

Revised National Tuberculosis Control Programme (RNTCP)

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The Beginning.....

- 1962 National Tuberculosis Programme (NTP)
 - Treatment success rates were unacceptably low
 - High mortality rate
 - High treatment defaulter rate
 - Managerial weakness including inadequate funds
 - Over-reliance on X-ray for diagnosis
 - Frequent interruptions in Drug supplies
 - Low rates of treatment completion
- 1992 Situational review

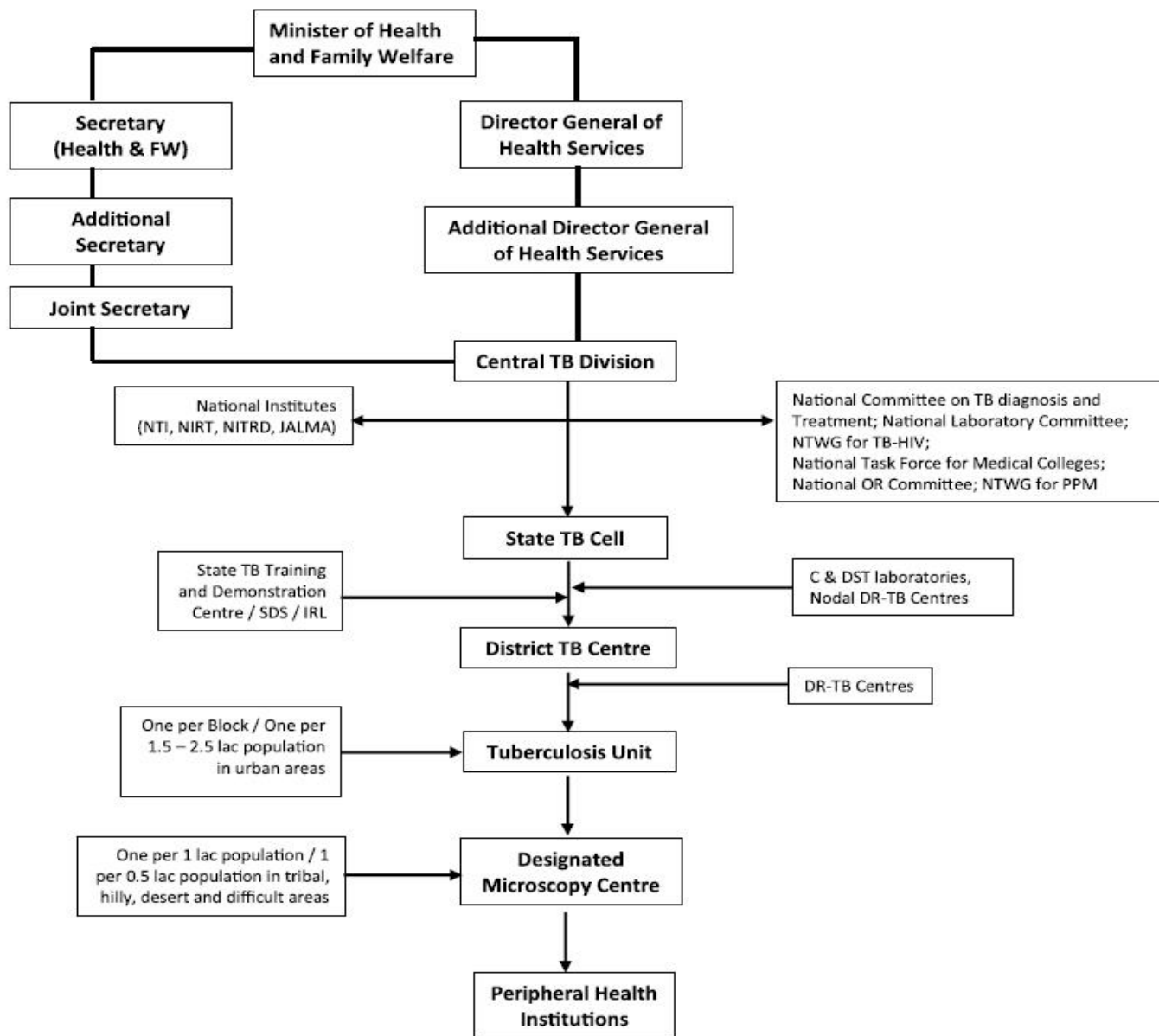
- 1993 Pilot Phases began with revised strategy
 - Phase I – Delhi, Mumbai, Kolkata, Bangalore & Mehsana District of Gujarat
 - Phase II – Extended to 16 more areas
 - Phase III – 102 Districts across 15 States
- 1997 Launched as a National Programme
 - Based on DOTS Strategy
 - Phased manner
- 1998 Only 2% of Population of India covered
 - Speeded up since late 1998
- 2006 Covers the whole country
 - Stop TB Strategy

