D. TN. The my second TB patient. Interview comments/ feed back please

RF_DIS_5_A_SUDHA_PART_2

soc/ 4/ 7/ 2000

Interview with Mr. Jayaram on 31 August 2000 from 1.15 from 3.15 pm.

Mr. Jayaram aged about 36 years lives in Neelsandra slum with his wife and two children, a son and a daughter aged 6 and 3 years. It's a small house measuring about 28 squares has an asbestos roofing and has electricity connection for one bulb. I was told that the house had collapsed a year ago, about 7 months ago they managed to repair the front portion and are living in since then. It is their own house. Cooking is done in one corner; utensils are washed outside the house on the street and use the community toilet. Lady of the house said that she uses the neighbor's bathroom for bathing. Jayram is a construction laborer, he says that he can earn about 70 – 80 rupees a day when he goes to work. He said that the he gets work only for about 15 days in a month. He is a chronic alcoholic and a chain smoker. I wonder how 4 people can sleep in such a small place. Their son had gone to school. Jayaram and his wife participated in the interview. It took about 1½ hour for the interview and the interview was done in Telugu as Jayram's mother tongue is Telugu and he preferred to respond in his mother tongue. This is a very poor family and survives by financial support given by the lady's family.

He said that he gets cough when the weather is cold and unable to eat well are his present problems. He said that the doctor at the hospital near Sapna (Lady Wellington TB center) Theater told him that he has TB.

His wife said that he had a boil in his hand and it got infected. When he went to a private doctor it was reported that the doctor told him if he neglects treatment his hand might have to be amputated. He was afraid and said he would rather die than going to any doctor. She said that her brother took him to a private practioners nearby for treatment and a surgery was done to cure his infected boil. She *said "He had lost so much of blood during the surgery and he was weak. He was also worried about his house in Neelasandra that had collapsed; he was not eating properly and started drinking (alcohol) more"* It was reported that this is the time he had fever and loss of appetite and was diagnosed as affected by Tuberculosis at the place mentioned above.

He say that he doesn't know why he got TB and said that he was doing well and was going to work, he said suddenly one day he got cold and fever, and felt like lying down all the time. He said that he was feeling cold, had fever and cough and it persisted for about 2 months. His wife said that he refused to go to a doctor. He was insisted by her people so went to Ashwin doctor (a private practioners) and told him that he had cold, fever and cough. The doctor gave an injection and tablet for three days. He also gave him a prescription and asked him to buy the medicines from a medical store. He said in two days time his fever and cold subsided but he was unable to eat so he went back to the doctor again. This time he said that the doctor told him that he might have TB and sent him with a chit to the Lady Wellington TB center.

He said that his mother had TB and she took treatment from the hospital near Sapna theatre (Lady Wellington TB center.) It was reported that she died two years ago. They both said that they have not studied so do not know why and how we he got the disease. His wife said, " *People say, if polio drops was not given when we were small, we get the*

disease" they said that they are not aware of anybody suffering from TB in thier neighborhood.

He said that as soon he went they took an X ray and did sputum test. He said that he was informed that he has TB and told him that they would give him the tablets for 6 months that he should take it without discontinuing. He said that he was sent with a chit to the government hospital in Munireddy palya for collecting tablets.

He said that he approached the Munireddypalya Government hospital after a week, where deliveries are conducted and attend also attend to the general health problems of all people. He said again they collected the sputum for three times, once as soon as he reached and asked him to bring after two days the sputum collected early in the morning. He said, again they collected the sputum when he went to the center and one inspector came and took away his sputum for investigation to be done in some other place. He said that he was again informed that he has TB and gave him the tablets *"they told me to take the tablet without missing and I would be cured."* He said that once a week he would go and collect the tablet by showing the tablet covers used and he took them for 5 months.

Note; during the interview he got up, went out and spat on the road, I think he does this always.

He said that he could eat well after taking the tablet for about a month. His wife said that the doctor told her to give him meat and soup and said that she gave and he was feeling all right within one month. They said that after completing the treatment for about 5 months they came back to Neelasandra. They said that they knew that he had to complete the treatment for another month and said they had to come back since they house here was in bad shape after it was collapsed. It is seven months ever since they came back from Munireddy palya after discounting the last month treatment.

They both said that they heard through their in laws that people form the government hospital in Munireddy palaya came in search of him and were sent back saying that they have gone back to Neelasandra. They said that they were told by their in laws that the people from the hospital felt bad for Jayram taking the tablet for 5 months and discontinuing the last month's tablets before being cured. It was reported that they told his mother in law to take him back there.

He said that at present he doesn't have any problem and gets cold only when the temperature drops. He sad that that people at the Lady Wellington hospital told him to stop smoking and drinking and said they would not give him the tablets if he wouldn't. He said that he gave up smoking and drinking during his treatment for five months and started again from the past one month. He said that while taking the tablets, he had burning sensation in the stomach and his appetite increased.

He said that TB affects because people don't eat well. He said, " *Doctors told me that I simply drink and sleep and don't eat well"* He said that at the Lady Wellington TB center he was shown the X-Ray. " *They showed me a big x-ray and I could seek the picture of*

my heart with holes in it and that is what called TB". He said that "*TB could affect anybody, and it affects particularly those who are lean and weak. It doesn't affect those who are fat and healthy and said smokers and drinkers do not eat well thus they are affected by TB.* "

He said, it is better to marry only when one is cured from because the disease can spread to the other person. He said that TB spreads if people stay in close proximity and breathe in their air exhaled by the person affected by TB. In his case, he said that he got after his marriage and was told by the doctor at Munireddy palya hospital to abstain form sexual relationship with his wife and he had abstained during his treatment. He said that he needs to go for check up again because he gave up the treatment during the end.

His wife said one need to pay some money to the place where the treatment was given (not sure how much) for continuing the treatment after discontinuing. She said the reason for payment is because they failed to make use of their consideration to provide the treatment free of cost due to their poor status. She said that outside each tablet cost 20 rupees. They said that he is planning to visit the health center where he was taking treatment and check his sputum during dasara when he visits his in laws.

"People say that you can get TB by stamping the urine and sputum of the person affected by TB. If they come to know that I have TB and if I spit and urinate in public places they would scold me". He said that his people at his mother in law's house told him to get admitted in the hospital and told him to spit in a tin, cover it and dispose it far away.

He said that I kept the chit given by the lady Wellington for 5 days with him before he went to the TB sanatorium. At TB sanatorium they checked his blood and sputum and said that he I has severe TB and I needed admission. He said that he spent about 100 rupees. 40 rupees to the lab technician and 50 rupees to the x ray technician and 10 rupees to the attendant who guided him to these places. Thy said that they spent 100 rupees for auto. His wife said that her brother took him to TB sanatorium at Old Madras road because he had seen his neighbor a teenage girl who was treated for TB there and is cured, she is now doing teachers training.

He said " *I saw people in worse condition than me, they were awkward to look at and I did not like to take treatment there so I came back"* His wife said that they insisted that one person should stay with him in the hospital and it was not possible for her as she had with her the little child so she had decided against it.

The said that they went 3 times to Lady Wellington Hospital and it costs 100 rupees for auto for each visit, they said they spent about 1000 rupees totally for transportation and other personal expenses apart from paying money to the staff at the sanatorium.

He said that he felt the Munired y palya hospital s better because the tablet they gave him helped in recovering and at TB sanatorium he said that they give injection and tablet.

He said that he did not go to work during the treatment of 5 months and said he couldn't do the work and was feeling breathlessness. He said that all his expenses were taken care by his in laws during those 5 months of treatment. He said that they made him become all right and sent him back. He changed his version and said *"How long I can stay in my in laws house, they started treating me indifferently and spoke ill of me and how long can I tolerate, they also need place for themselves. I just decided to leave their place discontinuing my treatment and said it did not matter even if I die. I brought back my wife and children, No need for any tablets."* The tablets given for the week he left was still with him and he did not take them.

They knew the Neelasandra and Asustin town TB clinics and said they would get the tablets if they get a letter from Munireddypaaly clinic. He said that he had to take 3,4,1,and 2 tablets each day. He said that he had to take and show the tablet covers to collect the tablets for the following week. It is 7 months since he has discontinued the treatment and has come back. His wife said that the doctor told her that both her daughter and she had to do the test for tuberculosis. She said that she went to Neelasndra corporation TB clinic and asked them to do TB test for and she was told by the people that there no necessity to do the test unless she has cough or loss of appetite. She said about her husband she was told to take him there with a referral letter from the Munireddypalya TB clinic.

She said about reasons for discontinuing *" my people were always scolding him, started telling him it is more than a year since you come here and you do not want to go back to you house, he could not tolerate their words so her brought us back here"*

He said that he is planning to his mother in-laws house for Dasara and said *"even if I go to my mother in-law's house, I will not go to the clinic because they would scold me for discontinuing"*

"If people come to know that I have the disease that they would tell me to go far away from them because it would spread to them." He said that he had no such experiences.

He said during those 6 months of treatment, he could not go to work and says that he can go to work now but unable to do hard work because he feels breathlessness.

He says, *" I was so close to my mother I ate with her, slept next to her and went wherever she went so I got this diseases from her"*

Questionnaire (Health Care Professional Version)

Name of Institution _____
Location (Address) _____
Phone # _____
Director/ In-charge _____
Person Surveyed _____
Funding Sources _____
Year of Establishment _____
# of Staff Members:
- Doctors _____
- Nurses _____
- Lab Technicians _____
- Other _____

# of Beds _____
# of Patients _____
# of TB Patients _____

# of Patients _____
#of TB Patients _____
Diagnostic Facilities Available _____
_____

Case Finding/ Diagnosis

1. Approximately how many patients come in with TB Symptoms? (suspect of TB)
   _____
   Of these symptoms, we include :
   - Severe cough for extended period of time _____
   - Severe Weight Loss _____
   - Extended Fever _____
   - Blood in Sputum _____
   - Extreme Fatigue _____
   - Patches on Chest _____
   - Other _____

2. What economic background do most of your TB patients belong to? _____
   _____

3. What diagnostic tools are used?
   - Chest X Ray _____
   - Sputum Culture _____
   - Both _____
   - Other _____

4. When do you repeat investigations? _____

5. What do you do if a patient presents his/herself with TB symptoms yet the investigations return with negative results? _____
_____
_____

6. When do you ask for a sputum culture? _____
_____

7. How many of the patients do you find are co-infected with HIV? _____
What other co-infections are common? _____

8. What information is given to patients upon diagnosis? _____
_____
_____

In addition to prescribing medication, what medical advice do you give patients?
_____
_____

9. What audio-visual aids do you have on TB?
_____
_____
_____

10. Normally, what is the patient's understanding of the disease?
_____
_____

Treatment

11. What are the most commonly prescribed drugs? _____
In your experience, which ones work best? _____

12. What is the duration of the treatment regiment that you advise? _____
To what percentage to they follow this, in your experience ? _____

13. What percentage of patients responsive to treatment? _____
Of those who are not responsive to treatment, what do you think are the reasons?_
_____
_____

14. What exactly is the prescribed regimen (i.e. SCC) _____
_____
_____

15. What are common side effects of the treatment, and how do patients handle them?
_____

16. What are some major challenges in providing treatment? _____
_____

17. What form of record keeping do you practice ? _____
_____

Do you have a sample to show ?

18. What do you charge for :
    a) Consultation
    b) Investigation (Sputum/X-Ray)
    c) Prescription

What percentage of patients finance treatment? _____
_____

19. Where do you get the medications from? _____

20. How much does an average course of treatment cost the patient? _____
_____

21. Does your institution have any financing plans? _____
_____

22. Are you aware of how patients can get assistance in getting medication? _____
_____

Case Holding/ Follow Up

23. What percentage of patients continue with treatment until the end? _____
24. What are the most common reasons they stop?
    Financial _____
    Social _____
    Side Effects _____
    Other _____

25. What follow up techniques does your institution practice? _____
_____
In your opinion, how effective are they? _____
_____

26. How often do you encounter drug resistance (or MDR TB)? _____
_____
What percentage of your patients become resistant ? _____
_____
What percentage of patients come with MDR TB? _____

27. How do you treat these types of patients? _____
_____

28. Is there special protocol/policy that you use for treating recurring patients? _____
_____

29. When do you decide to refer patients elsewhere? _____
_____

30. Are you aware of the Revised National Tuberculosis Program (RNTP)?
How often do you encounter it in practice and how often do you use its services?
_____
_____

31. Any other concerns/questions/comments that you would like to raise? _____
_____
_____
_____

Thank you for your cooperation

The Role of the Private Sector in TB
Community Health Cell

Questionnaire (Health Care Professional Version)

Name of Institution _____
Location (Address) _____
Phone # _____
Director/ In-charge _____
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# of Beds _____
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# of Patients _____
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Case Finding/ Diagnosis

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Of these symptoms, we include :
   - Severe cough for extended period of time _____
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2. What economic background do most of your TB patients belong to? _____
_____

3. What diagnostic tools are used?
   - Chest X Ray _____
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   - Both _____
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The Role of the Private Sector in TB
Community Health Cell

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What other co-infections are common? _____

8. What information is given to patients upon diagnosis? _____
_____
_____

can be combined

—In addition to prescribing medication, what medical advice do you give patients?
_____
_____

9. What audio-visual aids do you have on TB? how often used / when do you normally use
_____
_____
_____

may be an only question needed here

—10. Normally, what is the patient's understanding of the disease?
_____
_____

(Treatment)

11. What are the most commonly prescribed drugs? _____
In your experience, which ones work best? _____

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_____

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_____

In your opinion, how effective are they? _____

_____

26. How often do you encounter drug resistance (or MDR TB)? _____

What percentage of your patients become resistant ? What do you do?

What percentage of patients come with MDR TB?_____

When do you do when — Some one comes ? MDR

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29. When do decide to refer patients elsewhere? _____

30. Are you aware of the Revised National Tuberculosis Program (RNTP)?
How often do you encounter it in practice and how often do you use its services?

31. Any other concerns/questions/comments that you would like to raise? _____

Recording – patient/clinic retained cards – ? used for follow up
Reporting – to the concerned govt. authority
Any formal arrangements for referral – for diagnostic + treatment
Links with govt institutions – how they approached you.

