Summer Training
at
Innovtaors In Health (IIH) India
In collaboration with WHO
31st March 2018 - 1st June 2018

Drug Adherence in MDR-TB Patient

By
Ramesh pal

Under the guidance of
Dr. Sameer Phadnis

MBA Hospital & Health Management
2017-2019

Institute of Health Management Research
The IIHMR University, Jaipur
2018

INSTITUTE OF HEALTH
MANAGEMENT RESEARCH
(WHO Collaborating Centre for District Health System Based on Primary Health Care)

IIHMR UNIVERSITY

CERTIFICATE

This is to certify that **Mr. Ramesh pal** has undergone summer training in IIHMR University at **Innovators ion health (India)** from **1st April, 2018 to 31st May, 2018.**

The candidate himself completed the project assigned to him during summer training. His approach to the project was sincere and proactive. This summer training is in partial fulfillment of the course requirement recommended for the award of MBA in hospital and health management.

I wish him success in all his future endeavors.

Dr. Sameer Phadnis
Professor
IIHMR University, Jaipur

Col. (Dr.) Ashok Kaushik
Dean (Academic & Student Affairs)
IIHMR University, Jaipur

1, Prabhu Dayal Marg, Near Sanganer Airport, Jaipur- 302029, Rajasthan, India.
Ph.: 0141- 3924700, 2791431- 32, Fax: 0141 3924738, E-mail: iihmr@iihmr.edu.in, Web.: www.iihmr.edu.in

Innovators In Health (India)

Head office: Ground Floor, House No. 176, Road No. 2, G.D. Mishra Path, New Patliputra Colony,
PS: Patliputra, Patna, Bihar. 800013. Ph: 0612-2265533

Field Office: c/o Sultana Parveen, w/o Md. Tufail Ahmad, Mauja-Chaklokman Inside, Nagar Panchayat: Dalsinghsarai,
Ward 02, Thana: Dalsinghsarai, Distt: Samastipur, Bihar. 848114. Ph: 06278-221469

31 May 2018

To whom it may concern,

It is to certify that Ramesh Pal, a first year student in the MBA (Hospital and Health Management) program at the Institute of Health Management Research, Jaipur completed his summer internship with Innovators in Health. He worked in Dalsinghsarai, a block in the Samastipur district of Bihar, for 2 months from 1 April 2017 to 31 May 2018.

His conduct was satisfactory and he made efforts to learn from the experiences of the team. He was enthusiastic to learn about the community and program interventions.

We wish him every success in life.

For Innovators in Health (India),

Tushar Garg
31.05.2018
INNOVATORS IN HEALTH (INDIA)

Tushar Garg,
Program Manager.
Program Manager
tgarg@innovatorsinhealth.org
+91 98286 09562

ACKNOWL EDGEMENT

I would take this opportunity to express my profound gratitude to our institute, Institute of Health Management and Research, for providing us a platform to gain enough knowledge and skills in different aspects of Health Management.

I express my deep indebtedness to Dr Tushar Garg and Dyuti Sen, Innovators In health, for their advice, support, encouragement and guidance throughout my training.

My sincere thanks to my respected mentor, Dr.Sameer Phadnis , Professor for his support throughout the project. Without his guidance, this work would not have marterialized.

Lastly, I wish to thank the people whose insights and experiences have shaped the content of this report.

Ramesh pal

TABLE OF CONTENTS

ABBREVIATIONS AND ACRONYMS

AC-ASHA Coordinator

ASHA-Accredited Social Health Activist

CBNAAT-Cartridge Based Nucleic Acid Amplification Test

CHW-Community Health Worker

DOTS-Directly Observed Treatment Short course

DTO-District TB Officer

EP TB-Extra Pulmonary Tuberculosis

GDP-Gross Domestic Product

IIH-Innovators In Health

IHF-India Health Fund

K-Thousand

M-Million

MIS-Management Information System

MDR TB-Multi Drug-Resistant Tuberculosis

NGO-Non-Government Organization

PHS-Public Health System

PTB-Pulmonary Tuberculosis

RNTCP-Revised National Tuberculosis Control Programme

STS-Senior TB Treatment Supervisor

STLS-Senior TB Lab Supervisor

TB-Tuberculosis

TU-Tuberculosis Unit

WHO-World Health Organization

INTRODUCTION

Overview and Objectives

The Problem

India continues to have the highest number of tuberculosis (TB) cases in the world with an estimated 27.9 lakh patients suffered from TB and around 4.23 lakh patients died during the year 2016[1]. Out of the 27.9 lakh estimated patients, only 1,938,158 TB cases were notified through the public and private sector in India, which means over 8.5 lakh cases couldn't be notified[2].

