

# A NOVEL APPROACH - 99 DOTS & THE PERCEPTION OF T.B PATIENTS AND DOTS PROVIDERS TOWARDS 99 DOTS



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## INTRODUCTION

India conspicuously presents itself among the 22 high burden countries, as per WHO's Global Tuberculosis Report 2015.

The estimated incidence in India for all forms of TB is 22 lakhs.

Bihar adds about 2, 00,000 new cases of TB every year

DOTS for tuberculosis patients were implemented through Revised National Tuberculosis Control Programme (RNTCP). Since the treatment is for longer duration, drop-outs among many patients have been observed because of the unpleasant side effects

The relapse rate of which is almost 10%. Thus a low-cost approach for monitoring and improving TB medication adherence, called “99DOTS”, was deployed at a public-sector program in Samastipur district, Bihar, India.

**About 99 DOTS:**

Program has initiated use of various ICT (Information Communication Technology) enabled treatment adherence mechanism which works on a mobile (missed call) based active compliance including a smart pill box.

## RESEARCH OBJECTIVES

To assess the experience and perception of T.B patients and DOTS providers (ASHA/Panchayat coordinator) regarding 99 DOTS.

To evaluate the effectiveness of 99 DOTS.

## RESEARCH QUESTIONS

What are the difficulties and problems faced by T.B. patients and DOTS provider during the use of 99 DOTS?

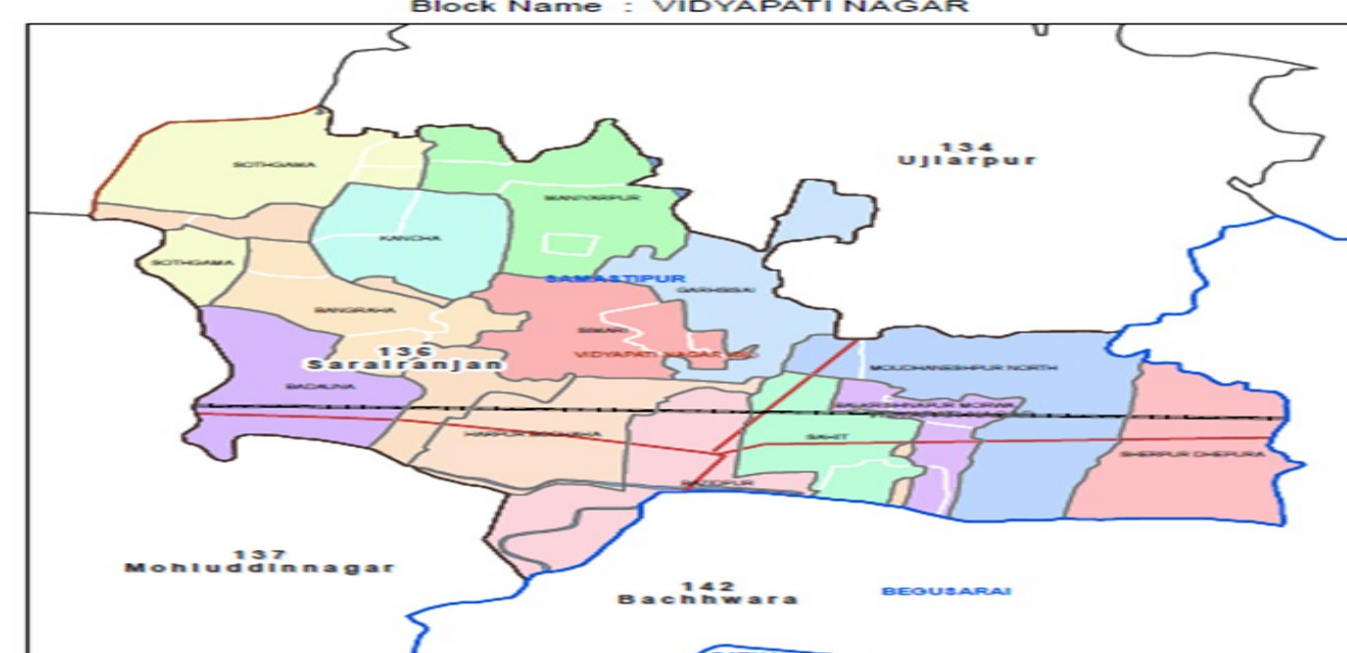
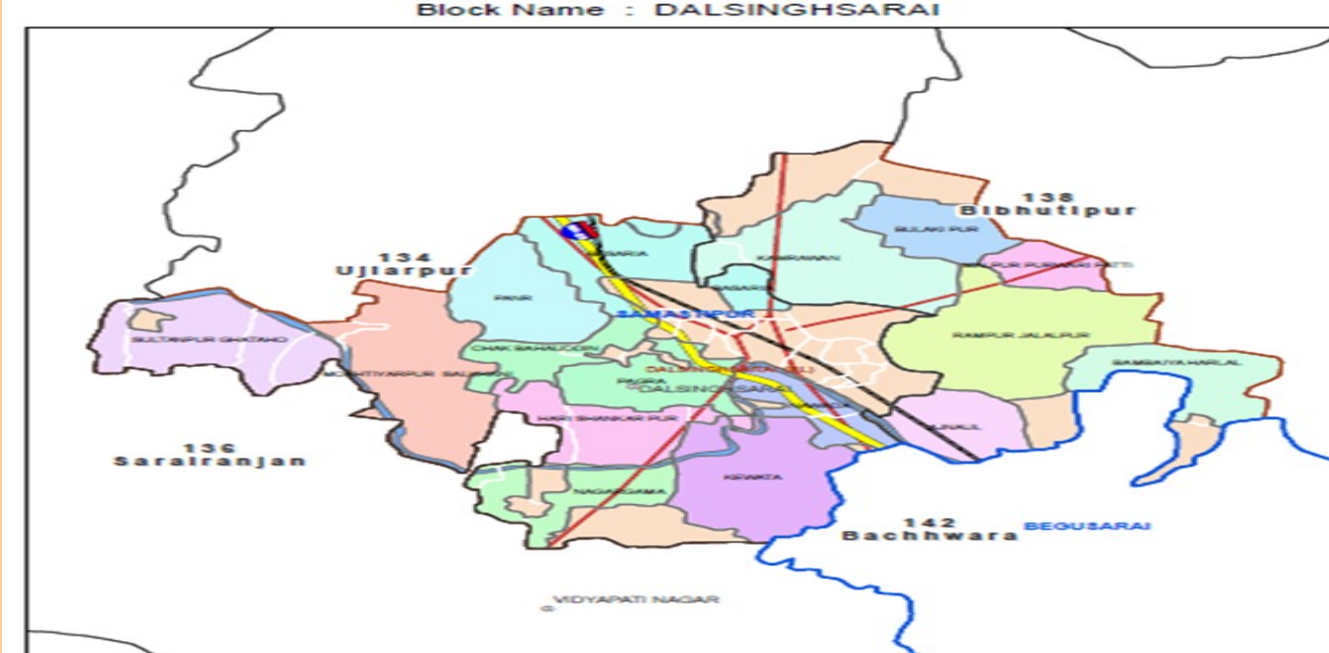
What are the factors that influence the patients to make the call?