Thank you for your cooperation

The Role of the Private Sector in TB
Community Health Cell, June – August 2000

List of Institutions to be approached
(From the *Voluntary Health Association of Karnataka*)

1. c/o Medical Superintendent
   Sindhi Charitable Hospital
   Sampangiramanagar
   Bangalore – 560027
   Ph : 2237117

2. c/o Administrator
   Chinmaya Mission Hospital
   Indiranagar
   Bangalore – 560038
   Ph : 5280461

3. c/o Medical Superintendent
   Church of South India Hospital
   No. 2 Colonel Hill Road
   Bangalore – 560051
   Ph : 2861103, 2861104

4. Correspondent
   Shanthinilaya Community Health
   Care Center
   Tambuchettypalya
   K.R. Puram
   Bangalore – 560056
   Ph : 5281139

5. Administrator (Father Sebastian)
   St. John's Medical College
   Hospital
   Sarjapur Road
   Bangalore – 560034
   Ph : 5530724

6. Administrator (Dr. Om Prakash)
   St. Martha's Hospital
   Nrupathunga Road.
   Bangalore – 560001
   Ph : 2275081, 2274541

7. Administrator (Dr. Michael)
   Bangalore Baptist Hospital
   Bellary Road, Hebbala
   Bangalore – 560024
   Ph : 3530321, 3530322, 3530333

8. Administrator
   Sneha Bhavan Dispensary
   Rose Garden
   Vivekanagar
   Bangalore – 560047
   Ph: 5110612

9. Administrator
   St. Philomena's Hospital
   1 Nilasandra Rd.
   Bangalore – 560047
   Ph: 5577046

10. Administrator
    St. Theresa's Sanitorium and
    Maternity Home
    Rajajinagar
    Bangalore – 560010
    Ph: 3320432, 3320761

11. Sevakshetra Hospital
    Ph: 6634080

12. Administrator
    Al-Ameen Medical Trust Hospital
    #2 Miller Tank Bund Rd.
    Bangalore – 560052
    Ph: 2200332

13. Director
    Nava Jeevan Health Center
    Carmelaram Post
    Sarjapura Road.
    Bangalore – 560034
    Ph: 3421121/1122/

14. Director
    Jnana Jyothi
    Anekal
    Bangalore – 562106
    Ph: 2141121

Sister Elise Mary (CHAIKA)
Ph: 8440530 , 9844084377

Dr → consultant or primary focus TB,

Community Health Cell
367, Srinivasa Nilaya, Jakkasundra
1st Main 1st Block, Koramangala
Bangalore – 560034

July 1st, 2000

Re: Tuberculosis Research Project

Dear Sir/Madam;

Recently, Community Health Cell (CHC), a voluntary health NGO located in Koramangala, initiated a study entitled, **"The Role of the Private Sector in Tuberculosis Control"**. Commissioned by the Karnataka State Task Force on Health, Nutrition and Population, this research study aims to understand the nature and role of the private sector in health care in the area of Tuberculosis (TB). In practice, TB control may be defined as having three main aspects including case finding and diagnosis, treatment, and case holding.

The voluntary not-for-profit sector plays an important role in the development of TB control programs and it is an important part of the private sector. Therefore, documentation of their approaches and effectiveness in health care is useful information that must be collected. As a result, we are approaching all NGO's and hospitals with significant TB components to their agenda, such as your institution, and requesting their participation. This participation will be solicited in the form of information regarding such topics as patient care, diagnostic techniques, and treatment regimens. This would require an interview session between a member of your staff and a member of CHC. It is important to note that *all data will be collected solely for the purpose of developing the study and all names and information will be kept strictly confidential.* No names of institutions, patients or staff members will be reproduced in any published text.

Attached is a sample survey, which includes the questions that will be asked by the members of CHC, included for your reference. Should you have any questions, comments or concerns, please address them to Dr. Thelma Narayan, Mr. Chander, or Deepti Tanuku at CHC (ph: 5531518 or 5525372). We thank you in advance for your cooperation, and we look forward to working with you.

Thanking you,
Sincerely,

Dr. Narayan Mr. Chander Deepti Tanuku

001 - A K Nagaraj

INDEPTH INTERVIEW - Patient Perspective TB. 29.8.2000 Nellasandra

Mr. A K Nagaraj Aged about 60 years, lives in Nella Sandra slum. He says that he can speak english but he cannot write. He did speak a few sentences. He could understand English. I conversed with him in Tamil as he was fluent in Tamil. His mother tongue is Telugu. I spoke a few sentences in Telugu too. He blongs to a cobblar community and makes shoes for some shoe room in Shivaji Nagar. He says that he is able to earn 75-100 rupees a day. He has completed TB treatment 1½ months ago.

He said that he suffering from piles and was admitted in Bowring hospital. He says, he chose Bowring hospital because he knows few staff there. He said he also had fever for 4 days along with the problem of piles. He was hospitalized for 15 days and he was referred by the doctor in Bowring hospital to TB Sanatorium in old Madras Road. He say that he came to know that he had TB by reading the referral letter in which a question mark for TB was mentioned. His wife says that the nurses in Bowring hospital had informed her that her husband had TB and it's a worst disease but curable. they said he would be cured iff he was admitted in the Sanatorium for 2-3 months. They also told me to be careful careful, because it spread. I was shocked when we were told to go to Sanatorium.

30/8/2000. 2 hours for interview
2½ " " writing

1

Mr Nagaraj had 4 workers and 2 sewing machine used for stiching leather when he was affected by TB.

He said the TB drugs were mixed in food given at Sanatorium, He was provided with greens, vegetables, ~~and~~ eggs and milk. He would feel hungry soon because the food provided was not adequate. Often his wife would bring him food from outside. He said that he did not feel like taking the toplets because it made him feel heat (body warmth) He also felt the need to urinate often and lost control over his bowels. About three or four occasions he lost control ~~and made~~ and wet his bed. He said that after was discharged from Sanatorium in July, he didn't want to take the toplets and was forced by his wife. He said during the treatment he had sleepless nights because he had to get up often for urinating. His wife said that she was informed by the nurses in the ~~Hospital~~ Sanatorium not ~~to~~ to discontinue the treatment because he would get back the disease if discontinued and it would be difficult to cure. His wife said that he insisted to be discharged though the nurses told him to stay for one more month. He completed the treatment from Neelasandra (corporation dispensary). He was referred there. His wife would go and collect the medicine once a week. She said that she had to wait for about 10 minutes and says the people in the dispensary were kind, did not ask money unlike other places.

Role of family support:

Good behaviour reported

2 in the Sanatorium

He said the peon and warboys trouble a lot for money. "If we dont pay money, they won't take care of us well" Even if we pay the care won't be good but they would talk to us well. The nurses forced us to go and collect the medicine from the counter She she would never go near the patient though the patient is unable to walk. once I fell down while trying to go for my injection. they take care of well only when we pay money & we dont pay they scold and refuse to attend when we complain when having some problem. He said that that all the patients showed turn their faces away during the visit of the doctor, he used his Stethescope to examine us. When asked why were they asked to turn away their faces ~~away~~ He said, may be the doctors are afraid that they would get the disease. - He said that the toilets were dirty they would'nt bother to Clean and the distance between the beds were close that he felt uncomfortable. ~~that~~ is one of the reasons that he wanted to get discharged soon. His wife said that lots of people were dying (in patients) and she was afraid They both said that they ~~were~~ witnessed an incident when the peon poured Aleagle into the mouth of the young patient who was suffering very much. He said that he was brought in a car by his wife and she never bother to be with him. One in a way his relatives

check necessary

Walk happened to him

He died

would come to see him and his wife would come once a week to see him but would not attend to any of his needs. He had three small children they both said, it is difficult to manage without an attender in the hospital. the condition of patients who do not have attenders is worse. the staff would not be free to attend to anything.

About community attitude he said that people are ignorant about the disease. He said that he doesn't know what peoples attitudes are towards a person affected by TB. He said because no one in his neighborhood knew that he had TB. He said that he faced indifferent attitude from his people at home. by his wife. he said that it is because may be she was afraid that he would spread the disease to her He said that he has seen for that people treating from the experience of other TB patients that they were treated just like untouchables.

About his perceptions: He says that he got TB by using a paste tooth paste made out of tobacco, he said that one of his friend suggested him to use the paste to be cured off from his cold. He said that he gained knowledge about TB through TV and by reading science textbooks He said that TB is caused by a virus which is produced in the body — and spreads from one person to another by eating and drinking

Conclusion

My people had stopped coming near me but have care of me well.

from a glass used by a TB person affected by TB, it also spread by using public toilet by smelling the gas in the toilet. He said that TB affects more people who are smokers, alcoholics and who dont eat good food. He also said that TB affects those who eat beef because the TB virus is in beef and it will not die even if it is cooked. He said TB affects more the non ~~vegetarian~~ vegetarian than the vegetarian and women are affected more because they neglect eating good food. He said that he was advised by the people in the hospital to eat mutton because it prevents ~~the person from getting TB~~ TB and he does not believe it. He also said that TB affects people who are lazy

Knowledge about TB & it's spread

About consequences of not seeking treatment. he said it would kill the person because TB virus destroys the blood cells. ~~It~~ and said a person can die within 6 months to 1 year if ~~not~~ not treated.

He said it is better for person suffering from TB to avoid getting married because it affects the stamina. "those married it is better they obstain from sexual relationship as possible. If not they can have once in a way.

He said TB is curable and treatment should not be discontinued ~~and~~ because the disease will reffect. If it would be severe if it is reaffected. ~~He~~ He said that people who are coming back to hospital after reaffected. He said it curable even after reaffecting if treatment is taken regularly

He said in both the places Bowring Hospital and TB Sanatorium he faces the problem of people demanding money. He says that he doesn't like Health Issues that staff at bowring but the Students took care of him well. He said that the Chief doctor would not bother to take care of the patients, and said the junior doctors spoke to him well and took care of him well.

At Sanatoriums he say that the nurses were better than the doctors. He said one his advocate friend brought the Kolar MP to visit him while he was Political influence in the Sanatoriums and since his visit he was given better care.

About treatment cost, including the indirect cost like Expenditure travel and food, he said that he has spent about 5000 rupees. He said that the doctor Malkaroppa who stays in the campus pressed insist that they buy the medicines from his medical shop which is outside near the circle. He says he paid 250 rupees to the nurse while admitting. He said that the ward boy took 30 rupees. and the X ray technician took 50 rupees. He said that his urine and sputum was examined ~~He~~ 10 days after his admission. His wife said that they Sale of assets. sold one of their sewing machines and used that money for treatment, and said that her relatives also supported financially. She said that she also took up a job in a Municipal Social economic impact Center and worked as an attender in an office

to take care of the family needs and his treatment. ~~He said~~ She spent money for bus fare and auto fare often. She also said that rice from ration was not sufficient she would buy from ~~outside~~ hotels.

continuing late health problems

Mr Nagaraj said that recently he went to a Homeo doctor in Basavanagudi for cough. He said that his friend referred him there. He said he visited him twice and paid him 100 and 60 rupees. He says that he had informed that doctor that he was suffering from TB. He feels that Homeo medicine can cure TB and had he known before approaching TB Sanatorium Dr Pudmesha he would have sought treatment from him. He says that he felt better after taking homeo medicine and says that did not have any side effects unlike TB medicines.

contact tracing not done

He said he was not carrying his 6 months old grand daughter while he was under treatment. He said that his sputum has been examined at Veeda Sadana dispensary and informed that he is cured. He said that recently a week ago some one from the center came and collected his sputum. His wife says that she showed it and collect the result.

follow up

He said that he was under rest for one month after he got discharged from Sanatorium and started his work (shoe making) and presently works alone at home and says that he is able to earn about 75-100 rupees a day

felt a sense of ~~gratitude~~ gratitude his wife says that she should praise the nurses who treated him & stay for one more month so that he would get well soon. — ? did they do so

SJC This is a good start. Pl. discuss tomorrow.

1. ? He has never been to a private practitioner.
2. ? Check of prescription + discharge slip, if available to diagnosis + treatment — was he on RNTCP
3. More (detail/info) required about early symptoms + when the patient started feeling better, what symptoms subsided first and what symptoms continued
4. When writing up leave a larger left hand margin for notes.
5. Write code numbers for patients + you keep a master list of code numbers and names. — confidentiality needs to be maintained.
6. check investigations
   - sputum microscopy — 3 sputum test
     - repeat sputum tests if true after 1m/th + 5/6 m/th
   - Xrays — how soon can it be done (screening) if done, when
   - Blood — ESR
     - liver function tests — repeat at monthly intervals

   what were they told about the results / should they given the results

7. Is it possible to find out if he was in touch with any infectious TB patient in the past year

In-depth interview with kavitha's mother at S D Sanatorium on 11.10.2000

Kavitha an eight-year-old girl studying in class three comes form Tiptur is admitted in S D sanatorium a week ago. Her father is agricultural coolie and earns about 30 rupees a day and mother to is a coolie, studied up to class 10 and earn about 15 rupees a day.

She stopped going to school two and half months ago due to fever and cough and said that she had fever at nights and had cough always. Her mother said ' she had fever and cough for five days, took her to the government hospital and they gave an injection and tablets. Fever and cough stopped for five days and again started. This time my mother took her to Gubbi (a village near by) and showed her to a private doctor. They doctor gave her injection, tablets an cough syrup. He gave her the injection for twenty days on every alternate day. The doctor said that she has more fever and cold. May be about 1000 rupees my parents had spent but there was little improvement. She said her husband is a coolie and earns about 30 rupees a day and her parents spent the cost of the treatment.

Again fever started so my parents took her to Thumkur and they asked us to take her when she has fever again. When we took her when she had fever they admitted her for about a month. They took four x-rays and we had to pay for three x-rays, one was taken free. Here we may have spent about 4000 rupees. Here they said that kavitha has TB and Limany (pneumonia) they tested her blood, sputum and had collected fluid from side. They said that they would cure her but referred her here. They said that a pipe needs to be fixed to her side and they could not do it. They sent us here by saying that there is a good doctor in this hospital.

When came here they did an x-ray and collected blood. They might have told my brother what is kavitha's problem, the doctor has not told me anything. Fever and cough is stopped but she cannot eat. At Thumkur hospital they gave 10 injections and gave half medicines asked us to buy from outside. It is a general hospital. Here they have fixed a pipe to her side and she is better now. Here they gave injection three time a day and give tablets after lunch.

How do not know how she has got TB. She said neither in my family members nor in my neighbourhood had TB. The Thumkur doctor said that TB is in the beginning stage. She said that her brother who is twenty-five

years old and he had TB when he was one year old and he took treatment till he was three years. Kavitha might have got this disease from other children in school. May be she got from the mosquito bite; the mosquito that had bitten the affected person and bitten or she might have stamped the urine of the affected person. TB spreads by stamping the urine and sputum of the Tb affected person; it also spread by the mosquito bite. All these information I learnt from some sisters used to come to our village, the anganwadi worker and the doctors who came there.

Note: it was difficult to get more information from as Kavitha's grandparents accompanied her to the hospital and her mother said that she did not know.