- DOTS Strategy
 - Political will and Administrative Commitment
 - Diagnosis by Quality assured Sputum Microscopy
 - Adequate supply of quality assured Drugs
 - Directly Observed Treatment
 - Systematic Monitoring and Accountability
- Stop TB Strategy
 - Pursuing Quality DOTS
 - Addressing TB/HIV & MDR-TB
 - Contributing to Health System Strengthening
 - Engaging all care providers
 - Empowering patients & communities
 - Enabling and Promoting Research

Objectives of RNTCP

- Achievement of at least 85 percent cure rate of Infectious cases of tuberculosis, through DOTS involving peripheral health functionaries
- Augmentation of case finding activities through quality sputum microscopy to detect at least 70 percent of estimated cases

Orgnogram



END TB STRATEGY

VISION	A WORLD FREE OF TB - Zero deaths, disease and suffering due to TB			
GOAL	END THE GLOBAL TB EPIDEMIC			
INDICATORS	Milestones		Targets	
	2020	2035	SDG 2030	End TB 2035
Reduction in number of TB deaths compared with 2015 (%)	35%	75%	90%	95%
Reduction in TB incidence rate compared with 2015 (%)	20% ($<85/100,000$)	50% ($<55/100,000$)	80% ($<20/100,000$)	90% ($<10/100,000$)
TB-affected family facing catastrophic costs due to TB (%)	0	0	0	0

PRINCIPLES

- Government stewardship and accountability, with monitoring and evaluation*
- Strong coalition with civil society organizations and communities*
- Protection and promotion of human rights, ethics and equity*
- Adaptation of strategy and targets at country level, with global collaboration*

PILLARS AND COMPONENTS

1. INTEGRATED, PATIENT-CENTRED CARE AND PREVENTION

- A. Early diagnosis of tuberculosis including universal drug-susceptibility testing, and systematic screening of contacts and high-risk groups
- B. Treatment of all people with tuberculosis including drug-resistant tuberculosis, and patient support
- C. Collaborative tuberculosis/HIV activities, and management of co-morbidities
- D. Preventive treatment of persons at high risk, and vaccination against tuberculosis

2. BOLD POLICIES AND SUPPORTIVE SYSTEMS

- A. Political commitment with adequate resources for tuberculosis care and prevention
- B. Engagement of communities, civil society organizations, and public and private care providers
- C. Universal health coverage policy, and regulatory frameworks for case notification, vital registration, quality and rational use of medicines, and infection control
- D. Social protection, poverty alleviation and actions on other determinants of tuberculosis

3. INTENSIFIED RESEARCH AND INNOVATION

- A. Discovery, development and rapid uptake of new tools, interventions and strategies
- B. Research to optimize implementation and impact, and promote innovations