Does 99DOTS reduce the work load of ASHA and panchayat coordinator in monitoring the T.B patients during their treatment phase?

## METHODOLOGY

- Research Design** : Descriptive cross sectional study  
**Research Approach** : Qualitative Approach  
**Sampling Type** : Non probability purposive Sampling  
**Respondents** : 1. T.B Patients enrolled with 99 DOTS - 30  
( Out of total 490 patients enrolled in 99 DOTS)  
2. ASHA enrolled with 99 DOTS – 30  
3. Panchayat Coordinator of IIH – 20

**Data Collection** : Structured in-depth interviews. Supporting data is collected through field observation.

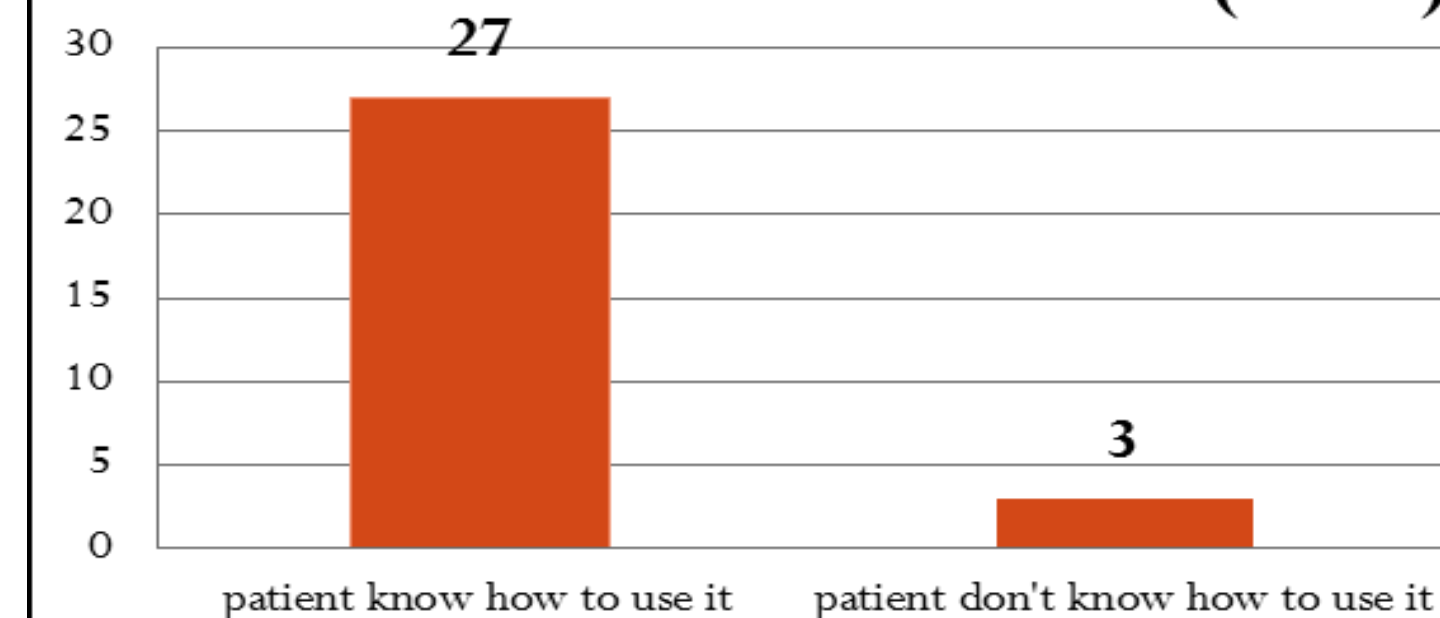