The Need

Nearly 0.85 million cases of TB in India are not notified to the Revised National Tuberculosis Control Program[3]. Most of these cases seek private treatment. In the rural context, a majority are unable to complete treatment, suffer financial catastrophe and frequent relapse. They approach the public health system (PHS) when their condition worsens. They have the greater risk of developing multi-drug resistant TB (MDR-TB) and infecting others due to delays in recommended treatment.

The Project

IIH (India) with the support of India Health Fund (IHF) implemented its intervention for improving outcomes of TB patients in public care. The project implemented its intervention in two phases. In the first and beginning phase of the intervention, project recruited team, initiated dialogue with private physicians, pharmacists, and diagnostic centres. Project established operational protocol and initiated a pilot activity. In pilot activity, the project enrolled TB patient staking treatment from private healthcare facilities and tried to understand the dynamics of the relationship between patient and provider. The project conducted baseline survey in the beginning phase to collect the baseline information for TB patients under public and private care. In the second phase of the intervention, the project scaled up its intervention by enrolling 40-50 patients per month, refined operational strategy with inputs from the different stakeholders involved with the project.

Objective

The project was rolled out with objective to identify TB patients under the public and private care with the support of govt. and private physicians and pharmacists and improve their

[1] Global TB Report 2017
[2] WHO Report 2017
[3] WHO Report 2017

outcomes with the support of community health workers.

The Coverage

The project started its intervention in the Dalsinghsarai block of the Samastipur district of Bihar state, about 3 hours by road from Patna, the state capital and extended its intervention in another neighbouring block, Vidyapatinagar. The project engaged private physicians, pharmacists, diagnostic centre and community health workers (CHWs) in two blocks, Dalsinghsarai and Vidyapatinagar with an estimated population of 3.5 million as per 2011 census. The private physicians and pharmacists notified TB patients belonging to these two blocks as well as other blocks of the district. The project enrolled all these notified patients and monitored them through physical visit in the Dalsinghsarai and Vidyapatinagar block and through telephonic counselling for patients belonging to other blocks.

MIS Development: The project developed an online management information system (MIS) to record the details of every TB patients under private care. It is maintained online on the Google excel sheet. The project enriched MIS by including vital information of TB patients, viz. information on contact details, diagnosis, treatment, treatment outcome, Nikshay notification number and summary of counselling and physical visit carried out by the project member. The MIS helped in tracking drug adherence and follow up counselling of TB patients.

E-NikshayNotification of TB Patients: The project notified 95% of total 739 enrolled TB patients to the RNTCP through Nikshay web portal. Others couldn't be notified because of incomplete information and will be notified in coming quarter