Case Definition in RNTCP

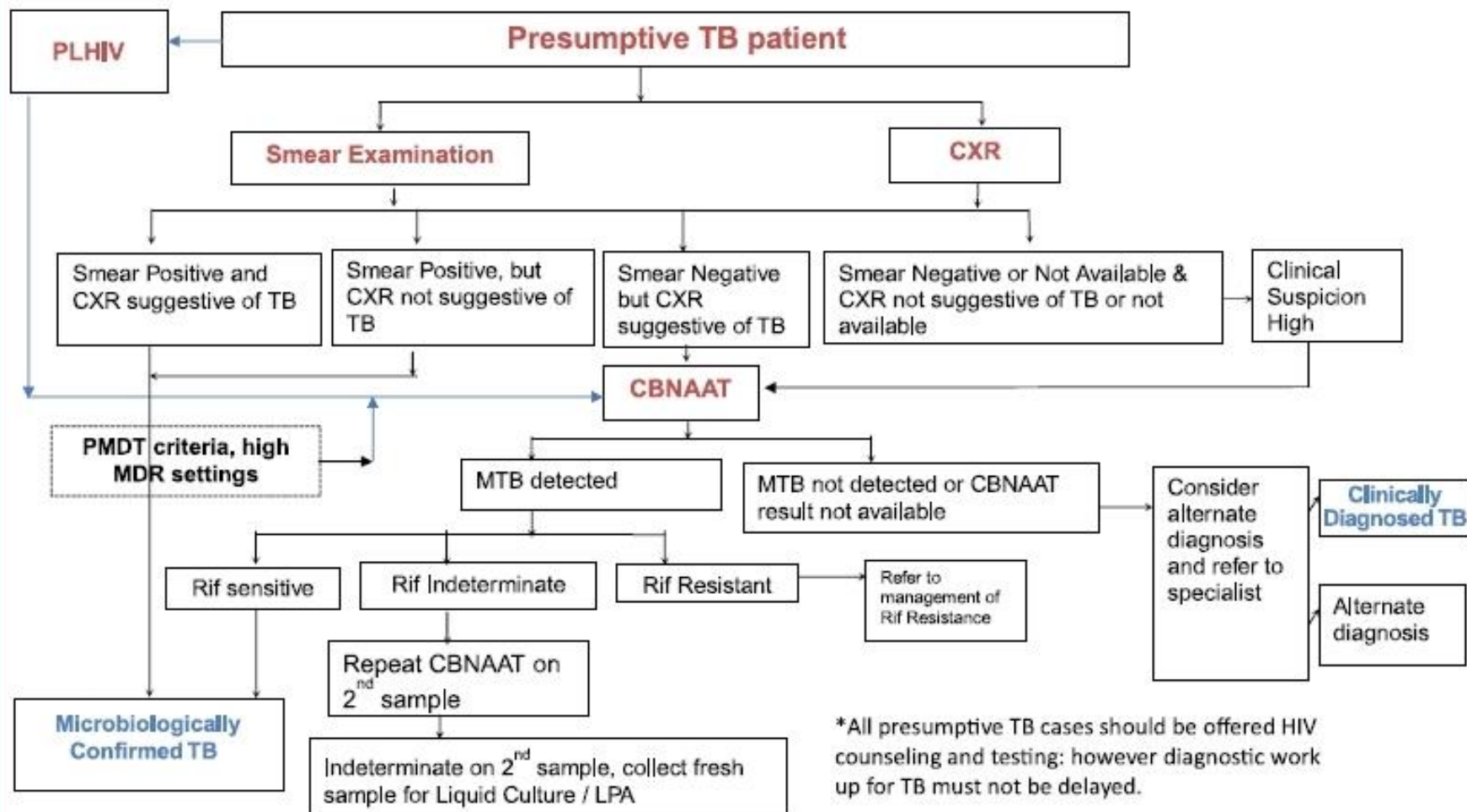
- I. **Microbiologically confirmed TB case** refers to a presumptive TB patient with biological specimen positive for acid fast bacilli, or positive for *Mycobacterium tuberculosis* on culture, or positive for tuberculosis through Quality Assured Rapid Diagnostic molecular test.
- II. **Clinically diagnosed TB case** refers to a presumptive TB patient who is not microbiologically confirmed, but has been diagnosed with active TB by a clinician on the basis of X-ray abnormalities, histopathology or clinical signs with a decision to treat the patient with a full course of Anti-TB treatment.

In children, clinically diagnosed TB case is diagnosed based on the presence of abnormalities consistent with TB on radiography, a history of exposure to an infectious case, evidence of TB infection (positive TST) and clinical findings suggestive of TB in children in event of negative or unavailable microbiological results

Microbiologically confirmed or **clinically** diagnosed cases of TB are also classified according to:

- anatomical site of disease;
- history of previous treatment;
- drug resistance;

Diagnostic algorithm for pulmonary TB



*All presumptive TB cases should be offered HIV counseling and testing; however diagnostic work up for TB must not be delayed.

Classification based on history of TB treatment

- a) **New case** - A TB patient who has never had treatment for TB or has taken anti-TB drugs for less than one month is considered as a new case.
- b) **Previously treated patients** have received 1 month or more of anti-TB drugs in the past.
 - I. **Recurrent TB case**- A TB Patient previously declared as successfully treated (cured/treatment completed) and is subsequently found to be microbiologically confirmed TB case is a recurrent TB case.
 - II. **Treatment After failure** patients are those who have previously been treated for TB and whose treatment failed at the end of their most recent course of treatment.
 - III. **Treatment after loss to follow-up** A TB patient previously treated for TB for 1 month or more and was declared lost to follow-up in their most recent course of treatment and subsequently found microbiologically confirmed TB case
 - IV. **Other previously treated patients** are those who have previously been treated for TB but whose outcome after their most recent course of treatment is unknown or undocumented.
- c) **Transferred In:** A TB patient who is received for treatment in a Tuberculosis Unit, after registered for treatment in another TB unit is considered as a case of transferred in.