## EFFECTIVENESS OF 99 DOTS

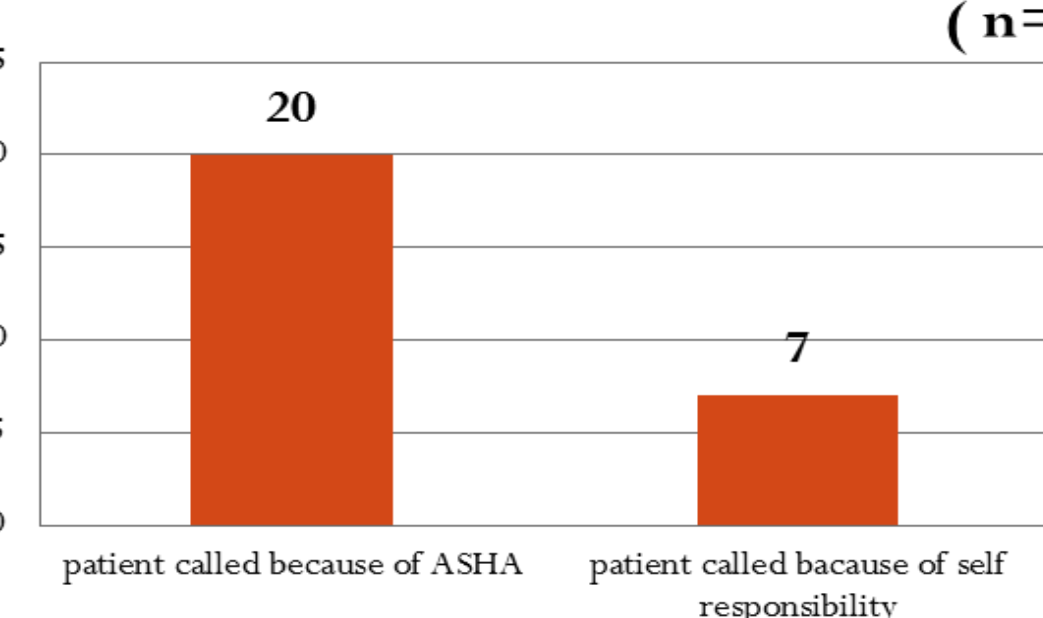
| On Treatment | Off Treatment | Cured | Treatment Complete | Treatment failure | Died | Lost To Follow Up | Not Evaluated | Treatment Regimen Changed |
|--------------|---------------|-------|--------------------|-------------------|------|-------------------|---------------|---------------------------|
| 88           | 402           | 148   | 221                | 4                 | 15   | 12                | 0             | 2                         |

## FINDINGS

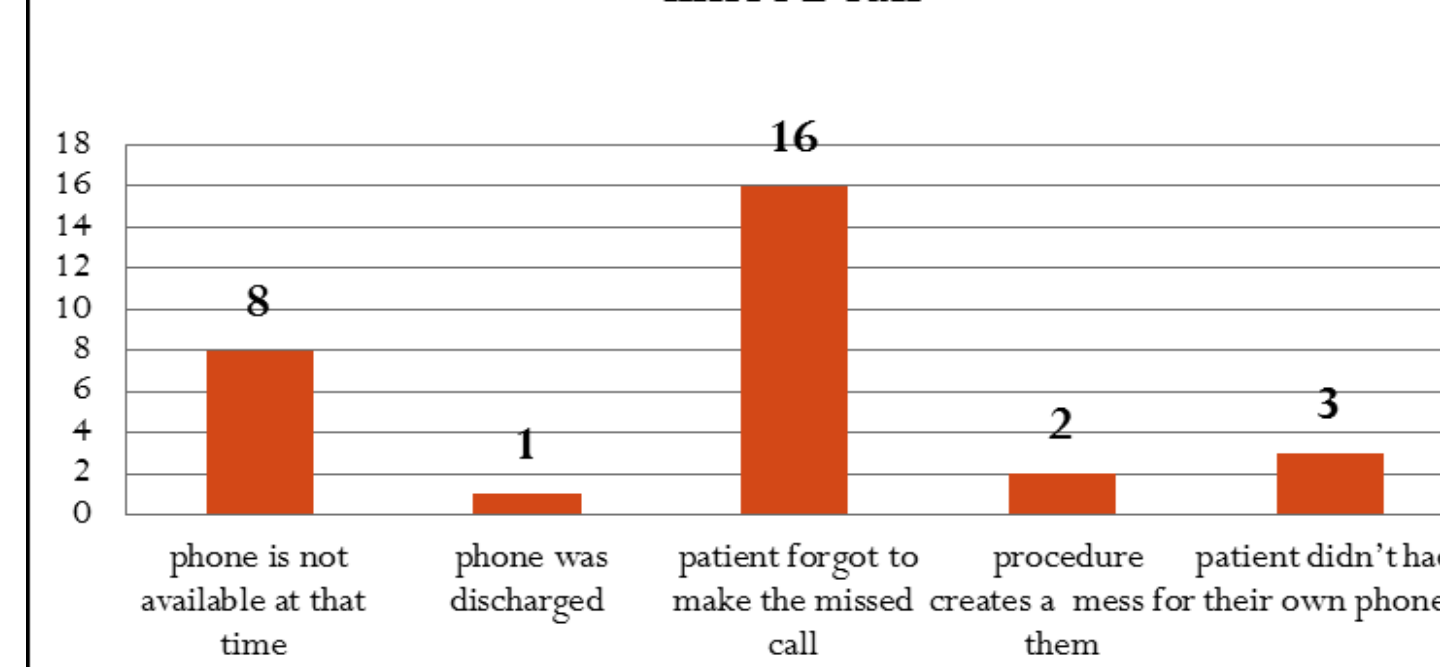
### Knowledge about 99 DOTS (n=30)