99DOTS: Workflow - Summary

Patient visits TU with symptoms of TB

Cough, Fever, Night sweats, Weight loss

Patient's sputum is sent for testing

Medical evaluation for evidence of TB

Patient identified positive for TB

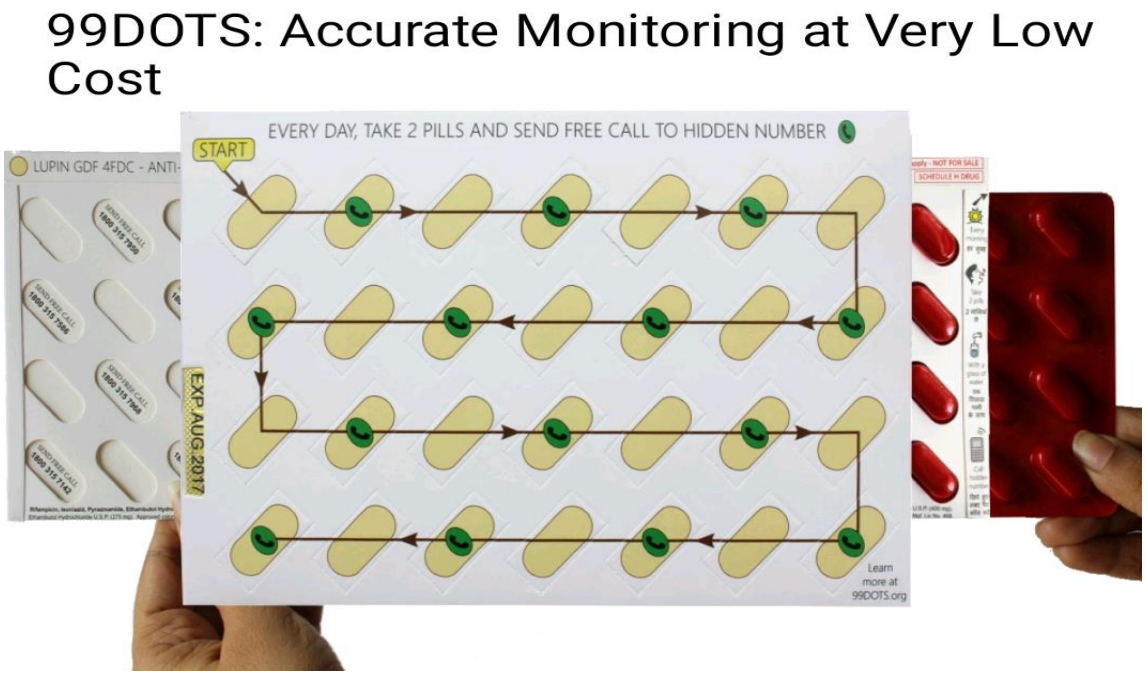
Patient registered on 99DOTS website and counseled on adherence

Continuous monitoring and follow up by RNTCP staff

FDC Drugs by Weight

WEIGHT CLASS	# OF PILLS	# STRIPS FOR 28 DAYS
< 25 kgs	Does not receive FDCs or 99DOTS	0
30 – 39 kgs	2 pills per day	2
40 – 54 kgs	3 pills per day	3
55 – 70 kgs	4 pills per day	4
> 70 kgs	5 pills per day	5

FDCs wrapped in custom 99DOTS envelopes based on weight (diagrams to follow)



.

ABOUT SUMMER TRAINING AT DALSINGHSARAI, BIHAR

Life is a challenge accept it, live it and face it besides this life gives us so many opportunities to learn from day to day activities, here training plays a vital role. Training is a learning process of developing skills, knowledge, improving ones capabilities, productivity and performance.

As a student got this wonderful opportunity to do summer training at Dalsingsarai Block of Samastipur. Doing training at this place gives me a wonderful real life experience in core health. Different tasks were assigned in day to day activities at this organization that will definitely help me in facing different challenges during career growth. Experience the pain of our community due to health related issues so, learned the importance of health management in building loopholes of our health system. I am sure this learning at summer training will definitely help me in future.

TASK ASSIGNED AND LEARNINGS

WEEK	MAJOR ACTIVITIES	LEARNINGS
1st WEEK	• Presentation about the organization • IHF(Indian health fund field visit) • Visit to SDH hospital • Attended ASHA facilitator	• Understanding organization i.e. how it works, what are the role of different stakeholders within and outside the organization. • Understanding organogram

	• Field visits • Participated in how to organize a camp for vulnerable section.	• Understands the new concept how a private practitioner and chemist influence the health system in different and unique way.
2nd WEEK	• Data collection from IMIS (Integrated management information system) and transferred to excel sheet. • Participated in counsellor meeting and interaction with different councillors. • Participated in Mahila mandal meetings. • Participated in data collection for base line survey. • Field visits and interaction with community • Visited SDH hospital • Interview with government ASHA.	• Learned about data management. • Understanding of the program running in the organization • Learned about the importance of community engagement in health sector with the help of mahila mandal meetings. • Appreciate real life experience • Understanding of government hospital set up.
3rd WEEK	• Revise presentation • Participated in ASHA facilitator training. • Mahila mandal meetings • Understanding data archive record • Interview with ASHAs, ASHA facilitators.	• Improve presentation skills • Learned about the importance of training from time to time of different stakeholders working with the organization. • Learned about ASHA perception related to her experience in health sector.
4th WEEK	• Participated in focused group discussion • Mahilla mandal meetings • Manual data management • Participated in informal group discussion with community.	• Learned the importance of focused group discussion i.e. how it is used to identify problem from within the society.