Daily Drug Regimen

For new TB cases, the treatment in intensive phase (IP) will consist of eight weeks of Isoniazid, Rifampicin, Pyrazinamide and Ethambutol in daily dosages as per four weight band categories. There will be no need for extension of IP. Only Pyrazinamide will be stopped in the Continuation Phase (CP), while the other three drugs will be continued for another 16 weeks as daily dosages.

For previously treated cases of TB, the IP will be of 12 weeks, where injection Streptomycin will be stopped after 8-weeks and the remaining four drugs (INH, Rifampicin, Pyrazinamide and Ethambutol) in daily dosages as per weight bands will be continued for another 4-weeks. There will be no need for extension of IP. At the start of CP, Pyrazinamide will be stopped while the rest of the drugs – Rifampicin, INH and Ethambutol will be continued for another 20 weeks as daily dosages in the CP.

Type of TB Case	Treatment regimen in IP	Treatment regimen CP
New	(2) HRZE	(4) HRE
Previously treated	(2) HRZES + (1) HRZE	(5) HRE

Prefix to the drugs stands for number of months

Drug Dosage for Adult TB

Weight category	Number of tablets (FDCs)		Inj. Streptomycin
	Intensive phase	Continuation phase	
	HRZE	HRE	
	75/150/400/275	75/150/275	
25-39 kg	2	2	0.5
40-54 kg	3	3	0.75
55-69 kg	4	4	1
>=70	5	5	1

**Inj. Streptomycin to be added in IP phase for 2 months in the previously treated regimen of drug sensitive patients. In patients above 50 years of age, maximum dose of streptomycin should be 0.75gm.*

Identified initial sites for BDQ-CAP

- NITRD, New Delhi
- RBIPMT, New Delhi
- BJ Medical College, Ahmedabad, Gujarat
- GHTM Tambaram, Chennai, Tamilnadu
- Guwahati Medical college, Guwahati, Assam
- **KEM , Mumbai, Maharashtra**





REVISED NATIONAL TUBERCULOSIS CONTROL PROGRAMME

(MINISTRY OF HEALTH AND FAMILY WELFARE, GOVERNMENT OF INDIA)

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About RNTCP

In India today, two deaths occur every three minutes from tuberculosis (TB). But these deaths can be prevented. With proper care and treatment, TB patients can be cured and the battle against TB can be won.

Tuberculosis (TB) is an infectious disease caused by a Bacterium, *Mycobacterium tuberculosis*. It is spread through the air by a person suffering from TB. A single patient can infect 10 or more people in a year.

India has a long and distinguished tradition of research in TB. Studies from the Tuberculosis Research Centre in Chennai and the National Tuberculosis Institute in Bangalore provided key knowledge to improve treatment of TB patients all around the world.

Modern anti-TB treatment can cure virtually all patients. It is, however, very important that treatment be taken for the prescribed duration, which in every case is a minimum of 6 months. Because treatment is of such a long duration and patients feel better after just 1-2 months, and because many TB patients face other problems such as poverty and unemployment, treatment is often interrupted.

Therefore, just providing anti-TB medication is not sufficient to ensure that patients are cured. The DOTS strategy ensures that infectious TB patients are diagnosed and treated effectively till cure, by ensuring availability of the full course of drugs and a system for monitoring patient compliance to the treatment.



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Using Mobile Phones to Monitor and Improve Adherence to Tuberculosis Medications

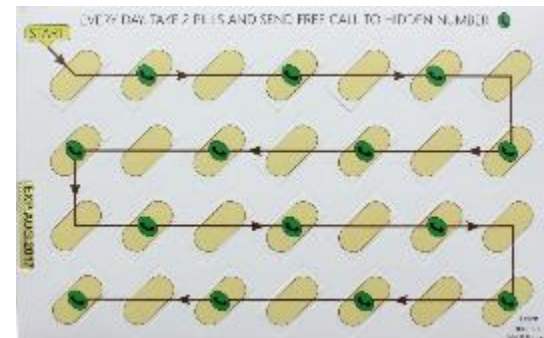
In collaboration with:
Central TB Division