In-depth interview with Devaraju's mother at S D sanatorium on 11.10.200

Devaraj a 10-year-old boy comes from Aroli village in kanakapura taluk, his mother sivamma was with him, his father Siddhiah is landless lab labourer. Devaraj has two more brothers and a sister. He came to S D sanatorium 15 days ago. He is studying in class 3 and left school when he had come for treatment to Bangalore. She said the she had some physical problem during the last deliver and she was advised not to do hard work. My relatives have given a thatched house and we live in that. My husband earns about 20 to 30 rupees a day. She has studies up to class ten.

Dveraju said that he has chest pain, back pain, fever and cough in the night. He had these problems for two months, I showed to a private doctor in the nearby village. From the past eight days he is given tablets and injections, he is feeling much better, his fever and chest pain is gone.

Six months ago Devaraju had fever for 15 days and I took him a private doctor and the doctor told me that he has heart problem. My father took him to Jayadevea hospital in Bangalore and the doctors said that he doesn't have heart problem. He was brought back and we were giving the tablets given by the private doctor. Jayadeva doctors had given him 30 tablets and he took them, he was all right for four months and two months ago he started complaining of fever, chest pain and cough. We took him to a private doctor and he charged him 10 rupees and gave a prescription. And the medicines cost about forty rupees and we spent about two hundred rupees for tablets. My husband borrowed the money from some one in the village for his treatment and I do not know how much he had borrowed.

When asked what is Deveraju';s problems she said , fever, chest pain and cough. When asked what was she told about his problems by the S D sanatorium staff, she said they asked if any of my family members had TB. No one in my family had TB. When we came here they took his sputum twice for examination. We came to this place with one of our neighbour who had undergone TB treatment from this hospital. My father knew this man and when we told my father that my son has TB, he went and told that man and he brought us here. The doctor at Aroli told us that he has TB. When asked if any investigation was done, she said no. I do not know how he has got T, I don't know if any of my neighbours have TB. Even if they would they tell me? I only know how to take care of children. After coming to this hospital only once I went home to have bath. Here in this hospital they give food for Deveraju and I manage with it.

Before coming he used to go to school and complained that he could not eat, would refuse and did not join the other children for play. The schoolmaster told us to show him to a doctor. He said with tears " he was healthy and fatty see how he has become so thin because we are poor" when asked about if any money was paid to hospital staff she said that she doesn't know because he father brought him and admitted.

Note: she could not answer many things, she doesn't know and said that she had never gone to school.

INTERVIEW GUIDELINE

1. KNOWLEDGE ABOUT THE DISEASE

- What is the name of the disease for which you are/ were getting treatment
- What do you know about this disease?
- Who are more affected by this disease male/ female.; rich /poor; children/ adult/ old people.
- Any reason why they are affected more
- How is the disease spread?

2. HELP SEEKING BEHAVIOR

- How did you find out that you had this disease?
- What were your initial complaints? What did you do?
- What made you seek treatment? When? Where? Narrate your experience
- If there was delay in seeking treatment what were the reasons?
- What made you come to this centre?
- How long have you been taking treatment from this centre?
- How have you to take treatment?

A STUDY ON

PATIENTS PERSPECTIVES REGARDING TB TREATMENT

UNDER RNTCP IN BANGALORE MAHANAGARA PALIKE

AIM:

to understand the patient's perspective regarding tb treatment

Provided by the Bangalore Mahanagara Palike under the RNTCP (Revised National Tuberculosis Control Programme) using DOTS (Directly Observed Treatment, Short course) approach.

OBJECTIVES:

Primary

1. Gain an understanding of the patient perception on TB Treatment, among the urban poor people.

SECONDARY

1. Understand the treatment seeking behavior

2. Understand the impact of the disease and their treatment on their lives and the adjustment they nee to make.

METHODOLOGY

In-depth interview

SAMPLING TECHNIQUE

Systematic random sampling

UNIVERSE: 826 patients registered during the first quarter,
January – March, 2001

SAMPLE SIZE: 115 patients

SAMPLE UNIT: male, female, children, adults

AGE CLASSIFICATION:

0- 5 years

6- 18 years

19- 45 years

46 years and above

TB UNITS FROM SAMPLES WERE DRAWN

	NAME OF UNIT	TOTAL	SELECTED
1	Yeshwanthpura	174	22
2	Hosahalli	96	15
3	Hanumanthnagara	147	24
4	Jayanagara	82	10
5	Neelasandra	99	14
6	Broadway	110	17
7	Lady Wellington	108	13
		826	115

- What symptoms have subsided? What symptoms are persisting?
- How do you feel generally now?
- What would happen if the disease not completed treated?

3.FAMILY

- Does this disease affect your married life? Family life?
- What your family members feel about your having this disease? What support you get from your family with regard to treatment? What are the changes you had to make?
- Do you have a child less than 2 years old? Do you breastfeed the baby? If you stopped breastfeeding why?
- Does any of your family have this disease? What has he/ she has done about it?

4. COMMUNITY

- Do the members of the community know that you have this disease?
- What do the community members think about this disease?
- What support you get from the community member with

Questionnaire (Health Care Professional Version)

Name of Institution _____
Location (Address) _____
Phone # _____
Director/ In-charge _____
Person Surveyed _____
Funding Sources _____
Year of Establishment _____
# of Staff Members:
- Doctors _____
- Nurses _____
- Lab Technicians _____
- Other _____

# of Beds _____
# of Patients _____
# of TB Patients _____

# of Patients _____
#of TB Patients _____
Diagnostic Facilities Available _____
_____

Case Finding/ Diagnosis

1. Approximately how many patients come in with TB Symptoms? (suspect of TB)
   _____
   Of these symptoms, we include :
   - Severe cough for extended period of time _____
   - Severe Weight Loss _____
   - Extended Fever _____
   - Blood in Sputum _____
   - Extreme Fatigue _____
   - Patches on Chest _____
   - Other _____

2. What economic background do most of your TB patients belong to? _____
   _____

3. What diagnostic tools are used?
   - Chest X Ray _____
   - Sputum Culture _____
   - Both _____
   - Other _____

4. When do you repeat investigations? _____

5. What do you do if a patient presents his/herself with TB symptoms yet the investigations return with negative results? _____

6. When do you ask for a sputum culture? _____

7. How many of the patients do you find are co-infected with HIV? _____
   What other co-infections are common? _____

8. What information is given to patients upon diagnosis? _____

   In addition to prescribing medication, what medical advice do you give patients?

9. What audio-visual aids do you have on TB?

10. Normally, what is the patient's understanding of the disease?

Treatment

11. What are the most commonly prescribed drugs? _____
    In your experience, which ones work best? _____

12. What is the duration of the treatment regiment that you advise? _____
    To what percentage to they follow this, in your experience ? _____

13. What percentage of patients responsive to treatment? _____
    Of those who are not responsive to treatment, what do you think are the reasons?_

14. What exactly is the prescribed regimen (i.e. SCC) _____

15. What are common side effects of the treatment, and how do patients handle them?
_____

16. What are some major challenges in providing treatment? _____
_____

17. What form of record keeping do you practice ? _____
_____

Do you have a sample to show ?

18. What do you charge for :
    a) Consultation
    b) Investigation (Sputum/X-Ray)
    c) Prescription

What percentage of patients finance treatment? _____
_____

19. Where do you get the medications from? _____

20. How much does an average course of treatment cost the patient? _____
_____

21. Does your institution have any financing plans? _____
_____

22. Are you aware of how patients can get assistance in getting medication? _____
_____

Case Holding/ Follow Up

23. What percentage of patients continue with treatment until the end? _____
24. What are the most common reasons they stop?
    Financial _____
    Social _____
    Side Effects _____
    Other _____

25. What follow up techniques does your institution practice? _____
_____
In your opinion, how effective are they? _____
_____

26. How often do you encounter drug resistance (or MDR TB)? _____
_____
What percentage of your patients become resistant ? _____
_____
What percentage of patients come with MDR TB? _____

27. How do you treat these types of patients? _____
_____

28. Is there special protocol/policy that you use for treating recurring patients? _____
_____

29. When do decide to refer patients elsewhere? _____
_____

30. Are you aware of the Revised National Tuberculosis Program (RNTP)?
How often do you encounter it in practice and how often do you use its services?
_____
_____

31. Any other concerns/questions/comments that you would like to raise? _____
_____
_____
_____

Thank you for your cooperation

ಪರಿಷ್ಕೃತ ರಾಷ್ಟ್ರೀಯ
ಕ್ಷಯ ರೋಗ ನಿಯಂತ್ರಣ ಕಾರ್ಯಕ್ರಮ
ಗುರುತಿನ ಪತ್ರ (ಕಾರ್ಡ್)

ಹೆಸರು : _____

ವಿಳಾಸ : _____

_____

ಲಿಂಗ : ಪು ☐ ಸ್ತ್ರೀ ☐ ವಯಸ್ಸು _____ ಟಿ.ಬಿ. ನಂ. _____

ಆರೋಗ್ಯ ಕೇಂದ್ರ : _____

ರೋಗದ ಏಂಗಡಣೆ	ಚಿಕಿತ್ಸೆ, ಪ್ರಾರಂಭಿಸಿದ
☐ ಶ್ವಾಸಕೋಶ ಕ್ಷಯ ☐ ಶ್ವಾಸಕೋಶೇತರ ಸ್ಥಳ _____	_____ _____ _____ ದಿನಾಂಕ ತಿಂಗಳು ವರ್ಷ

ರೋಗಿಯ ಪ್ರವರ್ಗ		ಚಿಕಿತ್ಸೆಯ ವರ್ಗ
☐ ಹೊಸ	☐ ಮರುಕಳಿಸಿದ ರೋಗ	☐ ವರ್ಗ I
☐ ವೈಫಲ್ಯವಾಗಿರುವ	☐ ಇತರೆ	☐ ವರ್ಗ II
☐ ಡಿಫಾಲ್ಟ್ ನಂತರದ		☐ ವರ್ಗ III
ಟಿಪ್ಪಣಿ _____		

ಚಿಕಿತ್ಸೆ ರೆಜಿಮನ್

ತೀವ್ರತರ ಹಂತದ ಚಿಕಿತ್ಸೆ	ಮುಂದುವರಿದ ಚಿಕಿತ್ಸೆ

ನೆನಪಿಡಿ

1. ಈ ಕಾರ್ಡನ್ನು ಸುರಕ್ಷಿತವಾಗಿಡಿ
2. ನಿಗದಿತ ಔಷಧಿಗಳನ್ನು ಕ್ರಮಬದ್ಧವಾಗಿ ಪೂರ್ಣ ಅವಧಿಯವರೆಗೆ ತೆಗೆದುಕೊಂಡರೆ, ಕ್ಷಯ ರೋಗವನ್ನು ಸಂಪೂರ್ಣ ಗುಣಪಡಿಸಬಹುದು.
3. ಅಪೂರ್ಣ ಚಿಕಿತ್ಸೆಯಿಂದ ರೋಗವನ್ನು ಬಂಧುವರ್ಗದವರಿಗೆ ನೀವೇ ಹರಡುತ್ತೀರಿ

ಭೇಟಿಯ ದಿನಾಂಕಗಳು

ಚಿಕಿತ್ಸೆಯ ಫಲಿತಾಂಶ _____

ಸಹಿ ಮತ್ತು ವೈದ್ಯಾಧಿಕಾರಿಗಳ ಮೊಹರು :

REVISED NATIONAL TUBERCULOSIS CONTROL PROGRAMME

Treatment Card

State : _____ City/District : _____ Code district/subdistrict : _____

Name : _____ Patient TB No.: _____

Complete Address : _____ Health Unit : _____

Sex : M ❑ F ❑ Age : _____

Name and Address of Contact Person : _____

_____

Disease Classification

❑ Pulmonary

❑ Extra-pulmonary

Site : _____

I. INITIAL INTENSIVE PHASE - Prescribed regimen and dosages :

Tick (✓) the appropriate Category below.

Category I ❑

New case
(pulmonary smear - positive, seriously ill smear-negative, or seriously ill extra-pulmonary)

Category II ❑

Retreatment
(relapse, failure, treatment after default)

Category III ❑

New case
(pulmonary smear - negative, not seriously ill; or extra-pulmonary, not seriously ill)

Type of Patient

❑ New ❑ Relapse

❑ Transfer in ❑ Failure

❑ Treatment after default ❑ other (specify) _____

Write number of tablets or dose of streptomycin in the boxes below.

3 times/week				3 times/week					3 times/week		
H	R	Z	E	H	R	Z	E	S	H	R	Z

H : Isoniazid R : Rifampicin Z : Pyrazinamide E : Ethambutol S : Streptomycin

Month	Date	Lab No.	Smear result	Weight
0				
2/3				
4/5/6				
6/7/8/9				

Tick (✓) appropriate date when the drugs have been swallowed under direct observation.

Month / Day	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31

II. CONTINUATION PHASE

(see Guidelines)

Prescribed regimen and dosages

Category I ❑
New case
(pulmonary smear - positive, seriously ill smear - negative, or seriously ill extra-pulmonary)

Category II ❑
Retreatment
(relapse, failure, treatment after default)

Category III ❑
New case
(pulmonary smear - negative, not seriously ill; or extra-pulmonary, not seriously ill)

Write number of tablets per dose in the boxes below.

3 times / week

H	R

3 times / week

H	R	E

3 times / week

H	R

Enter 'X' on date when the first dose of drugs has been swallowed under direct observation and draw a horizontal line (x_____) to indicate the period during which medicines will be self-administered.

Month / Day	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31

Remarks :

_____

_____

_____

_____

_____

- Do you know of any other member of the community having this disease? What has he /she done about it?

5. ECONOMIC

- How much money have you spent for the following;
- a. Consultation b. investigation c. medicines
- Others specify
- How did you get the money for the treatment?
- Family income sufficient; borrowing (from whom)
- Has any of the staff of the center demanded money? Taken money/

6. WORK AND TREATMENT

- Have been away from work because of this disease? (During treatment)
- If yes, for how long?
- Are you able to continue the work s before the symptoms started?
- Does the treatment affect your work? Rejection by employer? Co-worker?

