

Evaluation of Implementation of Revised National Tuberculosis Control Programme at Urban Primary Health Center, Koparkhairane, Navi Mumbai, Maharashtra

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Abstract: ***Background:** Totally 10.4 million new tuberculosis cases are found during 2016 worldwide and 64 percentage of the cases are from India, Indonesia, China, Philippines, Pakistan, Nigeria and South Africa. From the global perception (SEAR (South East Asian Region)), it is more important because it has 25 percentage of the world population, overall world level it has 30 percentage of poor population, this region is suffering from communicable and non-communicable. Due to the two-sword pandemic resurgence of HIV/AIDS & Tuberculosis, there is an increased mortality and morbidity prevalent worldwide. The Revised National Tuberculosis Control Program (RNTCP), based on the internationally recommended Directly Observed Treatment Short- course (DOTS) strategy, was launched in 1997 and implemented a phased expansion, achieving nationwide program coverage in March 2006 and currently reaches over a billion people in 632 districts/reporting units. Within the RNTCP, both diagnosis and treatment of TB are free. **Objective:** To examine RNTCP programme and study the challenges faced by the programme in its implementation. **Methodology:** A cross sectional quantitative study was conducted. For the purpose of getting data of TB patients, secondary data was used garnered via TB register maintained at UPHC. A complete enumeration sampling technique was employed for collection of data from TB patients via questionnaire. **Result:** It was found that the number of TB patients from 2015-2018 is almost constant every year. However, the numbers of MDR-TB and XDR-TB patients have increased during the years 2015- 2018. There were certain challenges faced by the programme in its implementation, resulting in increased number of defaulter patients like- shortage of medicines, migration, stigma, addiction habits etc.*

Keywords: RNTCP, UPHC, DOTS, NSP, Global TB report, IEC, X-ray

1. Introduction

Tuberculosis (TB) is an infectious disease caused by Mycobacterium tuberculosis. It is communicable air-borne disease that can be transmitted by a tuberculosis patient to others. Tuberculosis is a serious health concern in India. India has the highest number of tuberculosis (TB) cases in the world, as per the Global TB Report 2017 released by World Health Organization (WHO). According to the report, in India, an estimated 27.9 lakh patients were suffering from TB in 2016 and up to 4.23 lakh patients were estimated to have died during the year. Out of the 27.9 lakh estimated patients, only 1,938,158 TB cases were notified in the public and private sector in India, which means over 8.5 lakh cases were missing the treatment options. The report highlighted that underreporting and under-diagnosis of TB cases is a big challenge in India.

In 1992, the Government of India, together with the World Health Organization (WHO) and Swedish International Development Agency (SIDA), reviewed the national tuberculosis program and concluded that it suffered from managerial weaknesses, inadequate funding, over-reliance on x-ray, non-standard treatment regimens, low rates of treatment completion, and lack of systematic information on treatment outcomes. As a result, the Revised National Tuberculosis Control Program (RNTCP), based on the internationally recommended Directly Observed Treatment Short- course (DOTS) strategy, was launched in 1997 and implemented a phased expansion, achieving nationwide

program coverage in March 2006 and reaches over a billion people in 632 districts/reporting units. With the RNTCP both diagnosis and treatment of TB are free. The initial objectives of the RNTCP in India were:

- 1) To achieve and maintain a TB treatment success rate of at least 85% among new sputum positive (NSP) patients.
- 2) To achieve and maintain detection of at least 70% of the estimated new sputum positive people in the community.

Objectives and operational guidelines

With progress in achieving objectives in dots strategy under the 12th 5 year plan as new strategic plan for 2012-2017 to achieve detection of at-least 90% of total estimated cases and cure rate of 90% in new and 85% in re-treatment cases.

Components of RNTCP are:

- 1) Political will ensures financial support and sustainability.
- 2) Case detection with the help of quality assured sputum smear microscopy.
- 3) Regular and uninterrupted supply of drugs patient wise boxes.
- 4) Directly observed treatment
- 5) Systemic monitoring and accountability.

Rationale

India has the highest burden of tuberculosis in the world both in TB and MDR-TB with high mortality rate & also has the highest number of tuberculosis (TB) cases in the world, the Global TB Report 2017 released by World Health

Organization (WHO). According to the report, in India, an estimated 27.9 lakh patients were suffering from TB in 2016. India is also the country with the second highest number (after South Africa) of estimated HIV associated TB cases. RNTCP is one of the major national health programmes in the country and at Koparkhairane UPHC, considering the high burden of tuberculosis cases in the vicinity under Koparkhairane UPHC are the reasons that made us explore the status of Tuberculosis and the implementation of RNTCP in Koparkhairane UPHC.

