Referral Centres, Out-patient, In-patient & RCS
Comprehensive Care In Underserved Areas
Contact Survey And Home Based Self-care
Disability Care Centre
Advocacy, Communication & Social Moblization
Activities To Reduce Stigma & Discrimination
Partnering With Community For Elimination Of Leprosy
Follow Up Of Cases And Treatment Adherence
MEDICAL COLLEGE
Management Of Complicated Cases
Management Of Deformities
Reconstructive Surgeries

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