KNOWLEDGE ABOUT TB

NAME OF THE DISEASE

- Except one all of them said TB Kaayele or TV Kaiyele
- One lady aged 72 years ex-pul Tb completed treatment did not know that she took treatment for Tuberculosis

WHAT THEY ABOUT THE TB

- It spreads
- Spreads by eating food eaten by TB patient
- Spreads through sexual contact
- Spreads through air
- TB affects people of all age group and both the sexes
- Affects more poor because they do not eat on time
- Tb affects people who are addicted to alcohol and tobacco

HELP SEEKING BEHAVIOR

SIGNS AND SYMPTOMS

- Cough, fever, tiredness, could not work, limp node on the neck
- Went to doctors after month after symptoms started
- All of them went to private practitioner except one more than once.
- Most of them Came to know that they are suffering from TB from lady Wellington TB unit, two private practitioners informed their patients
- Taking treatment for the past 3- 6 months time
- Duration of the treatment – 6to 9 months
- One person said do not know and would take as long as the doctors tells

SYMPTOMS PERSISTED AND SUBSIDED

- Within two weeks to two months cough and fever stopped but tiredness continued.
- All of them said they are feeling health now
- If treatment discontinued

Reoccur, deteriorate, death two said

MARRIAGE AND FAMILY LIFE

- Families are generally supportive, encourage to complete the treatment
- Few families kept their plate and tumbler serrate and isolated those who had small children
- One male and female Said told by doctor to abstain from sex

COMMUNITY ATTITUDE

- One person said that the community know and no attitudinal changes.
- All the others were afraid of the community member coming to know

ECONOMIC

- Spent 20 rupees to 6000 for consultation, prescription, investigations and travel
- No one demanded money or given one tried given fruits to one of the staff but was refused

WORK AND TREATMENT

- Stayed back at home one month to one year

- Needed break after taking tablets
- Side effects; nausea, burning sensation, very tired
- Unable to work 6 days of the week

DISTANCE

- Most of them were very close to the treatment center
- One about tow kms distance father helped in traveling by bicycle

SATISFACTION

- None dissatisfied
- One said doctor not available to complain side effects
- One said long waiting time affects work
- One said it is like my house I walk in collect my tablets and go
- Another said the moment they see my they welcome me with smile

SUGGESTIONS TO IMPROVE

- Renovate the center, keep it clean and neat
-
- Be available at 9.00 am to provide the tablets.

0-5 YEARS

SEX	TOTAL	PUL	Extra-PUL	SELECTED
Fem	5	2	3	5
Male	10	4	6	10
Total	15	6	9	13

6-18 YEARS

SEX	TOTAL	PUL	E-PUL	SELECT	PUL	EP
Fem	65	45	20	8	6	2
Male	35	25	11	5	3	2
Total	100	82	33	13	9	4

19-45 years

SEX	TOTAL	PUL	E-PUL	SELECT	PUL	EP
Fem	213	145	68	27	24	3
Male	298	251	47	38	33	5
Total	511	396	115	65	57	8

46 years and above

SEX	TOTAL	PUL	E-PUL	SELECT	PUL	EP
Fem	45	37	8	5	3	2
Male	142	139	3	17	17	0
Total	187	176	11	23	20	2

7. DISTANCE AND TIME

- How far is the health center from your place?
- How do you go to the centre?
- Does any one accompany you when you go for treatment? Does it affect his/ her work?

8. SATISFACTION

- What did your like best in the centre? Why?
- What did you like least in the centre? Why?
- Was the staff courteous? Very much ☐
- to some exten ☐ not at all ☐
- Were there any side effects? Were they attended to?
- Did you have to discontinue treatment at this centre? Why?
- Would your recommend your relative/ friend to attend this centre if he/she had this disease?
- Any suggestion for improvement?

9. ANY OTHER MATTER

BANGALORE BAPTIST HOSPITAL
"I CAME THAT THEY MAY HAVE LIFE"

BANGALORE
Baptist
HOSPITAL
Bellary Road, Hebbal,
Bangalore-560024. India Phone:3330321/2/3/4

March. 22, 2001

To,
Mr.S.J.Chander
Community Health Cell,
No.367, Srinivasa Nilaya,
Jakkasandra, Ist Main, I Block,
Koramangala,
Bangalore - 560 034

Dear Sir,

With reference to your letter dated 13/3/2001 I am sending a list of TB patients who are under treatment from Government who are in the areas where we are working.

Hope this will be helpful for the study. Also I assure you that our full support will be given in doing your study a success.

Thanking you sir,

Yours faithfully

DR.SHIRIN SINGH
H.O. D. Community Health
Bangalore Baptist Hospital
Bellary Road, Hebbal
BANGALORE - 560 024

To: SJC

(974) 29/3/01

LIST OF TB PATIENTS

SL NO.	NAME	FATHER'S NAME	ADDRESS
1)	Chennaiah	S/O Nagaiah	No.238, 4th Block, Yelahanka Upanagara, Bangalore
2)	Shiva Kumar	S/O Golappa	No.211, Manorayanapalya, R.T.Nagar Post, Bangalore-32
3)	Ramadass	S/O Krishna	No.77, Pappanna Block, Anandnagar, Bangalore-24
4)	Jyothi smapath	D/O Sampath	C/O Sampath, No.181, Lalithavihar 7th Main, Mathikere, Bangalore-54
5)	Joseph	S/O Kandaswamy	63, 8th main Triveni Road, Yeshwanthpur, Bangalore – 22
6)	Jaya	S/O Rama	Police Quarters, Vijayapura, Bangalore 24
7)	K.P.Belliappa	S/O Poovaiah	No.9, 5th cross, Athmananda Colony Sulthanpalya, Bangalore.
8)	Vijaya krishna	S/O Balakrishna	A.D. Colony, Yelahanka post & post Bangalore District.
9)	Ravibernando	S/O Arokianathan	No.69, 4th cross, P&T Colony, Vrnkstrdhpura, Bangalore-45
10)	Viji	D/O Ramanna (late)	Police quarters, Hebbal, Bangalore – 24
11)	Vanaja	D/O Subramaniam	No.34, 5th main Venkatappa colony, Sanjaynagar, Bangalore 94
12)	Subbamma	D/O Ajjappa	No.769, Old Canara Bank Building Hebbal, Bangalore –24

"I Seek Not Kingdom, Nor Paradise, Nor Even Salvation :
I Seek only the Deliverance From Affliction of the Afflicted "

Phone : 3443661

DR.B.S.RAVI
MBBS,DIH,DHA,
FIELD MEDICAL OFFICER,

DEENA SEVA SANGHA

COMMUNITY HEALTH PROJECT
Sponsored by WATER AID, LONDON
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Dr. S.V. Rama Rao
M.B.B.S., D.P.H., (Cal), M.P.H. (Johns Hopkins)
F.R.I.P.H.H. (London)
Professor of Community Medicine & Director (Retd.,)
Chairman.

N.S. Srimantharajan
General Secretary

Ref. : T/CHP/ 1154 /2001

Date : March 28,2001

Mr. S.J. Chander,
Community Health Cell,
326, 5th main, 1st Block,
Koramangala,Bangalore-560 034

Dear Mr. Chander:

Sub: A study on the patient's perspective regarding TB treatment

Ref: Your letter dated 14th March, 2001 addressed to Dr.S.V. Rama Rao, Consultant.

With reference to your letter cited above, I would like to inform you that Dr.SV Rama Rao was not well and he was admitted to Bangalore Hospital. He is getting discharged to-day.

2. Regarding the subject matter, we furnish below a list of TB patients on treatment and their details, as desired by you:

Sl. No.	Area	Name and address of the patient	Age	House No.
1.	BHUVANESWARINAGAR	Ramya, D/o Pushpa W/o Dorai	11	BN-78
2.	-do-	Sharadamma W/o Nanjundaswamy	38	BN-83
3.	-do-	Jayamma W/o Venkataramappa	48	BN-137
4.	B.K.NAGAR	Nataraj	35	BK-196
5.	-do-	Murthy	60	BK-53
6.	-do-	Nasubunnisa	35	No.238
7	C/o DSSCHP	Muthulakshmi	30	
8.	-do-	Mariamma	28	

Please contact the undersigned for any further details.
Delay in replying to your letter is regretted.
Thanking you,

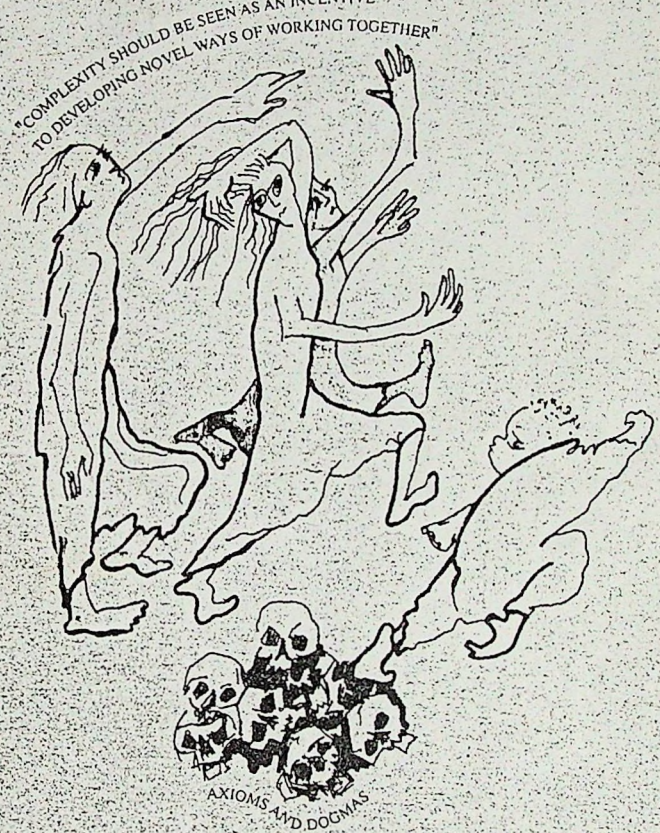
Yours faithfully,

(N.S. RAVI.)

TO : SJC
(978) 29/3/01

TUBERCULOSIS

An Interdisciplinary Perspective



Edited by

John D H Porter & John M Grange

Imperial College Press

Preface

Tuberculosis presents the global health care community with a paradox — the development of modern short course chemotherapy is one of the greatest triumphs of 'evidence-based' medical science as it is not only one of the most effective, but also one of the most cost-effective of all known therapies. Yet, far from being conquered or even controlled, tuberculosis is currently the most prevalent infectious cause of human suffering and mortality and, in 1993, the World Health Organization took the unprecedented step of declaring it a 'Global Emergency'. For the sake of the millions who suffer and die from this preventable and curable affliction each year, it is essential that we look carefully at the reason for the paradox and seek novel ways of addressing this major public health problem, even if this means challenging the very axioms and structures on which current health care practices are based.

The principal theme of this book is evident in its title 'Tuberculosis — An Interdisciplinary Perspective'. A wide range of disciplines is represented, including clinical medicine, social science, epidemiology, health policy, economics, nursing, education, ethics and history. By bringing together different academic disciplines to address a health issue such as tuberculosis, we are provided with an opportunity to study and understand different perspectives and approaches and, thereby, through a different vision, to approach the global issues of disease control in perhaps more creative and effective ways.

Interdisciplinary collaboration is, however, not the only theme in this book. As we read each of the chapters, we were struck by the other major themes that emerged: poverty, vulnerability, health care structures, globalisation, transcultural issues and the uneasy relation between quantitative and qualitative research methodology. It is apparent that perspectives on health are changing and that there is an increasing awareness that an overarching and all-embracing concept of health can help to link people working in different disciplines and even in different sectors. There is, within the field of public health, the increasing realisation that it is not sufficient merely to prevent disease, but that we need to be involved in the active creation of health and 'healthy communities'.

A feature of this book is the interaction and cross-over of the disciplines that occur in each of the chapters. Although a person may, for example, be labelled as an epidemiologist, their writing indicates that they resort to other disciplines such as history and the qualitative methods of the social sciences to construct their arguments. Each chapter stands alone and there is thus an inevitable overlap. Nevertheless, the contexts are quite different, as are the processes that are described. They amply demonstrate the *complexity* of ideas expressed in the field of public health — a complexity which, though fascinating, often makes arguments difficult to understand. This complexity should, however, be seen positively and as an incentive to developing novel ways of working together. For this purpose, each of us needs to develop a clarity of vision and engage in 'healthy' debate in order to resolve any conflict that might ensue.

One possible area of conflict is between those who espouse the reductionist 'evidence-based' approach and those who advocate a more 'holistic' viewpoint. But there need be no conflict. Implicit throughout this book is the fundamental importance of modern short course therapy, and the vast amount of effort devoted to its development by many distinguished scientists over the last half century is in no way denigrated. Likewise, recent developments in immunology and molecular biology are to be welcomed as the likely key to much more effective preventive,

diagnostic and therapeutic approaches. We do, however, agree with Sir Douglas Black (1998) that 'evidence-based' biomedicine is but one facet of the whole complex structure of modern medicine and not without its limitations in addressing major public health challenges. We also acknowledge the dangers of 'scientism', defined by Leggett (1997) as "an approach to medical practice that regards the scientific understanding of the disease as the only relevant issue, whilst ignoring any other factors". This belief system — and it is surely no more than a belief system — is firmly entrenched in many sectors of academic medicine and may prove to be a very powerful barrier to interdisciplinary communication and collaboration.

One of the represented disciplines, ethics, is a focus for the development of concepts, ideas and reasoning. Interestingly, the changes and shifts witnessed in health care and in public health are also occurring in the discipline of ethics. Over the last decade, in the field of bioethics for example, there has been an eclipse of 'foundationalist' projects aimed at the development of a moral theory capable of providing the framework for the deduction of principles and rules that could then be applied to particular cases. There has, in fact, been a shift away from the search for the foundations of morality towards a greater reliance upon the coherence of practical moral reasoning and common sense. According to Rawls, moral reasoning is based on the linkages between "a rich tapestry of principles, intuitions and norms" that together constitute a relatively stable, coherent, wide reflective equilibrium (Turner, 1998). Indeed, Murphy (1995) has remarked that "Bioethics seems to be shifting from the image of a layer cake, with theories supporting principles that justify rules which lead to particular conclusions in specific cases, towards the image of the web, where the web consists of a rich, 'thick' body of maxims, rules and norms that are a matter of shared public reason". The various strands of this web are mutually strengthening, with no one aspect providing a 'foundation' for the other components.

This book provides us with a web of complexity — a mosaic — around the subject of tuberculosis. All of those who have contributed have provided us with a "rich tapestry of principles, intuitions and

norms" that can facilitate the development of a structure for tuberculosis control that is part of the overall public health goal of 'creating health' and 'healthy communities'. Rhetoric, however, is not enough. To create this process we need to engage in debate and, possibly, conflict, with a clear understanding of who we are and of the power vested in our roles as health professionals and how this power can be used to a positive or negative effect. We are living in a time of complexity and change — the expression 'paradigm shift' is often heard today — and, far from being led to despair, we are provided with an opportunity to challenge axioms and dogmas and to create novel approaches to the control of tuberculosis to the betterment of the health of communities worldwide.

We hope you enjoy reading this book. We feel that it is an important contribution to the subject of tuberculosis and we hope that it will also be of use to people working in many different disciplines of health care.

