

5. FIELD PROCEDURES

The fieldwork was conducted from January 2000 to January 2003. The duration of fieldwork varied from 15-18 months in different zones. The fieldwork comprised of four major activities:

1. Planning
2. House to house registration of eligible children
3. Tuberculin testing
4. Reading of reactions.

In each zone, two teams were deployed for fieldwork concurrently in two districts. Thus each team had to complete the fieldwork in three districts of a zone. The field work had to be performed in accordance to the uniform set of work instructions prepared meticulously prior to the field work (Appendix 7).

To begin with, the team undertook a planning visit to the selected cluster to solicit the support of the local leaders, panchayat members or corporators, school teachers, social workers and opinion makers. These people were informed about the purpose of the survey and time schedule of the tuberculin testing and reading. Later in the day, the planning members of the team scouted the cluster following which a rough sketch of the area was made illustrating all the lanes and the number of houses in each lane. For the purpose of the survey, a hamlet was considered as a lane. Each lane was assigned a number. Subsequently using the random number table a lane was selected. The first house situated in one end of the lane denoted the point from which the fieldwork in the cluster would commence.

The testing teams were guided to the survey site from the description of the road route outlined in the Planning sheet. On the day of testing, the enumerators visited the first household selected by the planners and all the households in that lane were numbered serially irrespective of the presence of children eligible for the survey. The target was to register 85 children aged between 1 to 9 years and to achieve this they had to proceed to adjacent lanes and if necessary to the geographically neighboring cluster, numbering all the households during the process. The age of children eligible for the study was obtained from their parents/guardians and in case of doubt substantiated by appropriate documents, if available. Only children living in the cluster for more than 6 months prior to the survey were included in the study. At the time of registration, if a child was not available, a note was made in the remarks column of the household form regarding the time when the child will be back from School, etc. Then a wait was laid for the children to come back from school.

A suitable place under shade was chosen for the administration of the tuberculin test. The team members guided the children to the testing site. In a few places like urban areas in Delhi, hilly tracts of Kangra and East Sikkim districts, scattered houses in the tribal district of Jhabua, the children were tested in their homes.

A written consent from the guardian of the child was obtained before administering the tuberculin test. The secretary to the tester examined the upper third of both the arms for the presence or absence of a pea sized hypo-pigmented shiny scar produced by BCG vaccination. If a scar was present but did not possess the characteristics of a BCG scar, it was recorded as doubtful.

The children with fever at the time of testing or history of skin rash in the last six months were excluded from testing.

The tester administered 0.1ml of the tuberculin intra-dermally on the mid-volar aspect of the left forearm of each child. The injections were given using 1-ml disposable tuberculin syringes with graduations of 1/10th of mm, fitted with 26-gauge needle of ½" length with 20° bevel. The status of the test was observed by a trained secretary to the tester. Each test was recorded as 'satisfactory' if it raised a flat pale wheal with clearly visible pits and well demarcated borders. It was labeled 'unsatisfactory' in case of leakage or if it was subcutaneous injection. These observations were recorded in a 'Child card', which was opened for every child who was subjected to tuberculin testing.

The reaction size was uniformly read after three days of tuberculin testing. On the day of the reading, the reader collected all the child cards filled on the day of testing. The reaction sizes were read by the reader by visiting the houses of the tested children. The reader identified the margins of induration by carefully palpating the edges of the reaction. The maximum transverse diameter of the induration was measured in millimeters, using a transparent scale. The reader also examined the test site for the presence of oedema, bulla, vesicle or necrosis. The reader dictated these observations to his secretary who made a note of them in the child cards. For children having large (≥ 15 mm) or unpleasant reactions, enquiry was made for the presence of any symptoms suggestive of tuberculosis and history of contact with a case of tuberculosis. Children who were suspected to be suffering from tuberculosis were referred to the District TB Centre with a 'Referral slip' for further investigation and treatment if required. The availability of anti-TB drugs for such children was ensured.

The fieldwork could not be carried out in two clusters in north zone because of inaccessibility and refusal.

Quality control

An important aspect of the survey was the rigorous maintenance of the high levels of quality in work procedures. There were no instances of deviations from the work instructions. The various batches of tuberculin used were of uniform potency. The disposable tuberculin syringes used were of required specifications and high quality. The tuberculin vials were stored between 4-8°C and they were carried to the clusters in vaccine carriers. Utmost care was taken to protect tuberculin from heat and sunlight and vials once opened were used on the same day. The tuberculin reactions were read uniformly on the third day after administering the test.

Experienced team leaders from NTI and TRC camped with the field staff and continuously monitored the fieldwork. The data entry for north, west and east zones was done in NTI and at TRC for south zone. The data was entered twice into the computer and validated to avoid any keying errors.

The multifaceted role of Team leaders

The primary role of a team leader was to ensure satisfactory and smooth conduct of the field work. This job not only demanded one to be conversant with the nuances of the operational aspects of tuberculin surveys but also it was a test of the individual's communication skills with diverse groups of people including district health officials, community leaders and local populace. The ability of the team leaders on both these counts were admirable. After long hours of field work, the team leaders would verify the formats for completeness and correctness of records. At the end of the day they had to delve in to maintaining records concerned with the financial aspects of the survey. All bills and vouchers pertaining to accommodation, water, electricity, hiring of vehicles, petrol, oil & lubricants, miscellaneous petty vouchers etc., were meticulously filed by the team leaders. They led the team by setting an example to their subordinates.



*House to house registration under progress
in a rural cluster*