Objectives

- 1) To study the implementation of the RNTCP at UPHC, Koparkhairane
- 2) To garner data on the number of TB patients belonging to category 1, category 2, MDR and XDR in UPHC, Koparkhairane.
- 3) To study the challenges faced by the beneficiaries in availing the services provided under RNTCP at UPHC, Koparkhairane.

2. Methodology

A cross sectional quantitative study was conducted. The quantitative data was collected from the DOTS register maintained at the UPHC, which gave an insight about the number of TB patients, their age, sex, category, treatment status etc.. The total number of TB patients currently under UPHC Koparkhairane (as of treatment for the past 6 months were taken to gain knowledge on the treatment provided with respect to implementation of RNTCP at the UPHC (38 TB patients), with a ~9 % non-responsive rate, a total of 35 TB patients were taken. A complete enumeration sampling technique was employed for collection of data from TB patients via questionnaire.

Data Analysis

Data was entered and analyzed by using MS-excel. Anonymity was assured by ensuring that only research personnel had access to the data. It is important to state that the data was not weighted during analysis.

Ethical consideration

Written informed consent was obtained from all participants after the study has been properly explained to them.

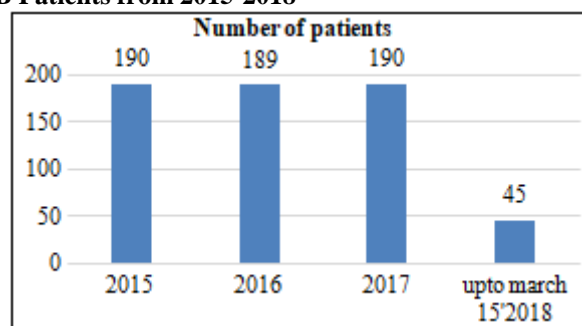
3. Results

On interviewing 35 TB patients, majority (32) of the patient’s revealed symptoms of fever, cough, anorexia, weight loss, chest pain and body ache whereas 3 patients revealed symptoms of fever, cough, anorexia, weakness and blood in cough. All patients went to the health facilities between the duration of 25-30 days. All patients were diagnosed through sputum test and x-ray chest. Major side-effects experienced by the patients are skin rashes, acidity, joint-pains, vomiting and drowsiness. According to the responses analyzed from the TB patients, 21 patients visited

the private health facility first for treatment and 14 visited the public health facility initially for availing the treatment which shows that more people tend to prefer to visit private health facilities first as compared to the public facilities. 11 out of 35 patients reported family history of TB in their families in the past whereas 24 patients didn’t mention any family history of the disease. Private practitioners confirmed the TB status for 21 patients and TB health visitor confirmed the TB status of 14 patients & all 35 patients said that they were counseled by the TB health visitor which shows the dedication and sincerity of the TB health visitors. Majority (25) of the patients are satisfied by the services provided under the RNTCP at Koparkhairane UPHC. The reason for less satisfaction and no satisfaction among the patients were shuttling between different health facilities for getting x-ray done which was not available at the UPHC & the stigma post positive diagnosis of TB.

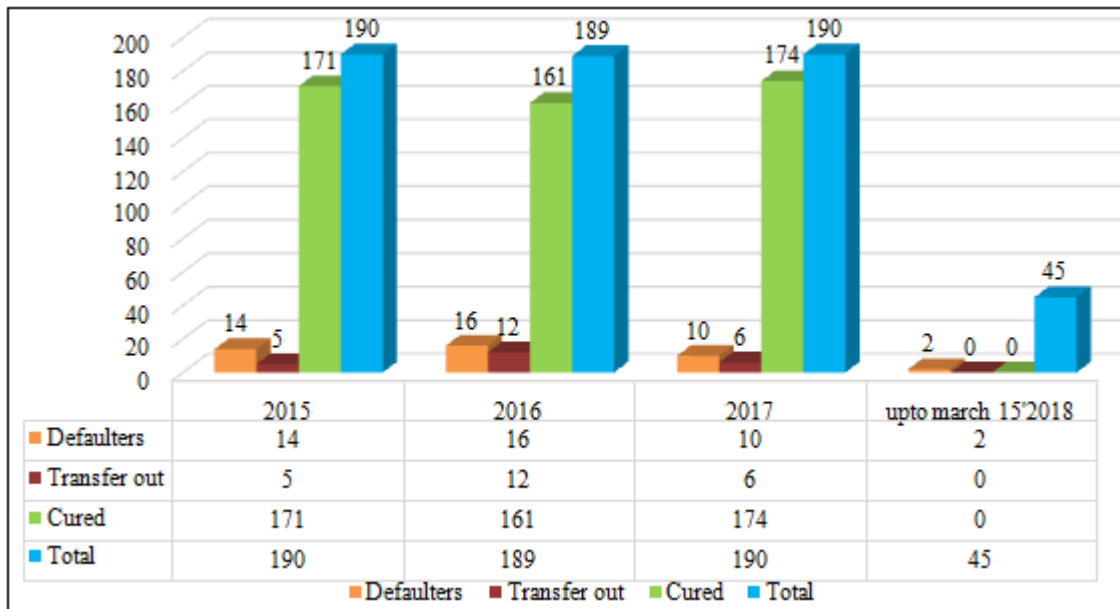
Data Analysis	Number of patients	Percentage
Type of health facility visited		
Public	14	40
Private	21	60
Total	35	100
Family History of TB		
Yes	11	30
No	24	70
Total	35	100
Confirmation of TB status		
Doctor	21	60
TB Health Visitor	14	40
TOTAL	35	100
Counseling by TB health visitor		
Yes	35	100
No	0	0
TOTAL	35	100
Satisfaction Level of the Services Provided at UPHC		
Satisfied	25	71.4
Somewhat satisfied	7	20
Not at all satisfied	3	8.6
TOTAL	35	100

