



Updated Revised National Tuberculosis Control Program

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The TB is one of the leading causes of mortality in India. It kills more than 300,000 people in India every year.

India has had an ongoing National TB Program (NTP) since 1962. In order to overcome these lacunae, the Government decided to give a new thrust to TB control activities by revitalizing the NTP, with assistance from international agencies, in 1993. The Revised National TB Control Programme (RNTCP) thus formulated, adopted the internationally recommended Directly Observed Treatment Short-course (DOTS) strategy, as the most systematic and cost-effective approach to revitalise the TB control programme in India. Large-scale implementation of the RNTCP began in late 1998.

Revised National Tuberculosis Control Program (RNTCP) is the state-run tuberculosis (TB) control initiative of the Government of India. As per the National Strategic Plan 2012–17, the program has a vision of achieving a "TB free India", and aims to achieve Universal Access to TB control services. The program provides, various free of cost, quality tuberculosis diagnosis and treatment services across the country through the government health system. It seeks to employ the WHO recommended tuberculosis control strategy, DOTS (Directly Observed Treatment, Short Course), to the Indian scenario.

NIKSHAY, the web based reporting for TB programme has been

another notable achievement initiated in 2012 and has enabled capture and transfer of individual patient data from the remotest health institutions of the country.

Program strategy

The program initially adopted the WHO-DOTS strategy which consisted of the five components of strong political will and administrative commitment, diagnosis by quality assured sputum smear microscopy, uninterrupted supply of quality assured Short Course chemotherapy drugs, Directly Observed Treatment (DOT) and systematic monitoring and Accountability. With progress in achieving objectives outlined in the DOTS Strategy of the 11th Five year Plan, the program defined the new targets of Universal Access to TB care, under the 12th Five Year Plan of Government of India as the National Strategic Plan for 2012–17. The plan hopes to achieve detection of at-least 90% the total estimated cases and a cure rate of 90% in new and 85% in re-treatment cases. Following are the key components:

- Case finding and diagnostics
- Patient friendly treatment services
- Scale-up of Programmatic Management of Drug Resistant TB
- Scale-up of joint TB-HIV collaborative activities
- Integration with health systems
- Control TB

Patient friendly treatment services:

- Promptly and appropriately treating TB, increasingly guided by DST.
- Making DOTS more patient friendly through increased communization of DOT; pilot incentives/offsets for patient costs to help patients complete treatment and better monitoring through information technology.
- Improving partnerships between public and private sector—establish 'Indian Standards for TB Care' which can be used to engage providers using existing private treatment and improve care with some public sector support and supervision.
- Research will guide improvements in regimens and delivery systems.
- National Treatment Committee/TWG for regular review of regimens, all treatment related technical guidance

Scale-up of Programmatic Management of Drug Resistant TB:

- Developing network of C&DST laboratories and strengthening of reference laboratories
- Decentralized DST at district level for early MDR detection
- Improved information system for PMDT
- Manpower support for additional workload by aligning with NRHM health blocks and rationalization of number of patients per STS
- Improved drug management of second-line anti-TB drugs

Scale-up of joint TB-HIV collaborative activities:

- Activities will aim at early, rapid TB diagnosis with high sensitivity tests for HIV-infected TB suspects and ART for all HIV-infected TB patients, with transport support.

Integration with health systems:

- Integrating the RNTCP with the overall health system will increase effectiveness and efficiencies of TB care and control which has been depicted in the picture.
- In rural areas the RNTCP can focus integration through the National Rural Health Mission.
- In urban areas the RNTCP can integrate through the private

sector and the evolving National Urban Health Mission.

Control TB: compared to today's activities, success will:

- Accelerate decline in incidence and prevent 22 lakh TB cases
- Reduce TB deaths by 75%, and save 17 lakh lives from TB
- Contain MDR TB: avert 1 lakh MDR cases and reduce incidence by 50%
- Quicker diagnosis of more TB patients, more effective treatment in future direct economic expenditure on TB cases prevented and
- Leadership for India: Sustain India's global leadership in TB treatment and control.

As a national health program, RNTCP pays more attention to the sputum-positive pulmonary tuberculosis patients (who are likely to spread the disease in the community) than people with other, non-pulmonary forms of the disease.

Treatment categories and drug regimens

Based on results from a recent study, RNTCP has issued guidelines to states on daily treatment for tuberculosis. The daily regimen will replace the existing alternate day (thrice weekly) regimen from January - February 2016 in selected states. The daily regimen has shown to be effective in reducing relapse rates and drug-resistance. Fixed Dose Combination (FDC) of Daily Regimen is available for 4 weeks packing i.e., for 28 days.

Standardized treatment regimens are one of the pillars of the DOTS strategy. Isoniazid (H), Rifampicin (R), Pyrazinamide (Z), Ethambutol (E), and Streptomycin (S) are the primary medicines to treat TB.

For New TB Case:

1. Treatment will continue for 24 weeks.
2. Intensive Phase (IP) will continue for 4 weeks in which 4 First line anti tuberculosis medicine H, R, Z, E (4 FDC) will

be administered as per 4 weigh bands.

- In Continuation Phase (CP), 3 FDC (H,R,E) will be given instead of 4 FDC as Pyrazinamide will not be administered. CP phase will be continued for 16 weeks.
- Both IP and CP phase will be administered as per Daily Regimen.

For Previously Treated Case of TB:

- TB patients who has been advised for re- treatment for TB; their treatment will be continued for 32 weeks.
- IP phase will be for 12 weeks.
- For 1st 4 weeks Inj. Streptomycin will be administered along with 4 FDC. Out of 12 weeks of IP phase, last 4 weeks only FDC will be continued without Injection Streptomycin.
- 3FDC will be administered in CP phase for these types of patients.

Table 1: RNTCP Daily Treatment Regimen

Type of TB Case	Treatment Regimen in IP	Treatment Regimen in CP
New TB Cases	2HRZE	4HRE
Previously treated TB Cases	2HRZES + 1HRZE	5HRE

Notes

*New categories includes former Categories I & III

**Previously treated is former Category II

Table 2: Daily Regimen for Adult Cases as per Body Weight

Weight Category	Number of tablets to be consumed		Inj. Streptomycin *
	IP	CP	
	HRZE	HRE	
	75/150/400/275 mg per tab	75/150/275 mg per tab	gm
25-39 KG	2	2	0.5
40-54 KG	3	3	0.75
55-69 KG	4	4	1
≥70	5	5	1

*Body weight < 50 Kg: 0.5 – 0.75 gm; Aged more than 50 years: 0.75 gm daily.

Table 3: Doses in RNTCP Daily Regimen

Type of TB Case	Doses in IP	Doses in CP
New	56 doses (8 weeks x 7 days/ week) or 28*2	112 doses (16 weeks x 7 days/ week) or 28*4
Previously treated	84 doses (12 weeks x 7 days/ week) or 28*3	140 doses (20 weeks x 7 days/ week) or 28*5

Table 4: Drug Doses for Pediatric TB Patients

Weight Category	Number of Tablets (Dispersible FDCs)				Inj. Streptomycin
	IP		CP		
	HRZ	E	HR	E	
	50/75/150	100	50/75	100	
				mg	
4-7 KG	1	1	1	1	100
8-11 KG	2	2	2	2	150
12-15 KG	3	3	3	3	200
16-24 KG	4	4	4	4	300
25-29 KG	3 + 1A*	3	3 + 1A*	3	400
30-39 KG	2 + 2A*	2	2 + 2A*	2	500

A= Adult FDC (HRZE = 75/150/400/275; HRE = 75/150/275)

References

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