5th WEEK	• Participated in focused group discussion • Mahila mandal meetings • Participated in ASHA facilitator meetings • Done counselling with MNH patients at SDH hospital. • MDR patient case analysis. • In- depth interview with community • Participated in training process of new members at Sarairanjan block • Field visit • Participated in screening process of TB patients • Participated in baseline survey of TB patients • Participated in counsellor meeting • Field visit for high risk case analysis of MNH patients • Visited CHC of Sarairanjan block	• Identify the various problems faced by the community in government hospitals • MDR patients case analysis • Give the exposure of start-ups of Aahan program at Sarairanjan block • In depth interview with the community helps to identify the real life health related problems faced by community during service delivery. • Learned the baseline survey and screening process. • Learned the importance of counsellor an active member of community in health sector and also learned about the importance of training for enhancing their skills. • Learned the different intervention Approach in managing high risk analysis of MNH patients.
6th WEEK	• Mahilla mandal meetings • Visited PHC • Participated in the training process of new members • Visited CHC, participated in ASHA meetings. • In- depth interview with different ASHAs • Field visit for base line survey of TB patients at panchayat • Design Medicine management Box for MDR-TB patients.	• Participation in training process further helps in understanding of the program in better way. • Understanding the problems faced by the MDR-TB patients. •

7th WEEK	• Visit to PHC • In-depth interview with community, ASHA, ASHA facilitator. • Interview with panchayat coordinator • Mahilla mandal meetings • Informal group discussion with community • Visited SDH hospital • Counselling with community • Scheduled based interviews	• Interaction with community and counselling with them enhance the understanding of MNH program.
8th WEEK	• Night duty at SDH hospital in emergency case handling of MNH patient • Interview with different stakeholders of the organization. • Informal group discussion with community	• Learned about the different interventions in emergency handling of MNH patients • Understands the work of different stakeholder influencing the program outcome • Practical exposure in core health region

Study

Introduction – Tuberculosis is a multi systemic infectious disease caused by Mycobacterium tuberculosis. It is the most common cause of infectious disease related mortality worldwide.

TB based on the organ - pulmonary TB and Extra pulmonary. Actually occur in almost all organs except hair and nail.

MDR-TB- Multi Drug Resistant Tuberculosis is a form of TB infection caused by the bacteria that are resistant to treatment with two most powerful first line drugs anti tuberculosis drugs

Isoniazid and Rifampicin

99 DOTS – 99 Dots is a low cost approach for monitoring and improving the already existing Directly Observed treatment Short Course (DOTS)

This study was conducted, to understand the problems faced by the MDE-TB patients in managing large number of drugs

OBJECTIVE

- To study demographic profile of MDR-TB Patient
- To understand drug adherence in MDR-TB patients
- To learn about the concepts of 99 DOTS

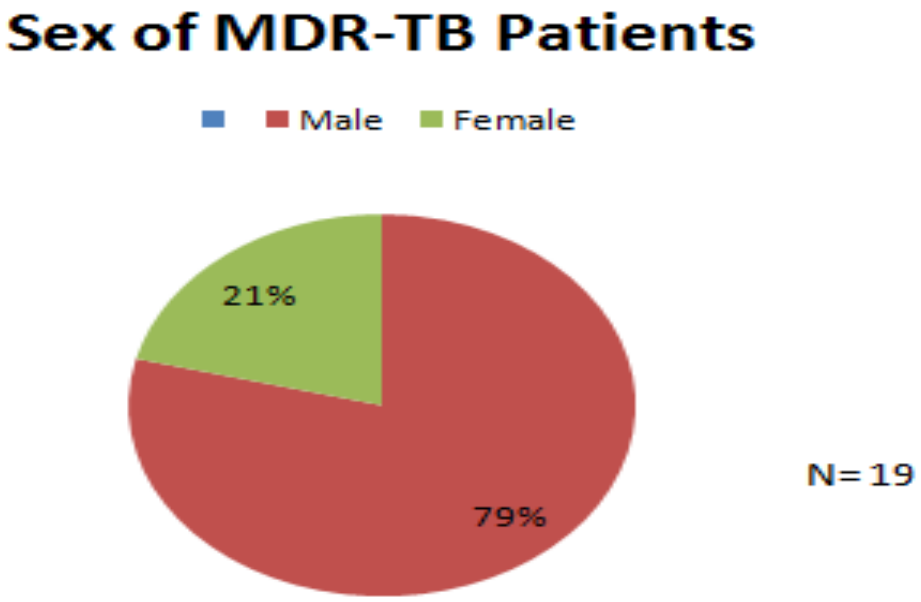
Methodology

- Innovators In Health running the programme in 3 different blocks (Bibhutipur, Srairanjan and Ujyarpur) of Samastipur district were selected for the study.
- 19 MDR-TB patients were selected on random sampling basis
- TOOL – A well structured schedule with both open ended and closed ended questions were prepared.
- Data were collected through personal interview.
- Respondent – MDR-TB patients
- Inclusion – All MDR-TB patients were included
- Exclusion – MDR-TB patients with HIV
- Data analysis through Kobo-collect