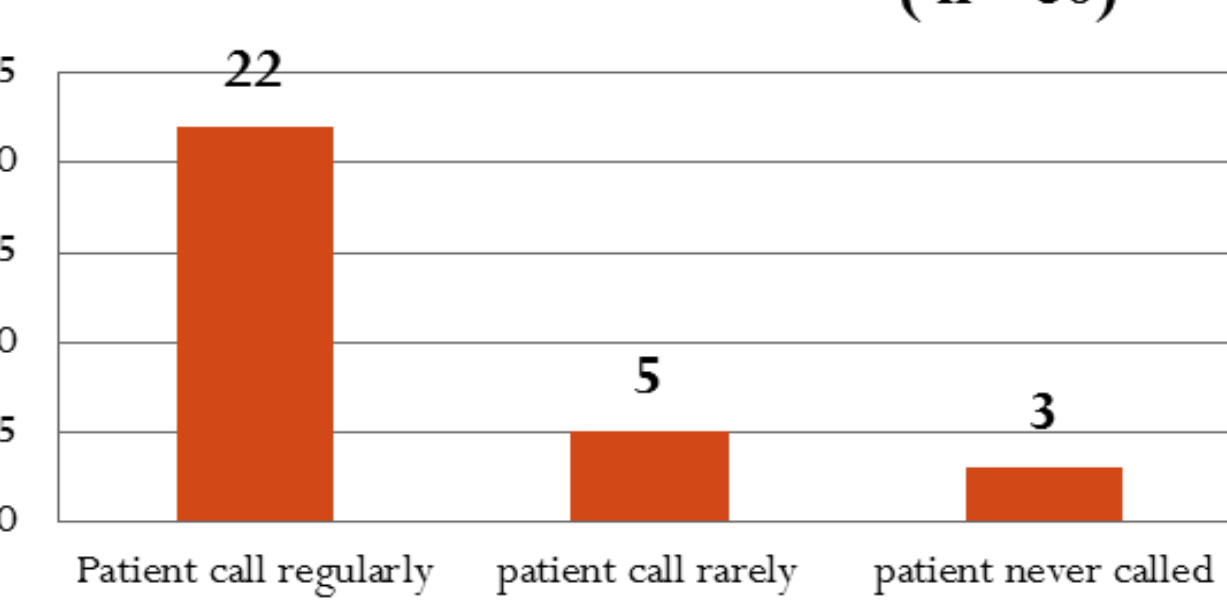
### Reason for making the missed call (n= 27 )



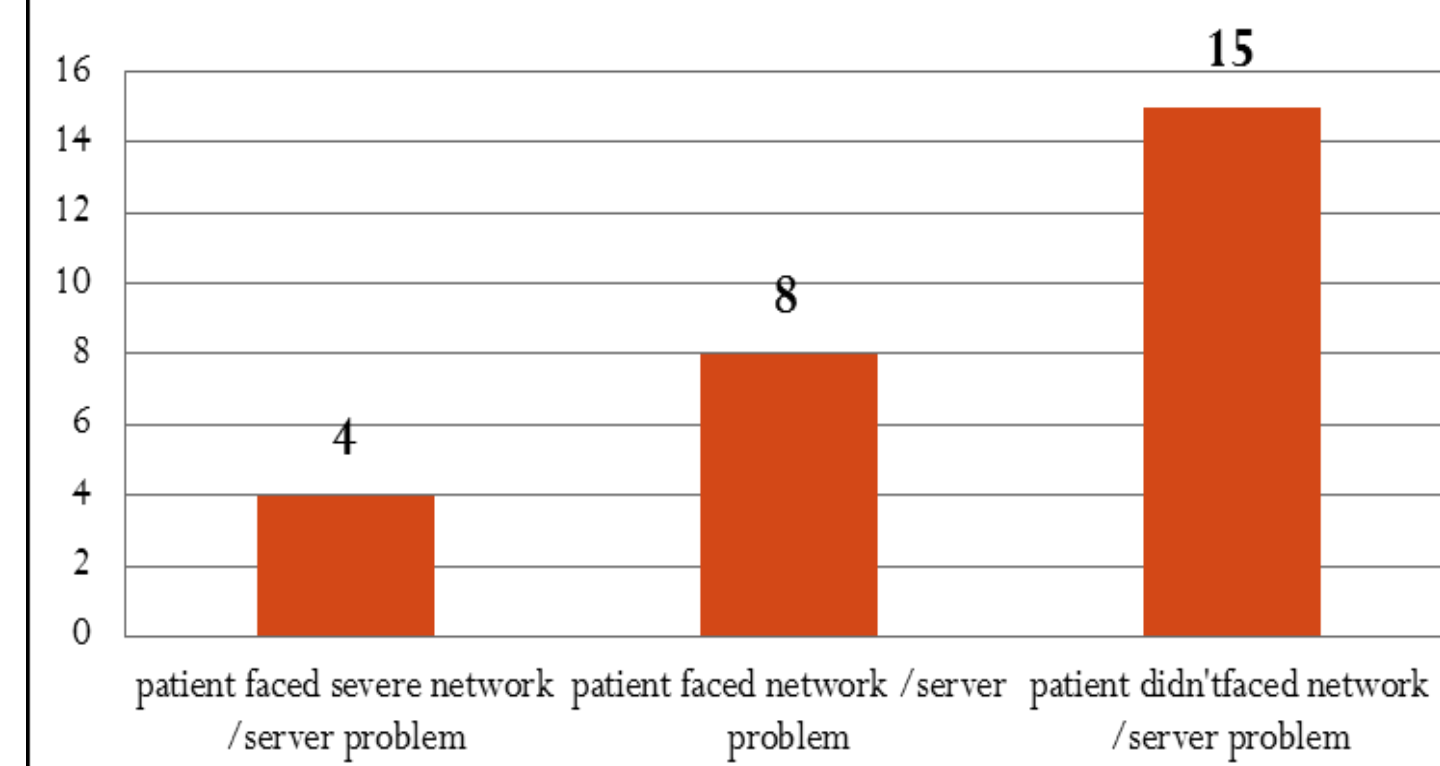
### Reason for not making the missed call (n = 30)