Microsoft Research



Ministry of Health
& Family Welfare
Government of India

सत्यमेव जयते

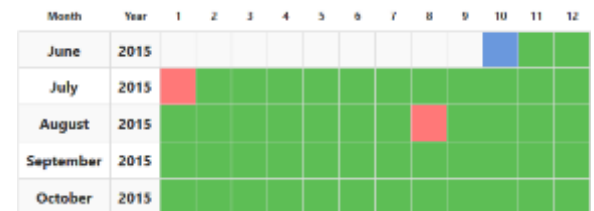


October 2016

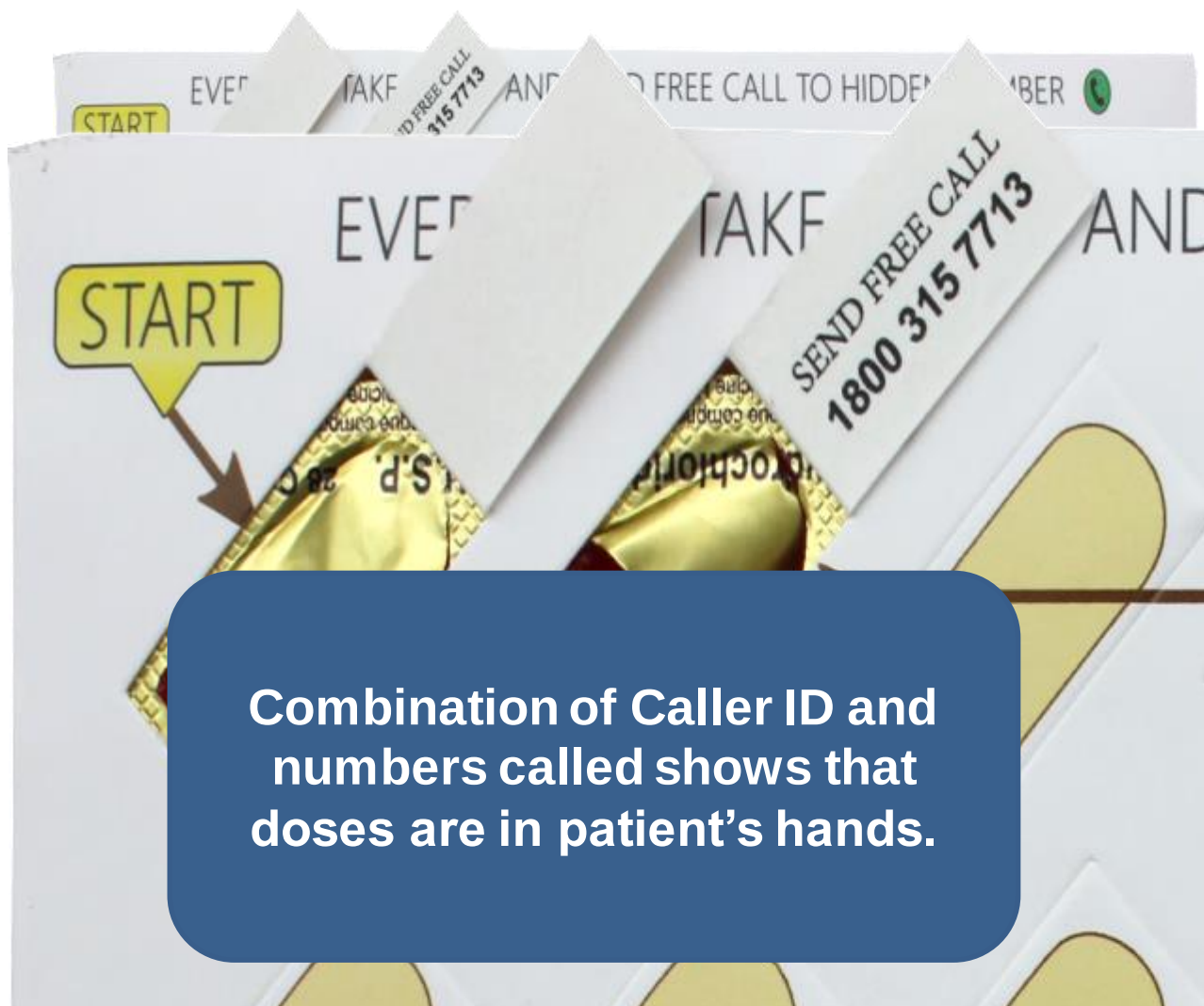
What is 99DOTS?