John Porter and John Grange
August 1998

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Contents

CHAPTER 21

EDUCATIONAL APPROACHES IN TUBERCULOSIS CONTROL: BUILDING ON THE 'SOCIAL' PARADIGM

Thelma Narayan and Ravi Narayan

Introduction

From the orthodox biomedical perspective, tuberculosis is a 'chronic mycobacterial infection' requiring early diagnosis by sputum microscopy and culture; radiological investigation; and chemotherapy, consisting of prompt, regular and extended treatment by a combination of anti-tuberculosis drugs. This perspective generates a restricted view of the challenges of educational approaches in tuberculosis control as it focuses primarily on motivating patients to take regular treatment and not to become 'defaulters'.

There is an urgent need to broaden the understanding of the disease by applying a socio-epidemiological perspective, which focuses on the larger socio-economic-political-cultural context in which the disease spreads and thrives in the community. This paradigm shift in understanding would lead to a recognition of a multi-disciplinary and multi-dimensional educational response that should become a major part of the control effort. The most significant aspect of this proposed change would be the contextualisation of tuberculosis control efforts to the important policy imperatives of equity and social justice — helping initiatives to reach those who are not reached by our present educational or health care efforts.

In this chapter this broader understanding is explored and a framework for a multi-pronged educational initiative that addresses these imperatives is evolved.

Recognising and Evolving the 'Social' Paradigm

The Medico Friend Circle is a national network of doctors and health workers in India concerned that health care and medical education in the country should become more relevant to the needs of the poor and the marginalised. In 1985, it organised an interactive dialogue on 'Tuberculosis and Society' which brought together 110 doctors, social workers, health and development activists, and many others concerned about

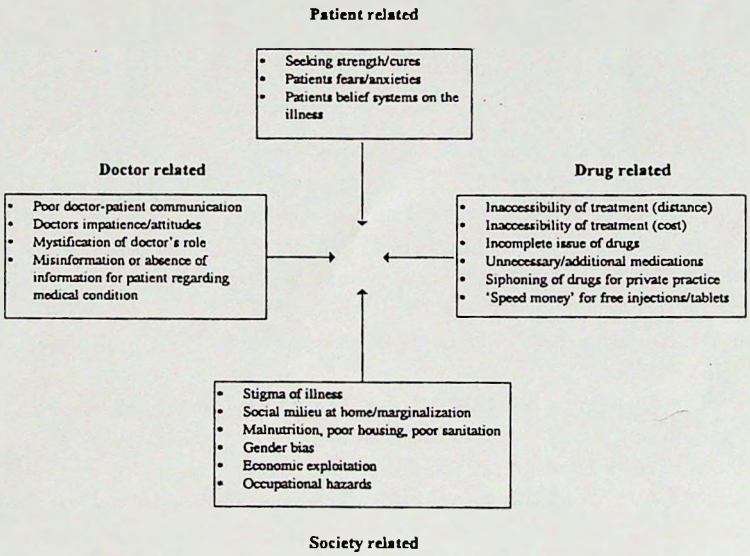

Fig. 1. The Social Paradigm — Some Significant Social Factors.
Source: Sadgopal (1983) and Medico Friend Circle (1985).

Table 1. Responding to the Social Paradigm — Some Suggestions.*

System Development
• Increasing health budget and reducing urban bias.
• Increasing accountability and responsiveness in the health care delivery system.
• Training paramedicals and community-based health workers to enhance accessibility.
• Reorienting medical/nursing education towards the social paradigm.
Community Involvement
• Interactive, culturally sensitive health education efforts.
• Tackling stigma of disease among health professionals, community and patients.
• Enhancing community participation at all levels.
• Tuberculosis control linked to grassroots peoples' movements.
Seeking New Partnership
• Involvement of Trade Unions and the 'Womens movement'.
• Involvement of local healers and practitioners of all systems of medicine.
• Involvement/orientation of community leaders, politicians, policy makers.
• Introducing 'Tuberculosis Control' in High School Science syllabus.
Tackling the Determinants of the Disease
• Intersectoral action to improve nutrition, housing, sanitation, working environment and wages.
• Minimum Wages Act and Right to Work.
• Land Reform.

*Source: Sadgopal (1983) and Medico Friend Circle (1985).

the tuberculosis problem in India. While the discussions explored the challenges of case-finding, case-holding and the alternative 'regimens of chemotherapy' there was also an identification of a large number of significant social/societal factors and issues of concern, from the field experience of the participants, that constituted a 'social paradigm' (Medico Friend Circle, 1985).

Figure 1 lists some of the factors that appear to play a key part in the patient's experience of the disease and the response of various types

of health care providers to the disease (Sadagopal, 1993; Medico Friend Circle, 1995). Table 1 lists a series of ideas and initiatives that were suggested during the group discussions as ways and means of addressing the social factors and issues of concern listed in Figure 1 (Medico Friend Circle, 1985).

It was evident at this meeting that if the factors responsible for the occurrence, spread and maintenance of the disease were social and societal, then the responses needed to be social/societal as well. This shift of emphasis would not only change the framework of tuberculosis control but would lead to a broader framework of educational effort to support action towards control.

Table 2. Tuberculosis and Society — Levels of Analysis and Solution.*

Levels of Analysis of Tuberculosis	Causal Understanding	Solutions/Control Strategies
Surface phenomenon (medical and public health problem)	Infectious disease/germ theory	BCG, case-finding and domiciliary chemotherapy
Immediate cause	Undernutrition/low resistance, poor housing, low income/poor purchasing capacity	Development and welfare-income generation/ housing
Underlying cause (symptom of inequitable relations)	Poverty/deprivation, unequal access to resources	Land reforms, social movements towards a more egalitarian society
Basic cause (international problem)	Contradictions and inequalities in socio-economic and political systems at international, national and local levels	More just international relations, trade relations, etc.

*Source: Narayan (1998).

More recently, a comprehensive review has once again stressed that the level and depth of analysis of the problem of tuberculosis and its causative factors influence the construction of the solution. Table 2 indicates different levels of analysis and different solutions and control strategies, highlighting once again the shift from a 'biomedical' to a 'social' paradigm (Narayan, 1998).

Widening the Educational Framework: Reaching All

The orthodox biomedical paradigm usually results in an educational effort that has a two-pronged focus: on the patient and on the health team. Health education efforts are directed at the patients to make them more informed and aware of all aspects of the disease and its treatment and the basic rules to prevent spreading the infection to others in the family or the community.

Instruction in all aspects of tuberculosis, including epidemiology, clinical, laboratory, therapeutic, preventive and public health aspects, has been an important part of medical and nursing education as well as a component of the curriculum of paramedical workers and health auxiliaries for many years.

The biomedical paradigm also stresses the technological component of tuberculosis control — BCG vaccine, sputum microscopy, radiological diagnosis, and varying regimens of chemotherapy. It focuses on individual patients, stresses only physical aspects of the illness, highlights mainly the role of the health care provider — doctor or nurse — and considers the role of the patient as a passive beneficiary of a top-down providing system who must be prevented, through health education, from becoming a 'defaulter'. Finally, the biomedical paradigm also stresses the challenges of research in molecular biology or pharmacotherapeutics.

The new 'social paradigm' discussed in the previous section and increasingly recognised in the last decade (CHC, 1989; Qadeer, 1995; Nikhil, 1995; Uplekar and Rangan, 1996; Narayan T, 1997; Narayan R,

1997; Chaturvedi, 1997) requires a totally different framework of education that is both multi-dimensional and multi-pronged in its orientation. While neglecting neither the patient nor the health care provider, the focus of such education goes beyond to a larger section of society and a broader range of groups in the community so that tuberculosis control efforts get the support, encouragement and involvement of many people. These include:

The patients' family. This is particularly important because tuberculosis has psycho-social dimensions that need family support for their amelioration. Care providers are therefore an important focus group.

The people of the community in which the patient lives. These include community leaders — both formal and informal, school teachers, non-governmental organisations, women's groups, other community-based organisations and educational institutions (Kaul, 1996).

Occupational groups. Those in which the patient works and, particularly, the occupational groups in which the risk of tuberculosis is higher.

Health care providers. This focuses beyond education of doctors nurses and paramedical personnel to a host of other formal and informal health care providers including practitioners of alternate systems of medicine, traditional birth attendants and other types of local folk healers, private practitioners and health teams, and technicians of the large number of private laboratories and health institutions.

Marginalised social groups. The 'social paradigm' should also lead to a special educational effort focused towards high risk groups and marginalised groups in society, including residents of urban slums, those who are HIV positive and those with AIDS, the homeless, destitute and pavement dwellers, ragpickers and street children, addicts — both drug users and alcoholics — and refugees, including those displaced by war, ethnic conflicts and development projects.

Policy makers. Most significantly, however, the recognition of the 'social paradigm' leads us to focus educational/awareness building efforts towards those within society who make decisions, those who are involved in policy planning and implementation, as well as those who support the programme initiatives. These include political leaders at all levels — particularly elected representatives at state, district and municipal corporation levels, government bureaucrats and technocrats, the pharmaceutical industry, and civic society. Finally, all those groups who are contributors to the 'watch dog' role of civic society also need to be addressed through educational efforts: these include the media, consumer groups/organisations/associations and non-governmental organisations.

Content of Educational Approaches: From 'Biomedicine' to 'Socio-epidemiology'

The recognition of the 'social paradigm' will necessitate a different framework of tuberculosis education and so the focus and content will have to experience a paradigm shift. The focus will move from individual tuberculosis patients, increasingly to focus on a community of potential sufferers. It will move beyond the physical dimension and explore the psycho-social-economic-cultural and political dimensions of tuberculosis including relationship to poverty, the problem of stigma and marginalisation, and the 'social burden' of the disease. It will move beyond vaccine/drug distribution to include components that enhance awareness, motivation and empowerment of patients through counselling. The focus will therefore be on educational and social processes and other enabling and autonomy-building skills, and will emphasise the supportive role of family members, other care providers, community leaders and grassroots and community-based health workers. It will also emphasise a change of role of the patient from a passive beneficiary of treatment to an active participant of the control strategy whose autonomy and sense of responsibility is to be respected and enhanced.

Clearly, such a framework of education must emphasise the key contributions from behavioural science and a qualitative approach to research, including both action and participatory research, and must encourage attempts to understand attitudes, belief systems, knowledge levels and practice options at the community level. This would also encourage an increasing shift from the orthodox 'clinical' and 'molecular biology' fixation of tuberculosis researchers to a more broad-based sphere of interest.

Table 3. The Paradigm Shift.*

Parameter	Biomedical Approach		Social/Community Approach
Focus	Individual	→	Community
Dimensions	Physical (tuberculosis pathology)	→	Psycho-social, economic, cultural, political and ecological (stigma, poverty, social burden)
Technology	Drugs/vaccines	→	Education and social processes
Type of service	Providing/Dependence creating	→	Enabling/Empowering Autonomy building
Patient	Passive beneficiary	→	Active participant
Research	Molecular biology	→	Socio-epidemiology
	Pharmaco-therapeutics	→	Behavioural sciences

*Adapted from CHC (1989).

Table 3 summarises this shift so that the broadening of the framework and content is clearer. It is important here to emphasise that a case is being made not for a biomedical versus a community/social model of public health dialectic, but for the broadening of the orthodox biomedical approach by the inclusion of a social/community/societal dimension (CHC, 1989). This will make the tuberculosis control initiative more holistic, more responsive, more relevant and definitely more effective in the complex environment and societal reality in which tuberculosis thrives and continues to be a major public health problem today.

An important feature of this recognition of the social paradigm in tuberculosis is the consequent need to give socio-economic-political-

cultural determinants an important role in policy review and programme planning.

Many determinants of tuberculosis have been known for some time (Narayan, 1997):

(1) Tuberculosis is related to industrialisation, which resulted in a process of urbanisation with overcrowded, unhygienic living conditions for the working class in the new industrial and mining towns. These were further complicated by low wages and longer hours of work. Research has indicated that, in the USA and Africa, there was an increase in the prevalence of tuberculosis at a time of industrial and urban growth.
(2) Population growth, migration, colonialism and war-initiated epidemic waves of tuberculosis in different regions of the world.
(3) The incidence of tuberculosis often increases in times of war and during ethnic conflicts and among refugees. In India, tuberculosis was a big problem among post-partition refugees.
(4) Disrupted social conditions, malnutrition, poor housing and physical and emotional stress are predisposing factors. In India, it is not surprising that the incidence of tuberculosis is relatively high among Tibetan refugees in the resettlement colonies.
(5) Housing is a key factor, especially small, overcrowded tenements in shanty towns and urban slums.
(6) Poor sanitation and unregulated growth of hazardous industries further compound the problem.
(7) Smoking, pollution and rapid industrialisation driven by an economic imperative which sacrifices safety procedures and compromises regulatory mechanisms are all contributory factors.
(8) Finally, there is growing evidence that new economic trends that promote 'globalisation', liberalisation and privatisation — increasingly have an adverse effect on the health of the poor by making health care more and more inaccessible (Chaulet, 1998). In Africa and the Philippines, the documented ill effects include a higher incidence of tuberculosis. State-run health services

experienced cut-backs in expenditure which particularly affects services for the poor.

While these factors are all very significant, it is equally significant that most of the literature, pamphlets and reports from the World Health Organization (WHO), the Government of India and non- governmental organisations ignore these dimensions (National Tuberculosis Institute, 1994; Government of India, 1995; World Health Organization, 1995a, 1995b; World Health Organization/UNAIDS, 1996; Voluntary Health Association of India, 1994, 1996; Chakraborthy and Choudhury, 1997). Hence the narrow biomedical perspective continues.

Educational Approaches — What Do We Seek to Achieve?

While all educational approaches at all levels, and for all the target groups mentioned earlier, must emphasise these broader factors in addition to the biomedical ones, the objectives of education will shift from enhancing case-detection, case-management, and tuberculosis treatment *per se* to a host of initiatives that would address the determinants and deeper causes of the illnesses. Tuberculosis treatment and control will become part of a wider social movement that seeks to address poverty, illiteracy, poor environment, marginalisation, unplanned urbanisation and industrialisation, poor housing and to increase access to, and options of, health care for the poor.

In 1981, the Indian Council of Social Science Research and the Indian Council of Medical Research in their Health for All Strategy in India, outlined a prescription for Health for All, which included such a broad concept of health action (ICSSR/ICMR 1981). They emphasised the need for a mass movement to reduce poverty and inequality and to spread education, to organise the poor and underprivileged to fight for their basic rights, and to move away from the counterproductive consumerist Western model of health care and replace it by an alternative based in the community.

More recently, echoes of this broader action are seen even in the writings of orthodox epidemiologists who stress that medicine and politics should not be kept apart. The late Professor Rose wrote, in what was perhaps his final work after decades of extensive epidemiological research, that "Medicine has indeed delivered effective answers to some health problems and it has found the means to lessen the symptoms of many others. But by and large, we remain with the necessity to do something about the incidence of disease, and that means a new partnership between the health services and all those whose decisions influence the determinants of incidence. The primary determinants of disease are mainly economic and social and therefore its remedies must also be economic and social. Medicine and politics cannot, and should not, be kept apart" (Rose, 1992).