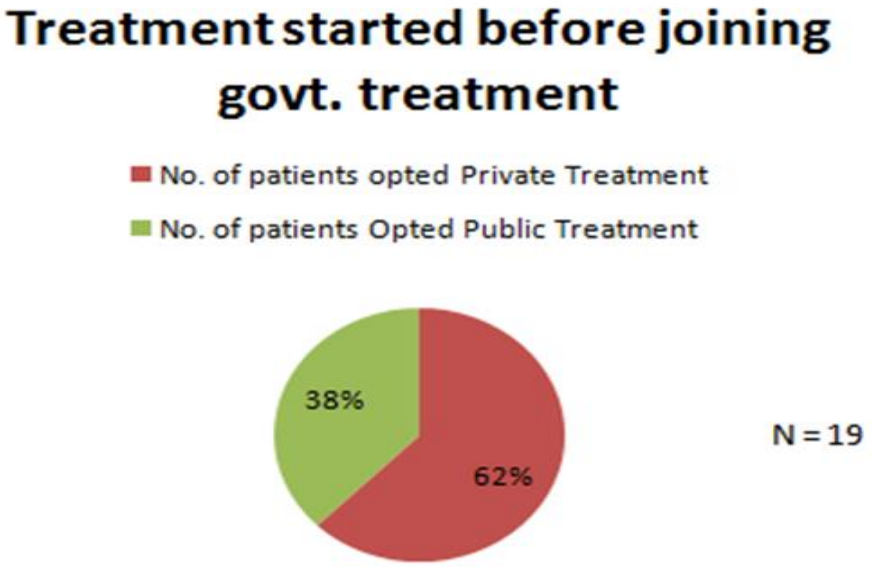
Findings

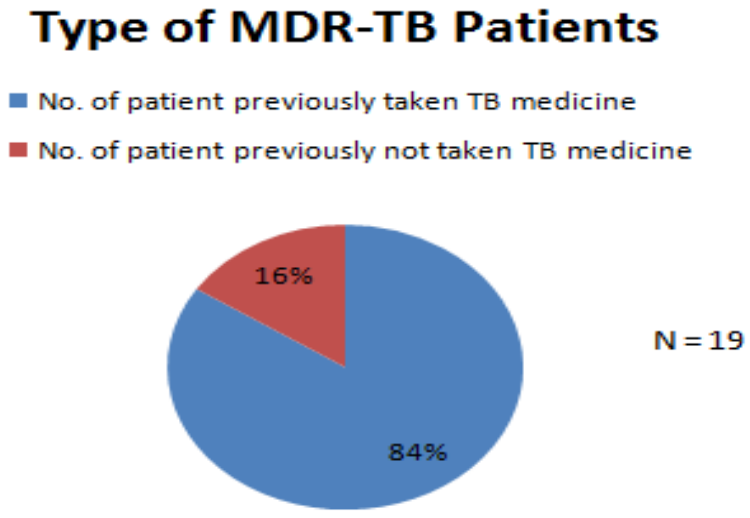
- None of the patients were connected with the 99 DOTS

- Out of 19 patients, all are having pulmonary MDR-TB
- All 19 patients are taking their medicine regularly without ant gap
- High out of pocket expenditure of private treatment holder is 276000 rupees



Out of 19 patients, 15 patients are Male and 4 are female





Out of 19 MDR-TB patients, 16 patients previously taken TB treatment, 3 patients previously not taken any anti TB treatment

Conclusions

- Patients don't know about govt. services and facility regarding TB treatment
- Proper drug adherence in MDR-TB patients increase the chances of recovery(RNTCP)
- Patients don't have food to take to take their medicine

Suggestions

- Provide food to MDR-TB patients with treatment by RNTCP
- Provide information regarding TB treatment in government hospitals
- Patients should be provided Medicine Management Box which will reduce the chances of error intake of medicine