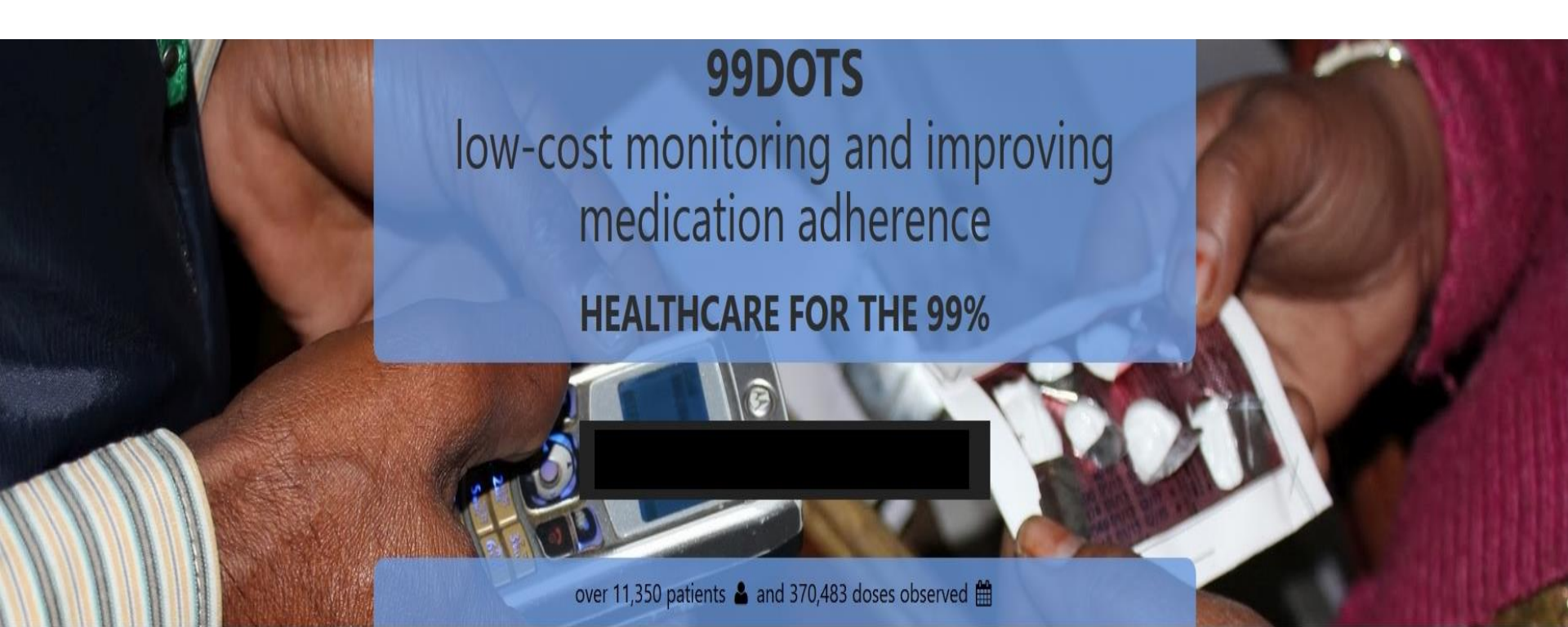
Goal: to provide 99% of the benefits of DOTS at a fraction of the cost and inconvenience to patients

- Anti-TB drugs are wrapped in envelopes which are printed with hidden numbers behind the pills
- When patients dispense a dose, they reveal a hidden TOLL FREE number which they call
- This call gets reflected on our dashboard **immediately** as a taken dose



99DOTS: Accurate Monitoring at Very Low Cost





99DOTS

low-cost monitoring and improving
medication adherence

HEALTHCARE FOR THE 99%

over 11,350 patients  and 370,483 doses observed 



LOW-COST / INCLUSIVE

Patients send a free call each time they take their medication, so that providers can monitor adherence records. The calls are toll-free, so patients do not have any additional costs. Most patients have access to a mobile phone and can make a call, so 99DOTS reaches the maximum



RELIABLE ANALYTICS

The analytics produced are extremely powerful, allowing providers to focus their time and attention on those patients who need extra help and counseling taking their medication. Deployments, agencies, and government can also use the data to understand in real-time their



TWO-WAY INTERACTION

Once a patient is interacting with 99DOTS, we can bootstrap other services to improve adherence, including daily reminders, incentive structures, or custom-tailored medical advice or counseling if a patient needs.

SUMMARY

- Evolution of RNTCP
- Changes in Strategy
- Organogram
- Case Categorization
- Daily Drug Regimen
- Newer Initiatives under RNTCP