The objective of a comprehensive educational initiative — comprehensive both in target groups and in content — is to facilitate a more comprehensive anti-tuberculosis programme that would locate programmatic action in a mosaic of multi-dimensional and multi-sectoral action impacting on all aspects of the problem. Such a programme would include an increase in health budgets — including funding for tuberculosis control, poverty alleviation programmes focused on marginalised peoples, housing and planned urbanisation programmes, occupational safety focused on high-risk individuals and high-risk occupations, personal and social support to affected people and their families — particularly those from the marginalised sections and initiatives to address social and economic inequality and injustice.

Such a broad based, social/societal-oriented model of a health programme for tuberculosis would then strike at the roots of the problem and not fritter away resources in superficial biomedical reductionist strategies that have a limited impact on the disease.

It is rather unfortunate that, in more recent times, the WHO and other international funding agencies have failed to establish their programmes for tuberculosis on a broad base and have advocated ideas such as DOTS that are at best 'reductionist' and at worst totally inadequate for the treatment of the complex social pathology of tuberculosis

in society. This continued 'technomanagerialism' at the cost of a comprehensive, integrated social strategy is particularly disappointing and, as usual, the poorest among the tuberculosis patients will bear the consequences of this public health reductionism (Banerji, 1996, 1997).

Educational Initiatives — Moving from Content to Process

In the earlier sections of this chapter, the 'who', the 'what' and the 'why' of educational initiatives in tuberculosis control in the context of the 'social paradigm' have been explored. In this section, the 'when' and 'where' of some aspects of such an educational response are explored. Broadly, these are described under the headings of basic and continuous health professional education and patient/community education.

Health Care — Professional Education

There is urgent need to enhance and strengthen the framework of tuberculosis education for medical practitioners and nurses. To make an impact on professional education, there is need to focus both on 'basic education' and continuing education.

Basic Education

There a is need to make tuberculosis education comprehensive, integrated, multi-systemic, multi-disciplinary, problem-based and sociologically and epidemiologically orientated. Doctors and nurses must be sensitised to the wider socio-economic and cultural factors in the disease causation and encouraged to see the patients as active participants and not as passive beneficiaries of the control strategy.

Increasing patient awareness and understanding of the disease process is a challenge in doctor-patient communication and, rather than 'victim blaming' and considering the patient as a 'potential defaulter',

an attempt must be to enable and empower the patient to adhere to treatment and other procedures.

Skills in listening, motivation and supportive counselling need to be enhanced and humane attitudes and behaviour towards patients, which are primarily non-stigmatising, must be emphasised. Education in pathology and therapeutics must be balanced by instruction in ethics and the social sciences. This is particularly important because the availability of effective chemotherapy has often tended to emphasise the curative aspects of the disease control strategies while disregarding the caring aspects. Tuberculosis is a very stressful disease and, although the clinical manifestations are irksome and often very discomforting, the patient suffers more than just physical illness. It is very important that the curing aspect of disease control strategies becomes more effective, but it is equally important that the caring aspects of the strategies are enhanced.

It is also important to ensure that training moves from didactics and a focus on minutiae to a more interactive, bedside and community-based education that emphasises the practical aspects of the disease and enhances skills in patient care and counselling. Where necessary case studies may replace case demonstrations. But the training must always be rooted in the human problem.

While stressing the component of tuberculosis in medical and nursing education will enhance the leadership of the tuberculosis control team, it is equally important to impart proper knowledge, skills and attitudes in tuberculosis treatment to all grades of health care workers — multi-purpose and community-based — who are often the peripheral health workers. They are most in touch with those who suffer from tuberculosis. An initiative at this level will strengthen first-line/first-level care and will ensure that the patient, who according to most socio-epidemiological surveys is already 'knocking at the health service door' (Narayan, 1998), will be given a supportive and relevant response by adequately sensitive and skilled health workers.

Continuing Education

While the focus on basic professional education will ensure that health professionals of the future will be better informed, better skilled, and better orientated to the socio-epidemiological challenges of tuberculosis control strategies, an urgent need today is to reach the present generation of health care providers with relevant, meaningful, authentic and practical information and updates on tuberculosis to enhance their involvement in, and contribution to, the fight against this disease. For it to be effective, this must be sponsored by professional associations or colleges and the National Health Programmes.

Much of the ongoing education on tuberculosis in many developing countries is presently done by the pharmaceutical industry. The focus and content of education is often orientated towards the promotion of specific prescriptions or remedies over others that are available in the market; to enhancing brand choice and subtly promoting the 'me-too' drugs that have additional, and usually unnecessary, components such as cosmetic embellishments or they may contain irrational combinations of drugs. In addition, they are often inadequately evaluated. Depending on the skills and vigilance of drug controlling agencies and the level and extent of legislation in each country, this 'drug' education is often supported by the subtle misinformation in which indicators for treatment are enhanced and side effects and contraindications are played down, thereby enhancing profits and sales, often at the cost of patient safety. It is not at all surprising that the Report on Health for All Strategy of ICMR/ICSSR (1981) exhorts us that "eternal vigilance is required to ensure that the health care system does not get medicalised, that the doctor-drug producer axis does not exploit the people, and that the 'abundance' of drugs does not become a vested interest in ill health".

In the area of anti-tuberculosis drugs, however, sometimes other forms of irrationality creep into the situation. If such drugs are included in the essential drug list and the prices are controlled, then the mark-up allowed on them is often reduced, leading to a decreased incentive

for drug manufacturers to produce them. Shortages of anti-tuberculosis drugs have not been uncommon in the past.

Another challenge in current continuing medical education (CME) is to ensure the emphasis on the use of standardised regimes for treatment which have often been evolved at the national level by expert committees who have considered clinical and epidemiological factors in the situation analysis and have looked at other relevant factors including the availability and cost of drugs and the logistics of their supply and distribution.

A number of very effective drug regimens for tuberculosis have been evolved on the basis of extensive and good clinical and field trials. Unfortunately, private practitioners and even hospital-based clinicians in most countries tend to evolve their own very individualistic, and often irrational, regimes based on what they consider to be 'clinical experience'. Costly and therapeutically unsound regimens, supported by a host of complementary and supplementary medications that are invariably unnecessary, ineffective and irrational are all part of regular practice. At best, these are merely symptomatic and play on the psychology of the patient. A good CME programme in tuberculosis should not only emphasise rational and therapeutically sound regimens but also discourage the use of all types of irrational and unnecessary complementary medication and always stress the social context as well.

Patient/Community Education

Education of the patients, their relatives and those caring for them within the family is an important challenge in tuberculosis control.

While making the patients aware of all aspects of the disease, its prevention and cure, the challenge is to do so by means and orientation that primarily enhance their autonomy, provide informed choices and options for treatment, and enable and empower them to abandon superstition and stigmatising concepts and to take responsibility for their own health. Motivation and supportive counselling must be built into

the whole educational effort so that the patients build up confidence in 'cure' in an environment of 'care'. The effort must also emphasise 'care' after 'cure'.

Such effective education is best achieved by culturally sensitive, interactive, low-cost approaches including puppetry, street theatre, folk methods, role play or even flipcharts and flashcards, and planned games whereby the patients learn in small groups, at their own pace, supported by other adult learners in an environment of collective trust and sharing. Whether clinic or community-based, the process of health education is as important as its content (Kaul, 1996).

Case Study: Health Education for Tuberculosis in Urmul Trust (a non-governmental organisation in Rajasthan)

Health education is working on three fronts (Kaul, 1996):

(1) Street theatre and puppet shows in the villages highlight the symptoms of the disease and the need to identify it as early as possible. It also gets the message across that irregular treatment is not only detrimental to the patients but also to people around them so that they must chip in to ensure that the patients take the full course of treatment without a break.
(2) The importance of the regimen and its regularity and duration and what to do in case of side effects are explained to the patients and their relatives in groups. All this is done with the help of television, puppet shows or playlets on the day of the tuberculosis camp held on a fixed day of the month.
(3) The doctor spends at least 15 minutes with each new patient and at least 5 minutes with each old one.

In addition, every few months, some cured patients are assembled to talk to the newer patients. The camp-like atmosphere on a single day of the month encourages the patients to share experiences.

In a country such as India and in most other parts of the developing world, the large majority of the people are illiterate or semi-literate and 'adult learning' techniques need to be used, moving away from the didactic approaches of orthodox education.

Recent studies and experiments done by a group of non-governmental organisations in India have demonstrated that even visual aids used in pamphlets, posters, flipcharts and flannel graphs need to be culturally sensitive and geared to the perceptions of illiterate adults which are rather different from those of urban literate adults. While an understanding of 'magnification' and 'depth perspective' by those who have had some school education including an exposure to scientific concepts and experimentation and demonstration may be taken for granted, these are not comprehended in the same way by adults without a basic school education.

Health education materials must therefore be developed locally and must relate sensitively to local socio-cultural realities. Decentralised health education efforts are therefore a very important component of any health programme strategy.

The centralised production of DOTS-related educational materials and the attempts to distribute so-called standardised, top-down guidelines on contents and messages are the very antithesis of current understanding of adult education for health and are another example of the overemphasis of the 'global' approach in what is essentially a local approach or strategy.

Much health educational material including that currently available for tuberculosis is still rather urban in orientation, context and visual content. A concerted effort needs to be made to ensure that material more relevant to rural and indigenous populations is evolved so that the process of learning and motivation is greatly enhanced.

There is, nowadays, a tendency to get on the 'electronic bandwagon' and videos, slides, cassette sets and even computer software programmes are being promoted. While they have their uses in situations where there is electricity and where people are habituated to such adjuncts to learning and recreation, they are not as widely relevant or as effective as

they are often perceived to be. To an illiterate audience, they are often more a source of entertainment than an effective tool for learning and, of course, the absence of continuous electricity in a large number of urban towns and in most rural and tribal areas in many developing countries limits their use and effectiveness. Even in this era of space and cyber technology, traditional and time-tested folk methods and interactive approaches still have great relevance and their importance must not be underestimated or inadvertently played down.

Conclusion: Towards an Alternative Strategy

In these reflections on educational approaches to tuberculosis control, an attempt has been made to highlight the following:

- Tuberculosis control initiatives need to move from the orthodox biomedical approach to a more social/community-oriented approach.
- This shift of emphasis will depend upon a creative educational initiative that helps to broaden the understanding of the problem and locate it in the wider social paradigm.
- The focus of education must expand beyond patients and health providers to a wide range of other involved persons including the patients' families, the people in the community where the disease occurs, occupational groups, health care providers including those in the private and alternative sectors, marginalised social groups, policy makers and society at large.
- The educational process must be primarily enabling and empowering and must transform the role of the patients from passive beneficiaries to active participants in the programme.
- Treatment and control of tuberculosis must form part of the wider social movement that seeks to address poverty, illiteracy and poor environment, marginalised peoples and unplanned urbanisation and to increase access to, and options for, health care for the poor. Such a broad-based model would then strike at

the roots of the problem and not fritter away valuable resources in implementing superficial, biomedical, reductionist strategies.

- Health care professionals must be sensitised to the wider socio-economic and cultural factors in the causation of disease and are encouraged to see the patients as active participants in the control strategy rather than passive beneficiaries.
- Skills in listening, motivation and supportive counselling must be enhanced and humane, primarily non-stigmatising, attitudes and behaviour towards patients must be emphasised.
- An initiative at this level will strengthen primary health care and ensure that the tuberculosis patient will be given a supportive and relevant response by sensitive and skilled health workers.
- A good continuing medical education programme in tuberculosis should not only emphasise rational, epidemiologically sound treatment regimens, but also de-emphasise all sorts of irrational and unnecessary complementary medication, as well as stressing the social context.
- Culturally sensitive, interactive, low-cost educational approaches, such as puppetry, street theatre, folk methods, role play or even flipcharts, flashcards and planned games, that enable the patients to learn in small groups, at their own pace and with the support of other adult learners in an environment of collective trust and sharing, must be promoted.
- Health education materials must be locally developed and be both sensitive and relevant to local socio-cultural realities. Decentralised health education efforts are therefore a very important component of any health programme strategy.
- All this will lead to the tuberculosis control initiative becoming more holistic, more responsive, more relevant and definitely more effective in the complex environment and societal reality in which tuberculosis thrives and continues to be a major public health problem today.

The continuing problem of tuberculosis has been accepted all over the world as a major public health issue of our times. Much is planned and much is being done. The sustained success of our efforts will, however, be determined by the extent to which we understand and respond to the challenge of the 'social paradigm' and the creative nature of our supportive educational response. The way forward is a paradigm shift from 'Directly Observed Therapy, Short Course' (DOTS) to 'Community Orientated Tuberculosis Service' (COTS).

Are we ready for this paradigm shift?

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INDIAN ASSOCIATION OF GENERAL PRACTITIONERS

BANGALORE

MEMBER FFPAI

CME PROGRAMME

In association with
INDIAN POPULATION PROJECT - VIII, - Bangalore., and
INDIAN MEDIACAL ASSOCIATION, - Channakeshavanagar Branch, Bangalore

Invites you for the CME on

3rd February 2001 (Saturday) at **IMA HOUSE,**
Bangalore - 560 018

PROGRAMME

1-00 pm to 2-00 pm	LUNCH
2-00 pm to 2-20 pm	RCH Dr. G.V. Nagaraj DHS Govt. of Karnataka Anandrao Circle, Bangalore
2.20 pm to 2.40 pm	Measles Clinical features Management Prevention Dr. Swarna Rekha Prof & HOD Dept. of Paediatrics St. Johns Medical College, Bangalore
2.40 pm to 3.00 pm	Vaccine Storage Administration etc - Dr. Mahendra Associate Prof. Dept of P & SM KIMS, Bangalore
3.00 pm to 3.20 pm	Universal Prevention in AIDS - Dr. Latha Jagannathan Managing Trustee Bangalore Medical Services Trust Member Task Force Govt. of Karnataka
3.20 pm to 3.50 pm	Discussion.

Note : Programme starts on time. Kindly attend in large numbers. We are in the process hosting a WEB SITE for the Association. Hence update your BIODATA and send the same to the Secretary.

Dr. Jayachandra Rao
Project Co-ordinator
IPP-VIII, Bangalore

Dr. S. Sheela Bhanumathi
President IMA, C. Nagar Br.
Bangalore

Dr. Srinath Herur
President
IAGP

Dr. Mohan
Hon. Secretary
IAGP

All Correspondence to Hon. Secretary :
Dr. D. Mohan, MOHAN'S CLINIC, # 613, 2nd Main, I Stage, Indiranagar,
Bangalore - 560 038 E-mail : docmohan@vsnl.com

INFORMATION ON TB FOR NGO STAFF.