(Fig1 – Patient with Medicine Management Box)

(Fig 2.2- MDR-TB patients)

(Fig 2.3 – patient Medicine)

ANNEXURE

प्रश्नावली

Block name पंचायत का नाम

लिंग उम्र

वार्ड संख्या रोग का प्रकार P / EP

शिक्षा वजन

Q1 घर कैसा है - कच्चा / अर्धपक्का / पक्का

Q1(i) कमरों की संख्या _____

Q2(ii) परिवार का प्रकार अलग अलग / माता पिता के साथ

Q3(iii) सोने के लिए कितने कमरे हैं_____

Q4(iv) रसोई - -खुला / बंद कमरे में ही / अन्

Q1(v) पेशा - किसान / मजदुर / दुकानदार / गृहिणी / छात्र / अन्य

Q2 रोगी की मासिक आय_____

Q2(i) रोगी के परिवार की मासिक आय _____

रोगी का पिछला रिकॉर्ड

Q1 क्या आपने पहले TB की दवाई ली है हा / नहीं

Q1(i) अगर हाँ तो कितने महीने - 6 महीने से कम / 6 से 12 महीने / 1 से 2 साल / 2 साल से अधिक

Q1(ii) रोगी के प्रकार CAT 1 / CAT 2

Q2 अपने ईलाज कहाँ से शुरू करवाया था - सरकारी / निजी / अन्य

Q2(i) अगर निजी अस्पताल से तो क्यों _____

Q3 आपका ईलाज में कितना खर्चा हुआ था _____

Q4आपने पैसे कि वयवस्था कहा से की थी - खुद से / ऋण / बिमा / अन्य

Q4(i) आपके परिवार में पहले कोई TB का रोगी था – हाँ / ना

Q4(ii)क्या उस रोगी ने TB कि दवा खायी थी – हाँ / ना

Q4(iii)क्या आपके परिवार में किसी TB रोगी कि मृत्यु हुयी है – हाँ / ना

वर्तमान रोगी का रिकॉर्ड

Q1 क्या आप TB कि दवाई खा रहे हो – हाँ / ना

Q1(i) नहीं, तो क्यों_____

Q1(ii) क्या आपको मालूम है कि आपके ईलाज कि अवधी कितनी है – हाँ / ना

Q1(iii) क्या आपको मालूम है कि जाँच के लिए कब कब जाना है – हाँ / ना

Q1(i) हाँ, तो कब कब --

हर महीने में एक बार / दो महीने में एक बार / तीन महीने में एक बार / अन्य

Q2 आपका आहार क्या है- चावल / दाल / मांस-मछली / दूध / अन्य

Q2(i) एक दिन में कितने बार भोजन करते हो _____

Q3 आपको TB कि दवा कहाँ से मिलती है _____

Q3(i) घर से अस्पताल कि दुरी क्या है (KM)_____

Q3(ii) यातायात का साधन क्या है – बस / रेल / निजी वाहन / अन्य

Q3(iii) घर से अस्पताल आने जाने में कितना खर्चा होता है_____

Q3(iv) क्या आप यात्रा करते समय अपना मुह ढक कर रखते हैं- हाँ / ना

Q3(v) क्या कभी आप पैसे कि कमी कि वजह से आप अपनी दवाई लेने नहीं जा पाए- हाँ / ना

Q4 क्या आपने दवा के साइड इफ़ेक्ट से दवा खाना छोड़ा है – हाँ / ना

Q4(i) हाँ तो कितने दिन के लिए _____

Q5 क्या आपसे कोई मिलने आता है- हाँ / ना

Q5(i) हाँ, तो कौन- आशा / सरकारी अधिकारी / आहन कार्यकर्ता / अन्य Q5(ii) आने कि अवधि- हफ्ते में एक बार / 15 दिन के अन्दर / महीने के अन्दर / एक महीने के बाद

Q6 आप MDR TB की दवा कितने महीने से खा रहे हैं _____

Q6(i) ईलाज शुरू होने के बाद आप बेहतर महसूस कर रहे रहे हैं-- ज्यादा / मध्यम / कम / बहुत कम

Q7आपका MDR TB का ईलाज शुरू होने के बाद कोई कठिन समस्या हुई हो

_____

Reference

- https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5617849/
- RNTCP Module
- 99 DOTS app