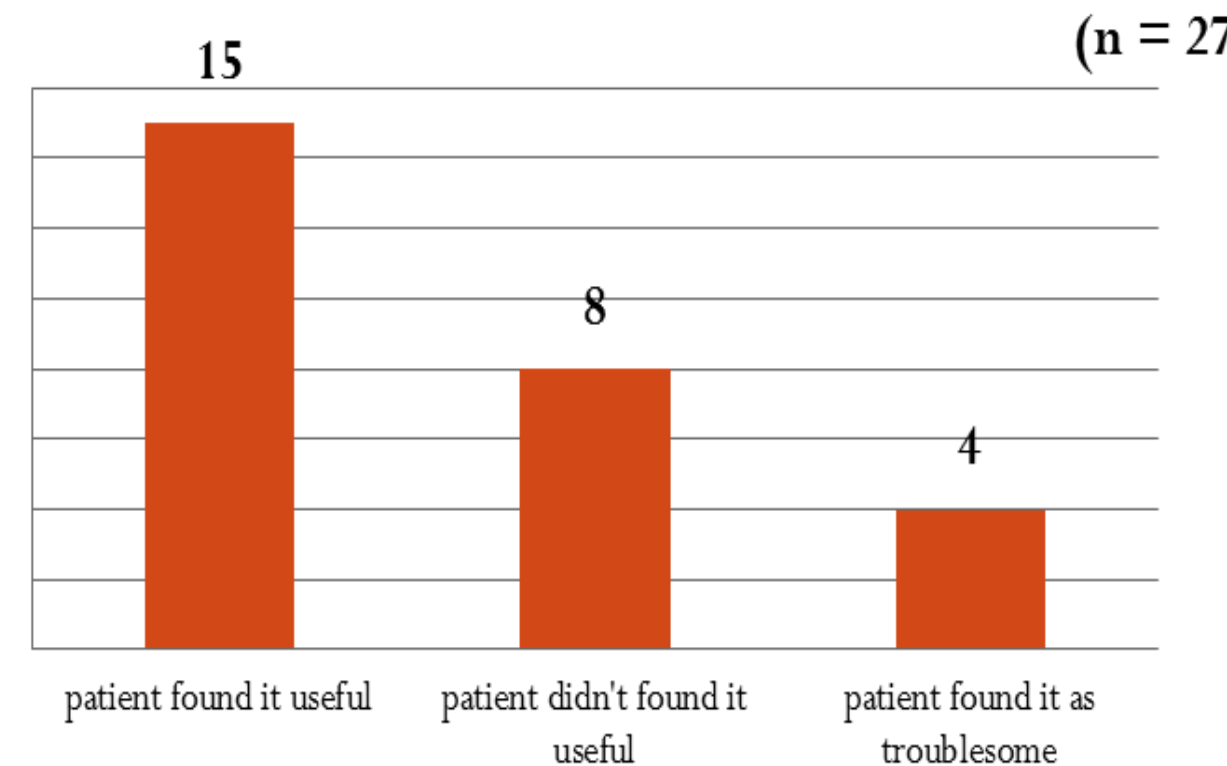
### Frequency of making miss call (n= 30)