Tuberculosis is a specific infectious disease caused by Mycobacterium tuberculosis. This disease primarily affects lungs and can affect other parts of the body also.

- **One person die of TB every minute.**
- **Affect more the people in the most productive age group**
- **Four out of every thousand people suffer from all types of TB**
- **One TB patient who is not on treatment infects 10 –12 people a year.**

What are the common signs and symptoms of TB?

- **Cough with or without sputum for more than three weeks**
- **Rise of Temperature in the evening for more than two weeks sweating particularly at night**
- **Coughing of blood**
- **Chest pain**
- **loss of appetite, Loss of weight, and increasing weakness.**

For children

- Children usually do not cough but experience loss of weight even though they eat well.

Who does TB affect more

TB can affect any one from any soico, economic and cultural background but it most often affects people between the age groups of 20-40. Tb affects more people who live in a overcrowded place, malnourished and women who are married early. TB can cause complications for children. TB is more in men than women however women have less access to care and some times there is greater tendency to hide especially during marriageable age. Older people with TB are neglected by the family, those with sputum positive TB are source of infection to others especially to young children in the family.

Is TB a curable disease?

Yes, TB is curable if the treatment is taken regularly without discontinuing for the duration specified by the physician. Usually the duration is between 6-9 months. The patient would begin to feel better after two months of treatment and some of them may discontinue the treatment. This can lead to drug resistance, which means the signs and symptoms would reappear and the patients would not respond to drugs which he/she was taking earlier. The newer drugs or costlier and would not be affordable by the poor, and not many drugs are available. which means patient would go to a chronic state and continue to spread the disease as they go through a gradual and painful path way to death.

Is TB an infectious disease and how

Yes TB is a communicable disease. It spreads person to person. The TB germ is carried in air when a patient suffering from TB coughs. It does not spread by handshake or by using the glass, plate and cloths of the infected person.

How can TB be prevented from spreading to others?

- **A person suffering from TB must cover his/her mouth while coughing with a handkerchief or a piece of cloth.**
- **He/she must take the treatment immediately after diagnosis and should not discontinue the treatment for any reason.**
- **Preventive measures through Health education.**
- **BCG vaccination is not useful in preventing adult pulmonary lung TB and is not used as a public health measure to control transmission of TB. It may however prevent complications of childhood TB and therefore used in the universal immunization programme.**
- **Nutrition, good nutritional status help developing resistance against the disease.**

Who should be approached when signs and symptoms are noticed?

One can approach the corporation health center near to her/ his residence. If that center is not a treatment center, after diagnosis the person would be sent to the nearest DOTS center to his/ or her residence for treatment. Bangalore city corporation has 130 DOTS (Directly Observed Treatment Short course) where TB drugs are available free of cost under the Revised National TB control programme.

How TB is diagnosed

Usually TB is usually diagnosed by doing three sputum examinations. One of on the spot collection and another of the early morning collection. The third is collected again on the spot. X-ray is necessary only when sputum is negative.

What is the cost of treatment?

It is supposed to be absolutely free, and the person suffering from TB has the right to receive free diagnosis and treatment for whatever duration specified by the physician. In case of money is requested by the staff it should be reported to Dr. Narayanamurthy, Joint director TB, Lady Wellington TB center Kempegowda road, Bangalore – 560 001, Telephone : 2267093

Treatment

Multi drug treatment Under RNTCP	3-4 antibiotics for 6-8 months with an intensive phase of treatment for 2 months.

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Treatment

Multi drug treatment Under RNTCP	3-4 antibiotics for 6-8 months with an intensive phase of treatment for 2 months.

HELP SEEKING BEHAVIOR

SIGNS AND SYMPTOMS

- Cough, fever, tiredness, could not work, limp node on the neck
- Went to doctors after month after symptoms started
- All of them went to private practitioner except one more than once.
- Most of them Came to know that they are suffering from TB from lady Wellington TB unit, two private practitioners informed their patients
- Taking treatment for the past 3- 6 months time
- Duration of the treatment – 6to 9 months
- One person said do not know and would take as long as the doctors tells

SYMPTOMS PERSISTED AND SUBSIDED

- Within two weeks to two mo

A STUDY ON

PATIENTS PERSPECTIVES REGARDING TB TREATMENT

UNDER RNTCP IN BANGALORE MAHANAGARA PALIKE

AIM:

to understand the patient's perspective regarding tb treatment

Provided by the Bangalore Mahanagara Palike under the RNTCP (Revised National Tuberculosis Control Programme) using DOTS (Directly Observed Treatment, Short course) approach.

OBJECTIVES:

Primary

1. **Gain an understanding of the patient perception on TB Treatment, among the urban poor people.**

SECONDARY

1. **Understand the treatment seeking behavior**

2. **Understand the impact of the disease and their treatment on their lives and the adjustment they nee to make.**

METHODOLOGY

In-depth interview

SAMPLING TECHNIQUE

Systematic random sampling

UNIVERSE: 826 patients registered during the first quarter, January – March, 2001

SAMPLE SIZE: 115 patients

SAMPLE UNIT: male, female, children, adults

AGE CLASSIFICATION:

0- 5 years

6- 18 years

19- 45 years

46 years and above

TB UNITS FROM SAMPLES WERE DRAWN

	NAME OF UNIT	TOTAL	SELECTED
1	Yeshwanthpura	174	22
2	Hosahalli	96	15
3	Hanumanthnagara	147	24
4	Jayanagara	82	10
5	Neelasandra	99	14
6	Broadway	110	17
7	Lady Wellington	108	13
		826	115

0-5 YEARS

SEX	TOTAL	PUL	Extra-PUL	SELECTED
Fem	5	2	3	5
Male	10	4	6	10
Total	15	6	9	13

6-18 YEARS

SEX	TOTAL	PUL	E-PUL	SELECT	PUL	EP
Fem	65	45	20	8	6	2
Male	35	25	11	5	3	2
Total	100	82	33	13	9	4

19-45 years

SEX	TOTAL	PUL	E-PUL	SELECT	PUL	EP
Fem	213	145	68	27	24	3
Male	298	251	47	38	33	5
Total	511	396	115	65	57	8

46 years and above

SEX	TOTAL	PUL	E-PUL	SELECT	PUL	EP
Fem	45	37	8	5	3	2
Male	142	139	3	17	17	0
Total	187	176	11	23	20	2

SL.NO	NAME	AGE	SEX	TYPE	CENTRE	POSITION	DATE OF INTERVIEW	
1	Jacob		Male		Broadway TB Unit	Typed		
2	Shashikala		Female		Jayanagar TB unit	Typed		
3	Ramesh		Male		Hanumanthnagar Tb unit	Typed		
4	prashanth		Male		Hanumanthnagar Tb unit	Typed		
5	Palani		Male		Jayanagar TB unit	Typed		
6	Sharmila		Female		Jayanagar TB unit	Typed		
7	Shivanna		Male		Neelasandra Tb unit	Typed		
8	Lakshmi		Female		Lady Wellington Tb unit	Typed		
9	MM swamy		Male		Hanumanthnagar Tb unit	Typed		
10	Pallavi		Female		Hosshalli Tb unit	Typed		
11	Raju		Male		Hosahalli Tb unit	Typed		
12	Durgasingh		Male		Ladywellington Tb unit	Typed		
13	Armugham		Male		Ladywellington Tb unit	Typed		
14	Yamuna		Female		Broadway Tb unit	Typed		
15	Selvakumar		Male		Neenasandra TB unit	Typed		
16	Usha		Female		Yeshwanthpura TB unit	Typed		
17	Vajrappa		Male		Yeshwanthpura TB unit	Typed		
18	Sridevi		Female		Hanumanthnagar TB unit	Typed		
19	Neela		Female		Ladywellington TB unit	Typed		
20	Srinivas		Male		Broadway Tb unit	Typed		
21	Hanumanthrayappa		Male		Yeshwanthpura Tb unit	Typed		
22	Venkattappa		Male		Yeshwantpura Tb unit	Typed		
23	Aiyesha Fatima		Female		Yeshwanthpura TB unit	Typed		
24	Vijayalakshmi		Female		Ladywellington Tb unit	Typed		
25	Krupavalli		Female		Broadway Tb unit	Typed		
26	Pramila		Female		Neelasandra Tb unit	Typed		
27	Mani		Male		Yeshwanthpura Tb unit	Typed		

28	Krishnappa		Male		Yeshwanthpura Tb unit	Typed		
29	Indramma		Female		Yeshwanthpura TB unit	Typed		
30	Muniraju		Male		Jayanagara Tb unit	Typed		
31	Bharathi		Female		Broadway TB Unit	Typed		
32	Venkataramanna		Male		Hanumanthnagar Tb unit	Typed		
33	Narayanarao		Male		Hosahalli Tb unit	Typed		
34	Kamakshi		Female		Yeshwanthpura Tb unit	Written		
35	Anand		Male		Neelasandra	Written		
36	Yeshodha		Female		Yeshwanthpura Tb unit	Written		
37	Mohan		Male		Yeshwanthpura Tb unit	Written		
38	Mohan		Male		Yeshwanthpura Tb Unit	Written		
39	Shekar		Male		Hosahalli Tb unit	Written		
40	Venkataramanna		Male		Yeshwanthpura TB unit	Recorded		
41	Sr. Cecili		Female		Neelasandra Tb unit	Interviewed		

DIS-5.

Subject: FW: TB and Anti-Retroviral Treatment
Date: Tue, 9 Jul 2002 20:03:23 +0100
From: "Roger Drew" <rogerdrew@rogerdrew.free-online.co.uk>
To: <drew.r@healthlink.org.uk>

Is this of interest?

Roger

-----Original Message-----
From: Paul Sommerfeld [mailto:paul@somhealy.demon.co.uk]
Sent: 09 July 2002 11:33
To: Ian Smith; morgani@who.ch; Roger Drew; Ryder Cheshire Foundation; Owain Tucker; Angela Mynors; Brian Watt; Caris Grimes; Edward Sadler; Geraldine Mynors; Gini Williams; Jenny Conway; John Crofton; Julie Lethaby; Ken Citron; Kenny Roger; Madeline Webster; Margaret Knight; Melanie Matthews; Nick Banatvala; Nils E. Billo; Noel Snell; Peter Davies (Attachments); Tilak S Chauhan; 'Vanessa Graham'; Tim Baker; sara joy davies; Rifat Atun; Richard Coker; Jack Barker; Ian Campbell; Freda Festenstein; John Grange; Tim Healing; Peter Ormerod; Michael Pelly; John Porter; Richard de Soldenhorf; Alistair Story; Veronica White; Karen Bissell; Peter Davies
Subject: TB and Anti-Retroviral Treatment

Dear Friends

Please find attached details of a conference on 2nd October organised by the
Royal Society of Medicine and co-sponsored by TB Alert.

Please consider attending; and also please pass this notice on to other circuits or individuals you think may be interested.

Best wishes

Paul

Paul Sommerfeld
22 Tiverton Road
London NW10 3HL
United Kingdom

Tel: 020 0969 4030
Fax: 020 8960 0069
Mobile: 07979 860266
Email: paul@somhealy.demon.co.uk
TB Alert Website: www.tbalert.org
----- Original Message -----
From: "Francis Ann-Marie" <Ann-Marie.Francis@ccl-tr.nwest.nhs.uk>
To: "Paul Sommerfeld (E-mail)" <paul@somhealy.demon.co.uk>; "Sharon (E-mail)" <Admin@lmi.org.uk>; "Bertie Squire (E-mail)" <sbsquire@liverpool.ac.uk>
Sent: Tuesday, July 09, 2002 10:21 AM
Subject: Progamme

> *Please find attached programme for RSM/LMI/TB Alert meeting on 2nd October.*
>
> *<<RSM Programme.doc>>*
> *Thanks*
> *Ann-Marie Francis*

MF. SFC 10/7/02

> Personal Assistant to
> Mr. J.A.C. Chalmers, Consultant Cardiac Surgeon
> & Dr. P.D.O. Davies, Consultant Respiratory Physician
> Cardiothoracic Centre, Thomas Drive, Liverpool, L14 3PE
> Tel: 0151-293-2398 Fax: 0151-293-2254
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> <mailto:Ann-Marie.Francis@ccl-tr.nwest.nhs.uk>
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Meeting of the Respiratory Medicine Section,
TB Alert and the Liverpool Medical Institution

The Royal Society of Medicine

ANTI-VIRAL TREATMENT FOR TB PATIENTS IN AFRICA – CAN WE AFFORD NOT TO GIVE IT?

Wednesday 2 October 2002

Barnes Hall, The Royal Society of Medicine
1 Wimpole Street, London, W1G 0AE

HIV is the greatest risk factor for tuberculosis (TB) known. The combination of TB and HIV/AIDS is devastating many parts of the developing world, especially sub-Saharan Africa. The diseases are commonest in children and young adults, the economic future of the countries affected. While TB drugs are now largely affordable, anti-viral medication is not.

Doctors treating TB/HIV patients can cure the TB but are frustrated that patients either get reinfected with TB or go on to die of other AIDS related diseases. Only giving specific anti-HIV treatment can reverse the impact of these deadly diseases on the populations and economies of the developing world. Can we afford not to treat both diseases?

RSM contact:
Fleur Raggatt

Academic Department, Royal Society of Medicine,
1 Wimpole Street, London W1G 0AE
Tel: (+44) (0) 20 7290 2984 Fax: (+44) (0) 20 7290 2989
Email: respiratory@rsm.ac.uk

10.00 am	**Coffee and registration**
10.30 am	**The layman looks at the problem** *Jeremy Lawrence, The Independent, London*
11.00 am	**The length and breadth of the problem** *Chris Dye, World Health Organisation, Geneva*
11.30 am	**HIV/TB prophylaxis** *Peter Godfrey-Faussett, London School of Hygiene and Tropical Mdeicine, London*
12.00 pm	**Treating HIV/TB together** *Anton Pozniac, Chelsea and Westminster Hospital, London*
12.30 pm	**Lunch**
1.30 pm	**Can we treat both ?** *Alison Elliott, London School of Hygiene and Tropical Mdeicine, London*
2.00 pm	**Drug access for HIV/TB in the developing world** *Alison Grant, London School of Hygiene and Tropical Mdeicine, London*
2.30 pm	**Frustrations of the clinician treating HIV/TB** *Nicky Hargreaves, Malawi Project, Liverpool School of Topical Medicine, Liverpool*
3.00 pm	**BCG and HIV** *Paul Fine, London School of Hygiene and Tropical Mdeicine, London*
3.30 pm	**Would clean water provide better health for the money ?** *Frank Greaves, TEAR Fund*

4.00 pm **Tea**

4.30 pm **The ethics of resourcing the developing world**
David Cook, Green College, Oxford

5.00 pm **Close of meeting**

5 CME/CPD points

REGISTRATION INFORMATION

Respiratory Medicine Section

Anti-viral treatment for TB patients in Africa - can we afford not to give it?
Wednesday 2 October 2002
Venue : Barnes Hall

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Delegate: / 1666

Finance: 40-0-43-042-01
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DIS-5

Revised National Tuberculosis Control Programme

TB

**In India today,
like any other day this year,
more than 1,000 people
will die from tuberculosis (TB)**

But these deaths can be prevented

**With proper care and treatment,
TB patients can be cured
and the battle against TB
can be won**

**Central TB Division
Directorate General of Health Services
Ministry of Health and Family Welfare
Nirman Bhavan, New Delhi-110 011**

Tuberculosis (TB) is an infectious disease caused by a bacterium, *Mycobacterium tuberculosis.* It is spread through the air by a person suffering from TB. A single patient can infect 10 or more people in a year.

