

# Using Mobile Phones to Monitor and Improve Adherence to Tuberculosis Medications

#### Central TB Division

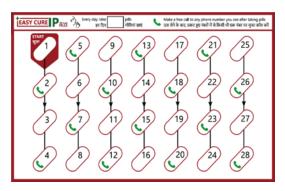


Ministry of Health & Family Welfare Goverment of India













What is 99DOTS

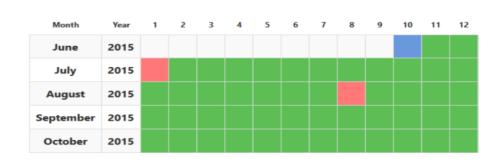
- Features and Benefits of 99DOTS
  - ✓ Benefit to Patient
  - ✓ Benefit to Field Staff
  - ✓ Benefit to District Supervisors

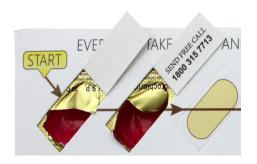
 99DOTS workflow on Nikshay Dashboard 99DOTS is a low-cost approach for monitoring and improving TB medication adherence.

It can be utilized either as a supplement to existing DOTS programs, or to enable remote observation of doses administered by patients or their family members.

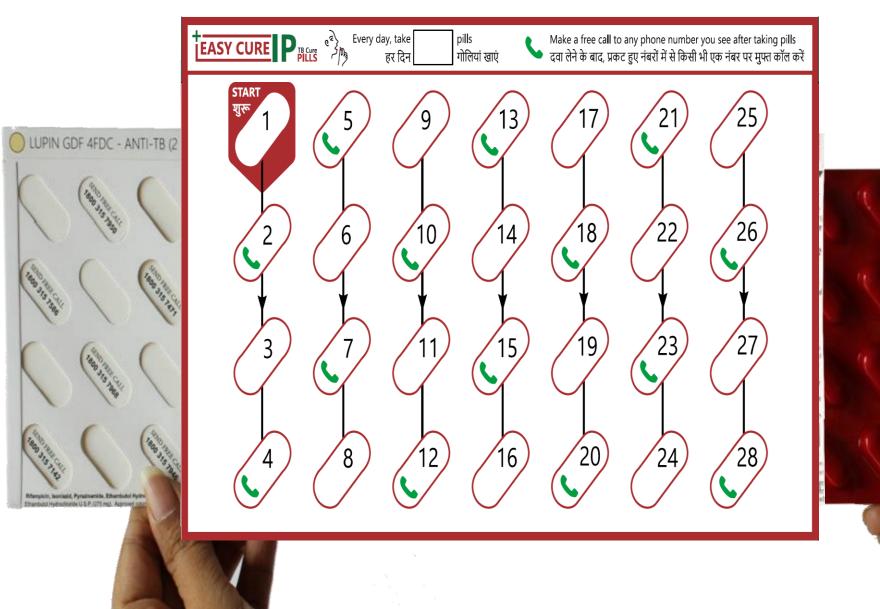
# Goal: to provide 99% of the benefits of DOTS at a fraction of the cost and more convenience for patients

- Anti-TB drugs are wrapped in envelopes which are printed with hidden numbers behind the pills
- When patients dispense a dose, a hidden TOLL FREE number is revealed. After taking daily medication, patients make a free call to the hidden phone number, yielding high confidence that the dose was "in-hand" and has been taken
- This call gets reflected on the Nikshay dashboard immediately as a taken dose









# How can the Patient data be accessed?

Different ways of accessing the patient data –

- Nikshay Web dashboard
  - login with your Nikshay ID and Password to access their patients
- Nikshay Mobile app (For Android phones)
  - Most of the functions that you can do on the Web dashboard can be done through the mobile app
- <u>SMS</u> Alerts for Staff and Treatment Supporters to take immediate action