### Network or Server issue (n = 27)

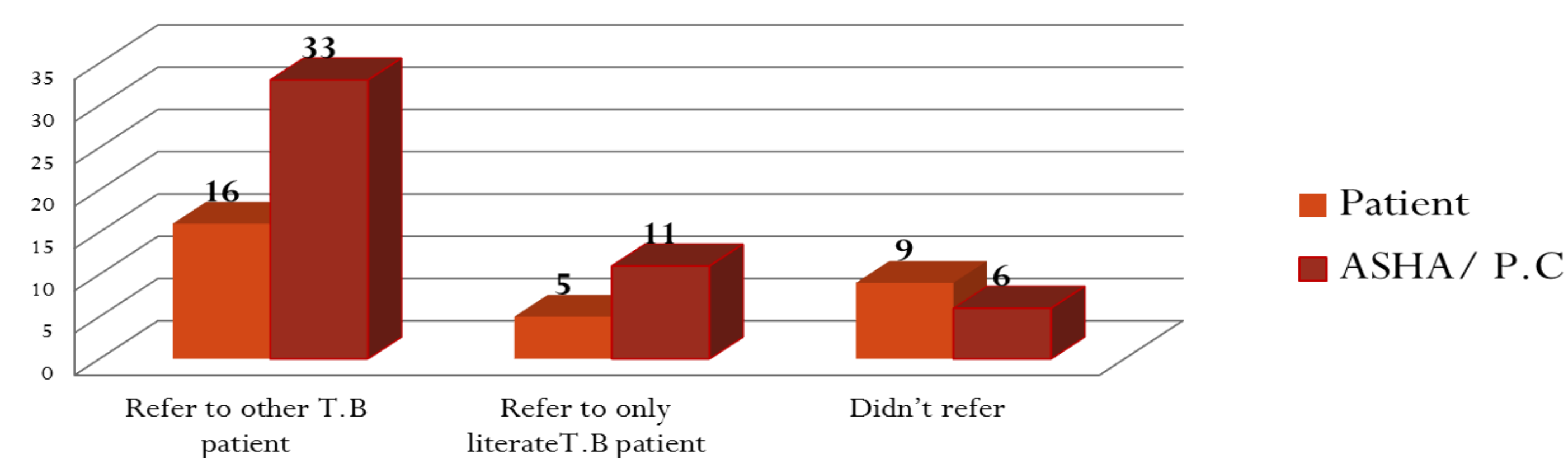


### Patient found 99DOTS useful (n = 27)

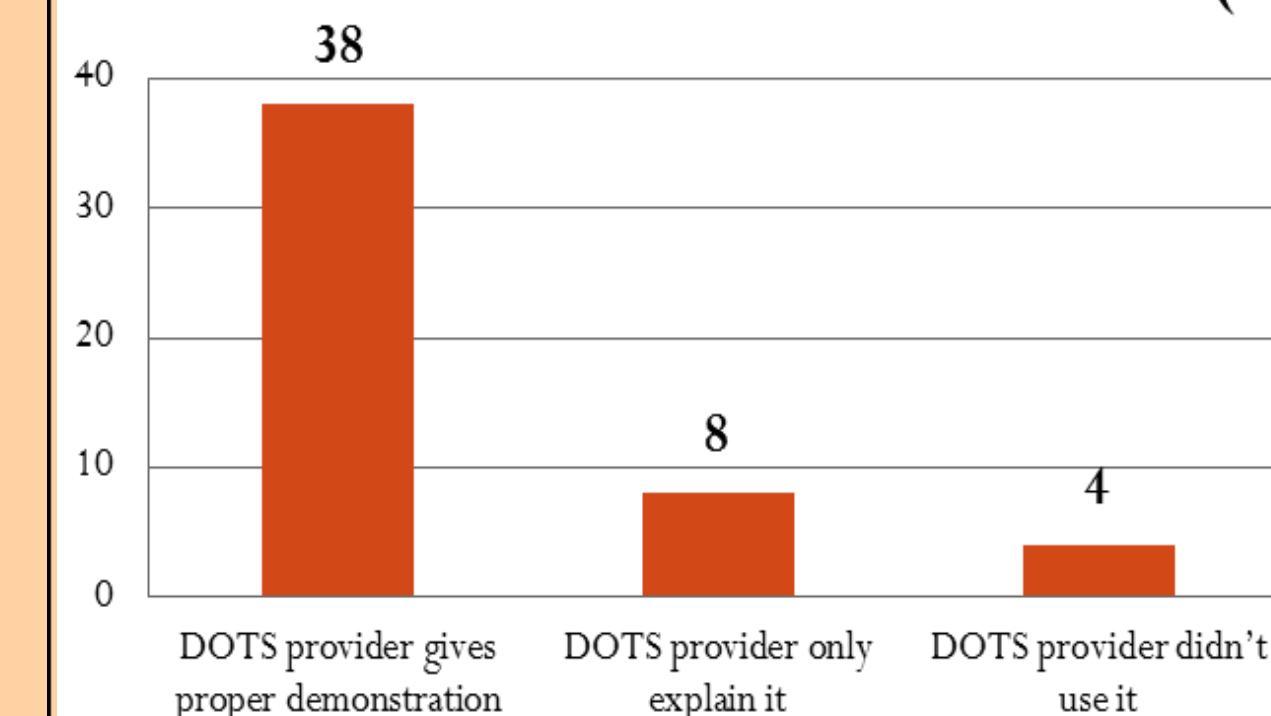


### Recommendation to other T.B