Chapter 4

Method & Materials

4.1 Selection of area and study population:

This was multistage cross sectional quantitative cum qualitative study. It was conducted at Revised Tuberculosis Control Programme (RNTCP) pilot project area of Mehsana. This study aimed to study the effect of RNTCP implementation regarding change in knowledge, attitude, and behavior of target population and those of care of target population e.g. health care provider. The rural model of RNTCP was first tested in Mehsana. So this study was carried out in rural area.

There was no base line study done at project area of Mehsana in past. So Anand district was selected as a control on following consideration:

(1) Anand and Mehsana, both were educationally and economically developed district, located in Gujarat state of India.

(2) These districts had similar agriculture business with adequate transport facilities.

(3) The availability of general health services as well as TB control services were also equally distributed.

(4) The availability of health men power was similar.

(5) Both the district had two NGO base TB hospital providing services to rural population.

(6) Anand district was not included in RNTCP pilot project till 1999.

So Anand can work as appropriate control for Mehsana to compare the change made because of RNTCP pilot project.

4.2 Selection of Primary Health Centers:

On the basis information obtained from district TB centre. The primary health centres (PHC) were listed alphabetically and four PHC were selected from each district on the basis of random selection.

4.3 Selection of village:

Two villages from each PHC were selected. One PHC head quarter village and another out reach village located 7 KM away from PHC. This was selected on the basis of random selection.

4.4 Selection of household:

The household residing in village for continuous period of one-year e.g. 1st January 1998 to 31st December 1998 was included in study. The following preliminary information were collected by the team of health worker:

1. No. of male and female household residing in house.
2. No of male and female children < 14 years of age.
3. No. of male and female children 1 to 2 years of age with their BCG vaccination status as per their mother statements.
4. The list of household having symptoms of cough with expectoration for more then 3 weeks and not taken TB treatment in past. (Chest symptomatic patient)
5. The list of TB patients who were diagnosed and put on treatment during the period of 1st January 1998 to 31st December 1998.
6. The list of death of any cause occurred during the period of 1st January 1998 to 31st December 1998. The death registration at village Panchayat register also verified.

A team of TB supervisor with pre-tested, semi-structured questionnaire contacted the chest symptomatic, TB patients, and family member of dead person. (See appendix) The questionnaire forms were filled-up after an in depth interview of beneficiaries.

If any beneficiaries ware not found on the day of interview then attempt was made on next day for contacting him. The house closed for consecutive three days was excluded from the study.

4.5 Sputum AFB examination:

Immediately after the interview of chest symptomatic and TB patients, a spot sample of sputum was collected in a screw tide transparent sputum container for smear AFB examination. Another empty sputum container was given to each patient for collection of early morning sample at his home. The patient was asked to return the sputum container at Panchayat office of village. The laboratory technician of concern PHC collected sputum sample. If the patient did not returned back then a health worker was sent to patient house to collect the sputum container. The third spot sputum sample was also collected from the patient at the time of collecting container on next day. The sputum samples with coded list were sent to TB laboratory for smear AFB examination.

4.6 Selection of Public Health Care Provider:

The medical officer, pharmacist, and health worker who are the key functionaries in TB Control Programme were selected from selected PHC. The pre-tested, semi structured questionnaire form in local languages were hand over to public health care provider. They were asked to fill the form in their own handwriting. The completely filled up form were collected on the same day.

4.7 Selection of TB treatment cards:

All the patients put on TB treatment during year 1998 and belong to selected PHC area were listed village-wise. The treatment cards were collected. These TB cards were studied for type of patient, sputum status, weight gain during treatment, sputum follow-up, regularity of treatment, default retrieval, and out come of treatment.

4.8 Permission to conduct study from state Government:

The permission to conduct study was obtained from state health authority by their office order no. TB/3899/TB surveys/TBC/99 dated 7/7/1999. (see appendix)

4.9 Recruitment and training of study team:

The TB supervisor, who were not in charge of selected Primary Health Centre for tuberculosis activities, were requested for consent to include them for study team. Total 8 TB supervisors were selected out of 17 who consented. The selected TB supervisors were trained for 2 days for data collection. The curriculum for training includes:

First day -Over view of study design
-How to fill-up the questionnaire
-Detail discussion of each questionnaire and possible interpretation.

Second day - Field training
- Feed back on experience obtained in the field.
- Necessary modification of Performa were made.

4.10 To avoid the observer bias:

- Survey conducted by same survey team in both the areas.
- TB supervisor who were in charge of selected PHC were excluded for the survey work.

4.11 Analysis—

The EPI-INFO-6 b software package developed by CDC USA, were used in personal computer. The data enter in EPI-INFO.REC file. The analysis, statistical test were done though EPI-ENFO program.

The formats for data entry and questionnaire form in local language please see appendix.

4.12 Timing of study:

(1)	Preparation of protocol	May 1995 to July 1995
(2)	Review of literature	August 1995 to December 1996
(3)	Design for forms data collection	August 1996 to December 1996
(4)	Pilot study	July 1997 to November 1997
(5)	Permission for field survey form state Govt.	July 1999
(6)	Selection & Training of study team	September 1999
(7)	Field survey	October 1999 to December 1999
(8)	Data entry in P.C.	January 2000 to April 2000
(9)	Analysis of data	May 2000 to July 2000
(10)	Report writing	August 2000 to November 2000
(11)	Submission of report	April 2001