### Calendar View of Adherence





### SMS Alerts from 99DOTS

#### **Reminders to Patients**

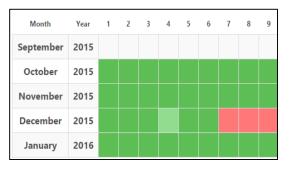
#### **Alerts to Staff**

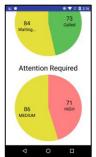


#### **Notification of new patients**



#### **Analytics and Reports for Program**





#### Features of 99DOTS

- Calls are completely free for patients
- Calls can be made even when the patient has no pre paid balance or the mobile is in roaming area
- Any call from a registered patient number is marked as a dose taken (personal, shared, land line)
- Numbers are not unique, but appear in an unpredictable sequence – ensures pill-in-hand adherence
- When patients call, they hear "Thank you"
- Calls immediately show up in the dashboard as taken doses
- Automatic alerts and reminders to patients and supervisors for non-adherent patients
- Adherence records available to field staff, medical officers, district staff and all other stakeholders in the program





Two of your patients have missed doses Raj (979XXXXXX) & Om (812XXXXXX)

#### Benefits of 99DOTS

**Patients** 

- Less travel
- Increased convenience

Field
Staff/Supervisors

Focused and more efficient care

**Program Officers** 

- Easy monitoring
- Accurate reports

### 99DOTS: Workflow - Summary





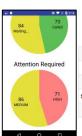
Patient visits the center with symptoms of TB
Cough, Fever, Night sweats,
Weight loss



Patient's sputum is sent for testing

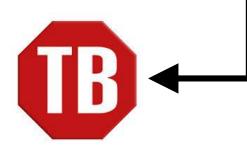


Medical evaluation for evidence of TB









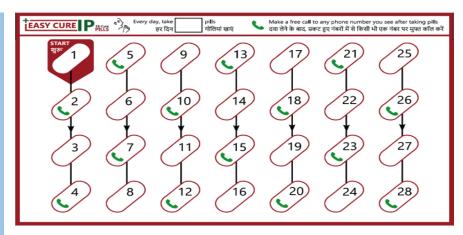
Continuous monitoring and follow up by staff

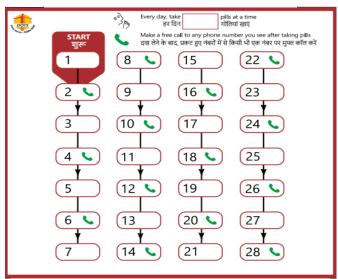
Patient registered for 99DOTS adherence monitoring on Nikshay website and counseled on adherence

Patient identified positive for TB

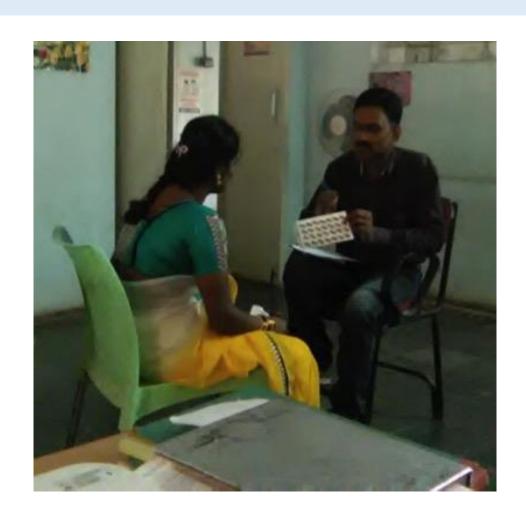
### 99DOTS Envelopes – Universal

- Each patient gets the same sleeve, regardless of weight band
- Envelopes are available for both Lupin and Macleods types of FDCs
- Counselor/pharmacist should write number of pills/day patient should take on the envelope
- Every day, a patient will take prescribed number of pills and reveal 1, 2, or 3 hidden phone numbers
  - Patient should call any one number they reveal that day
- Patient should start at pill 1 and move in sequence (1,2,3...28), completing each column, and starting from the top at each row





# Patient counseling of 99DOTS



#### 99D TS INFORMATION



- Take pills according to the arrow marks
- Call any one of the number revealed under the flap after you take pills
- · All calls are free

- Everyday we monitor your calls
- We can see a GREEN colour box if you have called
- We can see a RED colour box if you do not call

<	JUNE 2018												
SUN	MON	TUE WED THU FRI											
					1	2							
3	4	5	6	7	8	9							
10	11	12	13	14	15	16							
17	18	19	20	21	22	23							
24	25	26	27	28	29	30							