Patient

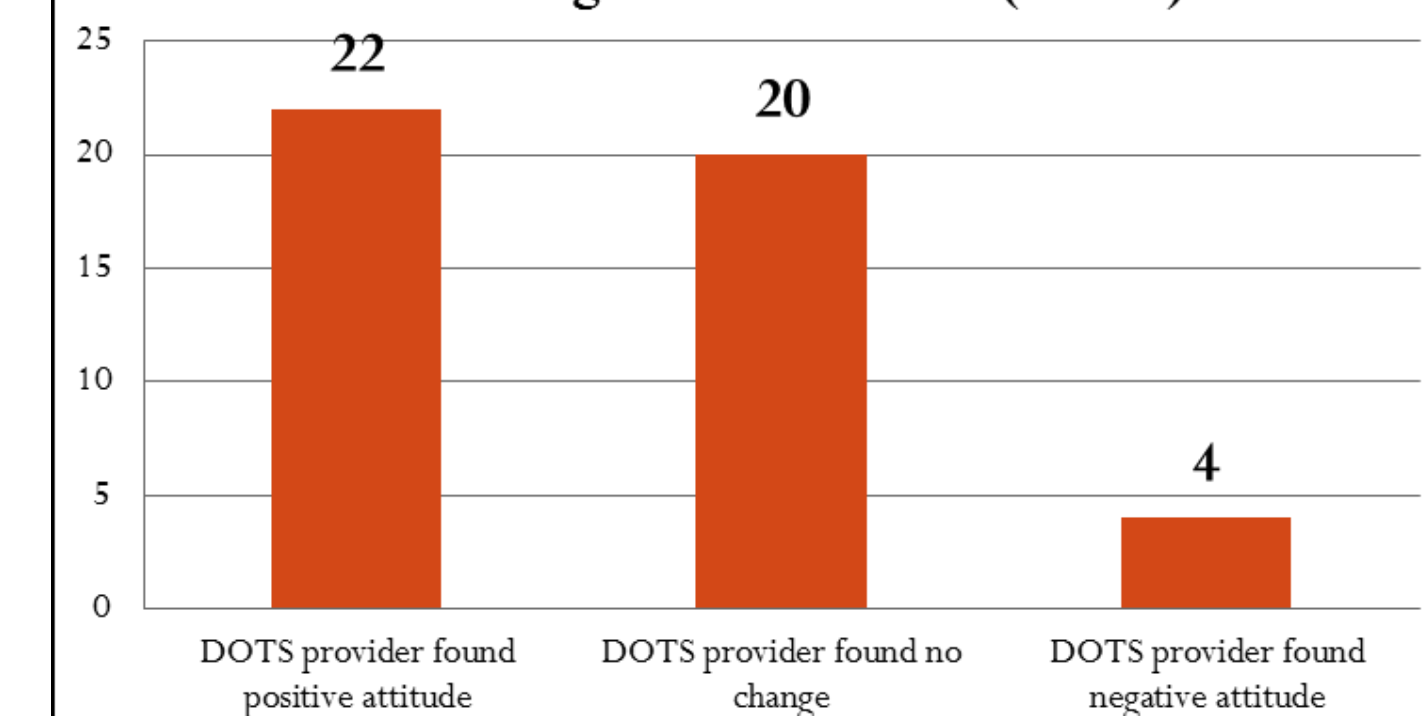
n(no. of patient) = 30  
N(no. of ASHA/P.C) = 50



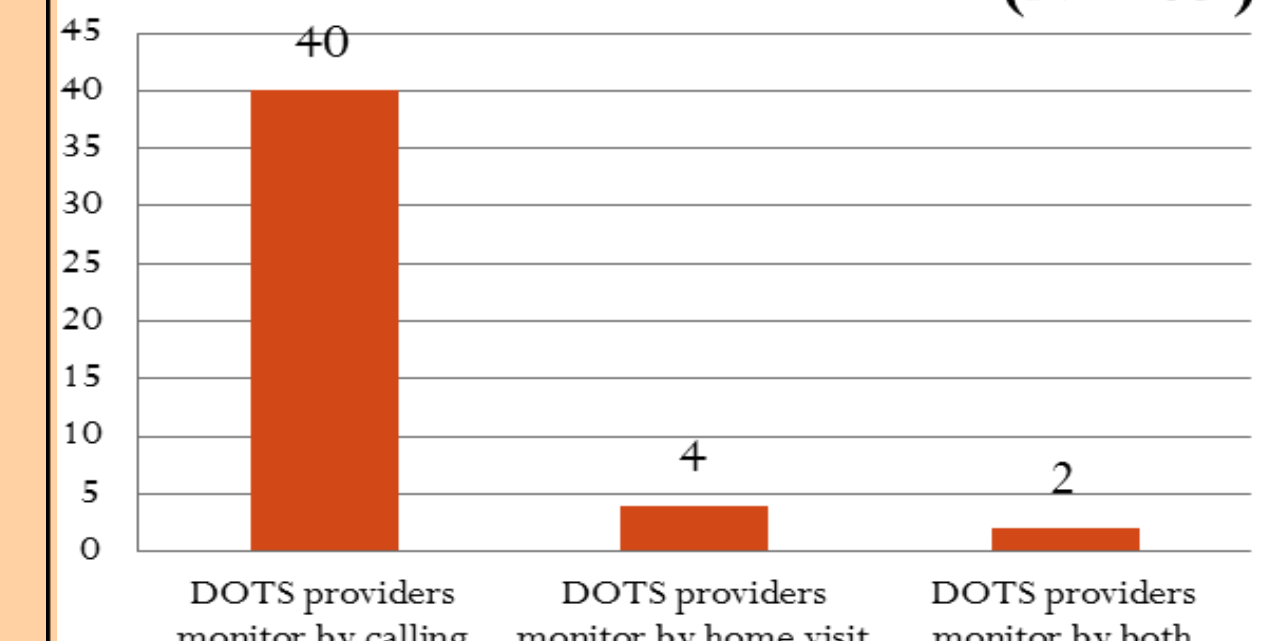
### Training /Explaining method of DOTS Providers (N = 50 )