TB Patients from 2015-2018



According to the secondary data available from the DOTS register, the total number of patients from 2015-2018 remains almost constant at the Koparkhairane UPHC.

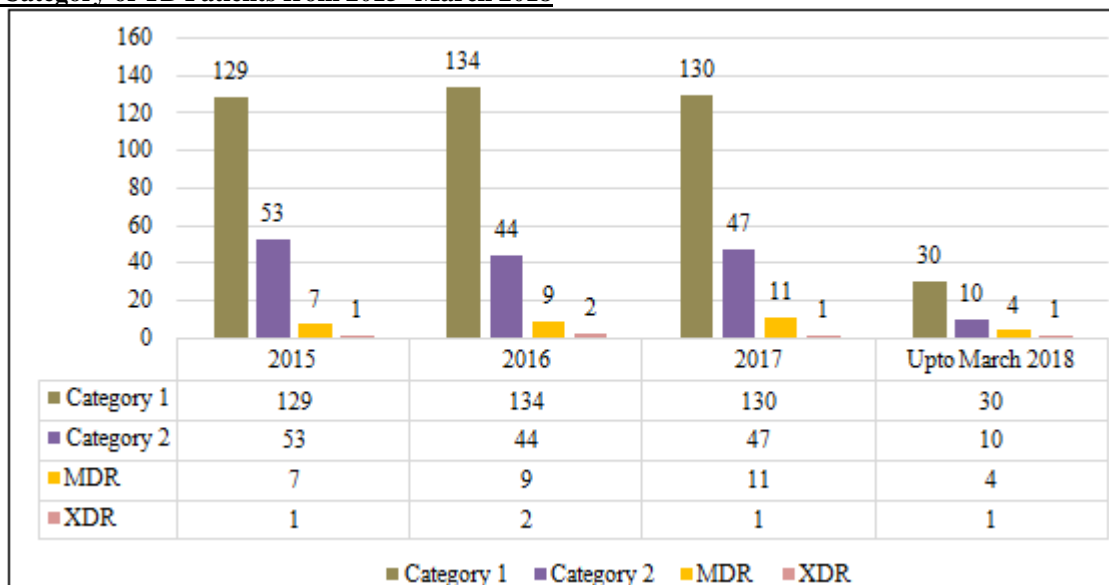
Defaulters, Transfer Out and Cured Patients from 2015-2018



According to the secondary data available from DOTS register, it was found that in number of defaulters and transfer out TB patients increased from 2015-2016 but decreased from 2016- 2017. However total number of cured patients decreased from 2015-2016 but increased from 2016-

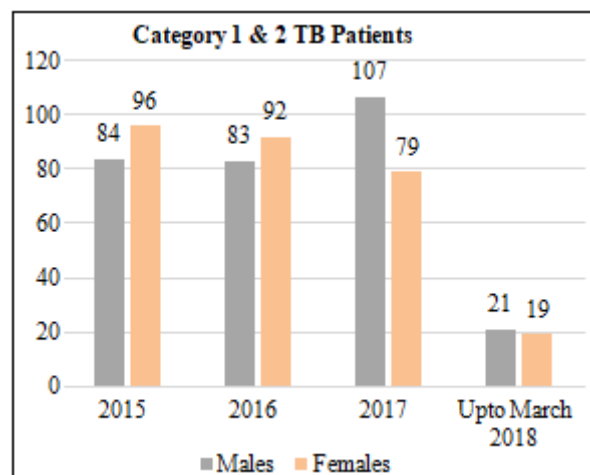
2017 at the Koparkhairane UPHC due to increased awareness in the society provided by the TB Health visitor and other health workers working at the UPHC.