- If you do not call, you will receive a reminder call/SMS/house visit from us
- You may also receive automated calls or SMS based on your calling

#### WHAT WOULD YOU LIKE TO SEE?





### Patient monitoring by RNTCP

- Login to Nikshay Website or Mobile app to see patient adherence/notes on 99DOTS
  - Follow up with patients with low adherence
- Respond to SMS alerts, and 99DOTS requests to follow up with patients
- DOTS+ Supervisor/RNTCP team to review adherence at regular meetings
- Add notes on patient behavior to log follow ups



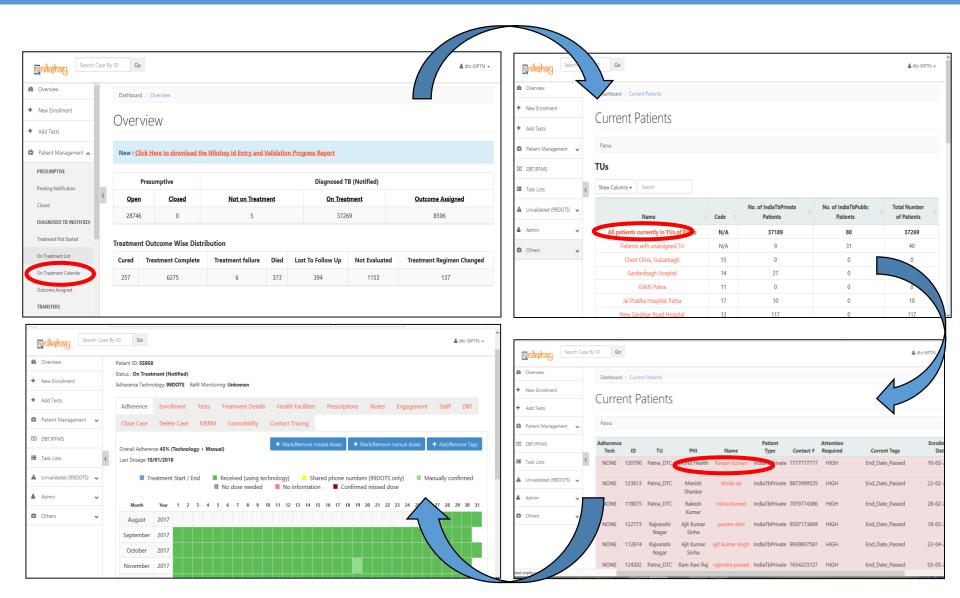
ID#	Status -	Patient \$	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
5869	ACTIVE	MANOJ MASUR																														
5875	ACTIVE	RAVINDRA DHA																														
5870	ACTIVE	RITESH KATARE																														

### 99DOTS on Nikshay Website and App - Workflow

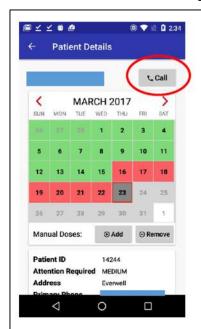
#### **NOTE:**

For detailed information on how to use 99DOTS on Nikshay Website or the Mobile app to perform various tasks, see the respective guides/videos available on the **Training**Materials menu inside Nikshay dashboard.

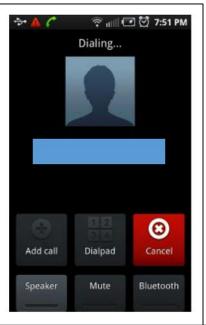
### Snapshots of 99DOTS on Nikshay Website Dashboard

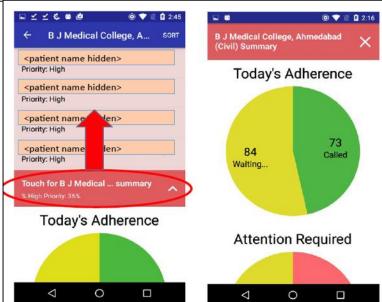


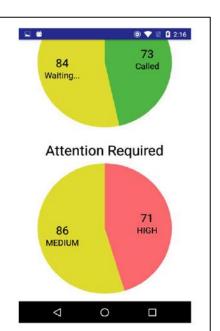
#### Snapshots of Nikshay Mobile App











## THANK YOU