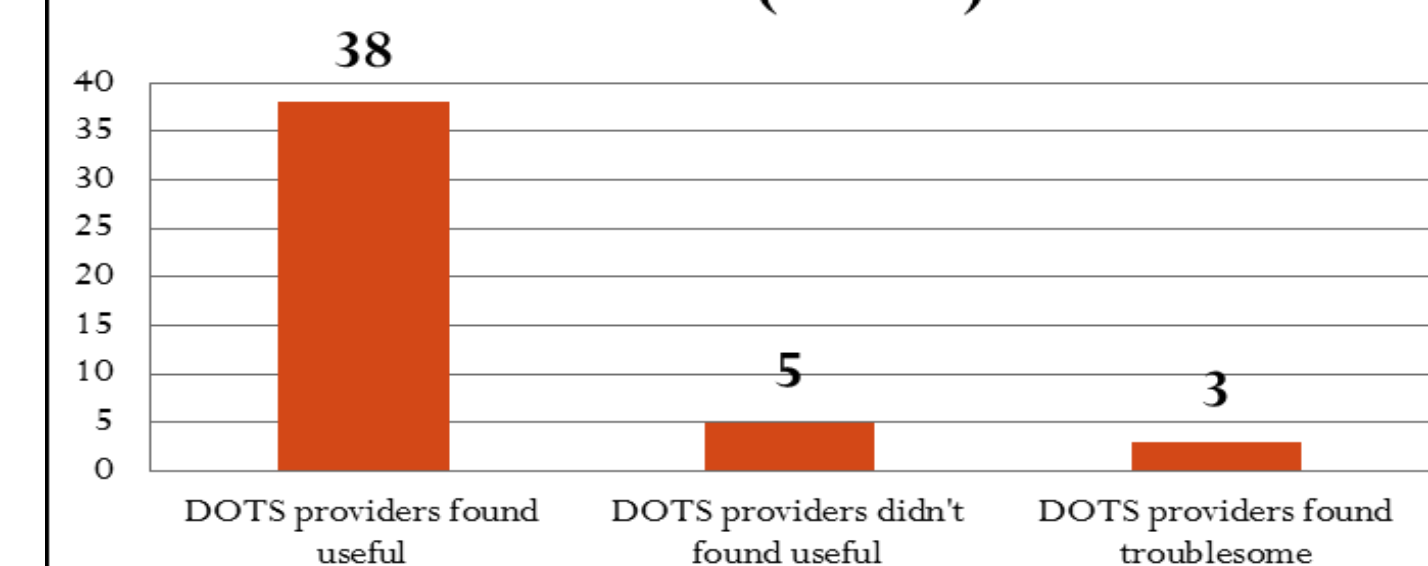
### Behavior of patients enrolled with 99 DOTS according to ASHA (N= 46)



### Monitoring of T.B patient by DOTS providers (N = 46 )



### DOTS Providers found 99DOTS useful (N = 46)



## GAPS FOUND

1. Message sent by 99 Dots is in English because of which more than 95 % of Patients, ASHA and P.C. are unable to read and understand it properly.
2. Network or Server problem is one of the major issues in this procedure; more than 40 % of patients have faced a server problem while making the missed call.
3. The literacy of patients is still a major challenge for this program. According to the perception of ASHA and P.C., literate patients made the miss call on a regular basis and had a positive attitude toward the program, while the illiterate patients showed little or no interest in it and had a negative attitude towards this program.
4. After dialing the number ,The “**THANK YOU**” replies which the patients receive is very short and low pitched because of which they are not able to listen to it properly and try dialing repeatedly.
5. The system lacks the monitoring of the ASHA and P.C.
6. Only one no. is registered with 99DOTS, which has emerged out to be one of the major problems as many a times the registered number is not available at home.
7. There is no mechanism or source which would provide direct solutions to problem they face during the treatment. ( for e.g. A Call system through which they can share their problems).

## SUGGESTIONS

- 1.Change in the message( SMS) language
- 2.Monitoring of the DOTS providers
- 3.Increase in the length of reply from the system
4. Small Reward system
5. Introducing Call System
6. Relaxation in registration of 2 numbers (one primary and 2<sup>nd</sup> optional)
7. Along with ASHA, Doctor (Health worker) may also advise the patients to make the missed call during their hospital visit.

## CONCLUSION

According to the ASHA & P.C. the attitude of the patients enrolled with 99 DOTS is comparatively better than those who are not enrolled with it. But few gaps like the language of messages, dependency on literacy of the patient, patients who didn't have a mobile phone, network or server problem, monitoring of the ASHA & panchayat coordinator, were also observed, which when rectified will make the program more successful, even replicable to wider areas.