Different Category of TB Patients from 2015- March 2018



According to the secondary data available from the TB register, it was found that total number of TB patients belonging to category 1 increased from 2015 to 2016 but decreased from 2016 to 2017, patients belonging to category 2 decreased from 2015 to 2016 but increased from 2016 to 2017, whereas there is an overall increase in MDR TB patients from 2015 to 2017 at UPHC, Koparkhairane.

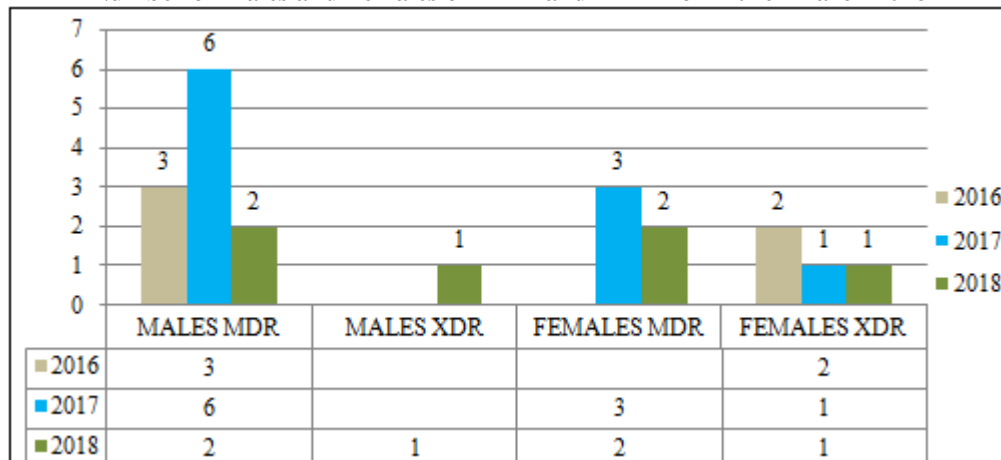
Number of Males and Females of TB Patients (Category 1 and 2) during 2015- March 2018



According to the secondary data available from the UPHC, Koparkhairane, the number of male patients were less than females in the years 2015 and 2016 but the number of male patients were more as compared to females in 2017. Also

there is an increase in number of male patients in 2017 as compared to 2016.

Number of Males and Females of MDR and XDR from 2016- March 2018



According to the secondary data available from the UPHC, Koparkhairane, there has been an increase in total number of MDR and XDR TB cases in both males and females from 2015-2018. Currently the total no. of MDR TB cases are 18 and 4 XDR TB cases who are registered under RNTCP at Koparkhairane UPHC.

4. Discussion and Conclusion

In the implementation of the RNTCP programme at the Koparkhairane UPHC, it was found that the number of TB patients from 2015-2018 is almost constant every year. However, the numbers of MDR TB and XDR TB patients have increased during the years 2015- 2018. Main challenges faced by the service providers at Koparkhairane UPHC in the implementation of the RNTCP programme are increased number of defaulter patients, patients over-load at the UPHC and sometimes shortage of XDR medicines (Capreomycin). It was also observed that there is no X-RAY facility in the UPHC but provision of sputum test under laboratory services aids in the diagnosis of suspected TB patients. It was gathered during the study that there are certain challenges faced by TB patients in availing services provided under RNTCP which are- side effects of the medicines (skin rashes, acidity, joint-pains, vomiting and drowsiness), stigma and discrimination and migration due to employment related concerns resulting in high number of defaulter patients. There are 2 TB health visitors, 1 of them is specialized for MDR TB AND XDR TB daily visit the areas and perform their duties of finding suspected cases in the community as well as awareness about the disease. Currently, the registration of patients is done both in TB registers and also in 99 DOTS programme. The programme is currently being implemented properly as the total number of patients visiting UPHC have increased due to increased awareness by the various health workers working in the vicinity of the UPHC. The programme can do better by increased contribution from the private sector and increased awareness by conducting Focus group discussions, use of IEC material thereby reducing discrimination and stigma related to the disease and increasing the awareness among

public. Also, if the x-ray facility is made available in the UPHC, it would result in early diagnosis of the disease and avoid delay due to visiting multiple health facility for getting diagnostics done for availing the treatment of TB.

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