India has a long and distinguished tradition of research in TB. Studies from the Tuberculosis Research Centre in Chennai and the National Tuberculosis Institute in Bangalore provided key knowledge to improve treatment of TB patients all around the world.

Modern anti-TB treatment can cure virtually all patients. It is, however, very important that treatment be taken for the prescribed duration, which in every case is a minimum of 6 months. Because treatment is of such a long duration and patients feel better after just 1–2 months, and because many TB patients face other problems such as poverty and unemployment, treatment is often interrupted. Therefore, *just providing anti-TB medication is not sufficient to ensure that patients are cured.*

Today, for the first time since the discovery of the first anti-TB medicines in 1944, there is hope of stopping TB. This breakthrough is a strategy known as DOTS, an acronym for Directly Observed Treatment, Short-course.

The Director-General of the World Health Organization has declared that, "The DOTS strategy represents the most important public health breakthrough of the decade, in terms of lives which will be saved."

Directly Observed Treatment, Short-course (DOTS)

DOTS, known as the Revised National Tuberculosis Control Programme (RNTCP) in India, is a comprehensive strategy for TB control.

DOTS is the only strategy which has proven effective in controlling TB on a mass basis. The DOTS strategy is in practice in more than 100 countries. India has adapted and tested DOTS in various parts of the country since 1993, with excellent results, and the RNTCP now covers more than 120 million population.

DOTS is a systematic strategy which has five components:

- **Political and administrative commitment.** TB is the leading infectious cause of death among adults. It kills more women than all causes associated with childbirth combined and leaves more orphans than any other infectious disease. And, since TB can be cured and the epidemic reversed, it warrants the topmost priority, which it has been accorded by the Government of India. This priority must be continued and expanded at the state, district and local levels.
- **Good quality diagnosis.** Top quality microscopy allows health workers to see the tubercle bacilli and is essential to identify the patients who need treatment the most.
- **Good quality drugs.** An uninterrupted supply of good quality anti-TB drugs must be available. In the RNTCP, a box of medications for the entire treatment is earmarked for every patient registered, ensuring the availability of the full course of treatment to the patient the moment he is registered for treatment. Hence in DOTS, the treatment will never fail for lack of medicine.
- **The right treatment, given in the right way.** The RNTCP uses the best anti-TB medications available. But unless treatment is made convenient for patients, it will fail. This is why the heart of the DOTS programme is "directly observed treatment" in which a health worker, or another trained person who is not a family member, watches as the patient swallows the anti-TB medicines in their presence.
- **Systematic monitoring and accountability.** The programme is accountable for the outcome of every patient treated. The cure rate and other key indicators are monitored at every level

of the health system, and if any area is not meeting expectations, supervision is intensified.

The RNTCP shifts the responsibility for cure from the patient to the health system.

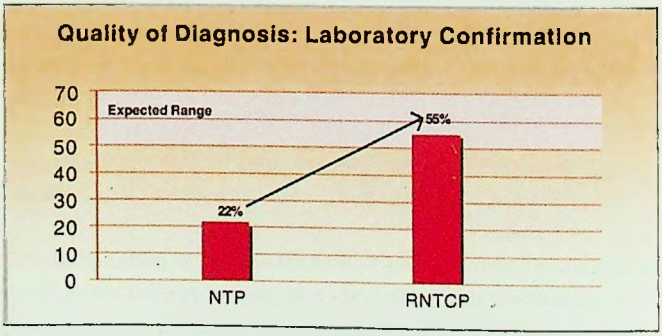
DOTS in India

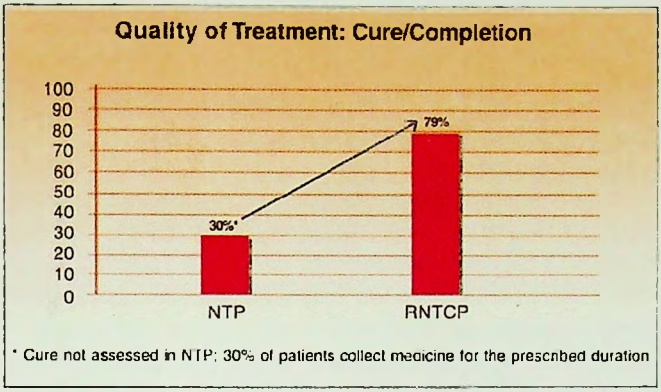
In the 1950s, Indian TB researchers documented the tremendous burden of suffering caused by TB. In the 1950s and 1960s, the modern principles of the diagnosis and the treatment of TB were established by research done in India.

The National Tuberculosis Programme (NTP), established in 1962, created an infrastructure for TB control throughout the country. A comprehensive review in 1992 determined that the programme had not achieved the desired results. To intensify the efforts to control TB, the Government of India adopted the RNTCP.

The RNTCP has been remarkably successful. In a population of more than 200 lakh in 13 states throughout the country, the quality of diagnosis is dramatically better than that of the previous programme or of private practitioners.

Nearly 8 out of 10 patients diagnosed in the programme since 1993 were cured; this cure rate is more than double that of the previous programme.





HIV

While the size of the HIV epidemic in India is presently not known, it is clear that HIV will worsen the TB epidemic. The Human Immunodeficiency Virus breaks down the immune system and makes patients highly susceptible to TB; these patients can then spread TB to other people. In some countries, the HIV epidemic has doubled or tripled TB cases.

Fortunately, DOTS is as effective among HIV-infected TB patients as among those who are HIV negative. Even among HIV-infected TB patients, DOTS cures patients and results in longer, healthier lives.

Multidrug-Resistant Tuberculosis (MDRTB)

MDRTB refers to strains of the bacterium which are proven in a laboratory to be resistant to the two most active anti-TB drugs, isoniazid and rifampicin. Treatment of MDRTB is extremely expensive, toxic, arduous, and often unsuccessful. DOTS has been proven to prevent the emergence of MDRTB, and also to reverse MDRTB where it has emerged. MDRTB is a tragedy for individual patients and a symptom of poor programme performance. The only way to confront this challenge is to improve the treatment programme and implement DOTS as rapidly as possible. A poorly performing programme will create drug-resistant cases at a faster

rate than these cases can be cured, even if unlimited resources are available.

The Future of DOTS in India

The Government of India has significantly increased the national budget for TB control. The RNTCP will be implemented in a phased manner in a population of nearly 300 million in the next two years. At the same time, the rest of the country will be prepared for RNTCP implementation by receiving updated technical material, diagnostic equipment, uninterrupted supply of drugs, and by implementing the RNTCP registration system. It is hoped that the RNTCP will be implemented nationally as soon as operationally feasible.

Experts caution that DOTS must not be implemented too rapidly. The experience in the past 4 years in India, which matches that of many countries, is that phased expansion is critical. Trying to expand too fast can result in a poor programme which can actually worsen the prospects for TB control by increasing drug resistance.

Effective implementation of DOTS will save hundreds of thousands of lives in India. DOTS has been deemed one of the most cost-effective health interventions. Each life saved represents a child, mother, or father who will go on to live a productive, TB-free, longer life. Every patient who is cured stops spreading TB. Working together to implement DOTS, we can win the age-old battle against TB.

Districts Scheduled for Full RNTCP Implementation

1998

Ahmedabad, Gujarat
Ahmedabad Corp., Gujarat
Amreli, Gujarat
Bangalore Urban, Karnataka
Bangalore, Karnataka
Barabanki, Uttar Pradesh
Bhopal, Madhya Pradesh
Calcutta, West Bengal
Daussa, Rajasthan
Delhi
Dibrugarh, Assam
Hamirpur, Himachal Pradesh
Hooghly, West Bengal
Howrah, West Bengal
Hyderabad, Andhra Pradesh
Imphal, Manipur
Jaipur, Rajasthan
Jamnagar, Gujarat
Kangra, Himachal Pradesh
Kannoor, Kerala
Kheonjhar, Orissa
Kottayam, Kerala
Lucknow, Uttar Pradesh
Madras City, Tamil Nadu
Malapuram, Kerala
Malda, West Bengal
Mandi, Himachal Pradesh
Mayurbhanj, Orissa
Medak, Andhra Pradesh
Mehsana, Gujarat
Mumbai, Maharashtra
Murshidabad, West Bengal
Nadia, West Bengal
Patna, Bihar
Pathanamthitta, Kerala
Pune, Maharashtra
Raigad, Maharashtra
South Arcot, Tamil Nadu
Sundargarh, Orissa
Thiruvananthapuram, Kerala
Trichur, Kerala
Vaishali, Bihar
Valsad, Gujarat
Vidisha, Madhya Pradesh
Wynad, Kerala

1999

Ajmer, Rajasthan
Banaskantha, Gujarat
Bankura, West Bengal
Bardhaman, West Bengal
Bellary, Karnataka
Bhavnagar, Gujarat
Bijapur, Karnataka
Birbhum, West Bengal
Chitradurga, Karnataka
Dharmapuri, Tamil Nadu
Deogarh, Orissa
Ernakulam, Kerala
Hazaribagh, Bihar
Jalpaiguri, West Bengal
Jharsugda, Orissa
Junagarh, Gujarat
Kasargode, Kerala
Kheda, Gujarat
Kollam, Kerala
Kozhikode, Kerala
Mednipur, West Bengal
Muzaffarpur, Bihar
North 24 Parganas, West Bengal
Pallakad, Kerala
Pallamav, Bihar
Panchmahal, Gujarat
Rai Barelli, Uttar Pradesh
Raichur, Karnataka
Rajgarh, Madhya Pradesh
Rajkot, Gujarat
Ranchi, Bihar
Sabarkanta, Gujarat
Salem, Tamil Nadu
Samastipur, Bihar
Sambalpur, Orissa
Shimla, Himachal Pradesh
Sirmaur, Himachal Pradesh
Solan, Himachal Pradesh
South 24 Parganas, West Bengal
Surat, Gujarat
Thanjavur, Tamil Nadu
Unnao, Uttar Pradesh

Tuberculosis—Key facts

- More adults die from TB than from any other infectious disease—1 every minute, more than 1,000 every day in India.
- The National Tuberculosis Programme was begun in 1962 and created an infrastructure for TB control throughout the country. However it has not achieved the desired results.
- The Director-General of the World Health Organization has declared that "The DOTS strategy represents the most important public health breakthrough of the decade."
- The strategy of Directly Observed Treatment, Short-course (DOTS) is based largely on research done in India in the field of TB over the past 35 years.
- Since 1993, DOTS has been pilot tested in 20 sites of India as the Revised National Tuberculosis Control Programme (RNTCP). In the RNTCP, the proportion of TB cases which are confirmed in the laboratory is double that of the previous programme, and the cure rate is nearly triple that of the previous programme.
- The operational feasibility of DOTS in the Indian context has been demonstrated, with 8 out of 10 patients treated in the programme being cured, as compared with approximately 3 out of 10 in the previous programme.
- Multidrug-resistant tuberculosis (MDRTB) is a result and symptom of poor programme performance. Reliable and representative data on the rate of MDRTB in India is not available. DOTS has been shown to prevent the emergence of MDRTB and to reverse the trend of MDRTB in communities in which it has emerged.
- The Human Immunodeficiency Virus (HIV) is the strongest known risk factor for development of TB. In some countries, HIV has tripled TB caseloads. However, DOTS can cure TB even in HIV-positive people.
- Success of the RNTCP depends on communication, collaboration, and coordination between the Government and private practitioners, non-governmental organizations, and other institutions of prominence such as medical colleges.
- In the next two years, the RNTCP is to be implemented in a phased manner in a population of more than 300 million throughout India, and at the same time the rest of the country will be prepared for RNTCP implementation. Phased implementation is essential to success.
- By the year 2000, the number of infectious patients cured per year, will increase from the current level of at most 1,50,000 to more than 5,00,000 per year. By the year 2000, 1,00,000 fewer patients will die every year from TB as a result of the RNTCP. Every patient who is cured stops spreading TB, and every life saved is a child, mother, or father who will go on to live a longer, TB-free life.

For more information, contact the District TB Centre
RAICHUR / KOPPAL

REVISED NATIONAL TB CONTROL PROGRAMME

RNTCP at a Glance

Central TB Division
Directorate General of Health Services
Ministry of Health and Family Welfare
Nirman Bhavan, New Delhi-110 011

CONTENTS

DEFINITIONS: THE REVISED NATIONAL TUBERCULOSIS CONTROL PROGRAMME

CASE DEFINITIONS

Pulmonary tuberculosis, Smear-positive

TB in a patient with at least 2 initial sputum smear examinations (direct smear microscopy) positive for AFB,

Or: TB in a patient with one sputum examination positive for AFB and radiographic abnormalities consistent with active pulmonary TB as determined by the treating MO,

Or: TB in a patient with one sputum specimen positive for AFB and culture positive for *M. tb*.

Pulmonary tuberculosis, Smear-negative

TB in a patient with symptoms suggestive of TB with at least 3 sputum examinations negative for AFB, and radiographic abnormalities consistent with active pulmonary TB as determined by an MO, followed by a decision to treat the patient with a full course of anti-tuberculosis therapy,

Or: Diagnosis based on positive culture but negative AFB sputum examinations.

Extra-pulmonary tuberculosis

TB of organs other than the lungs, such as the pleura (TB pleurisy), lymph nodes, abdomen, genito-urinary tract, skin, joints and bones, tubercular meningitis, tuberculoma of the brain, etc.

Diagnosis should be based on one culture-positive specimen from the extra-pulmonary site, or histological evidence, or strong clinical evidence consistent with active extra-pulmonary TB followed by an MO's decision to treat with a full course of anti-TB therapy.

Pleurisy is classified as extra-pulmonary TB.

A patient diagnosed with both pulmonary and extra-pulmonary TB should be classified as pulmonary TB.

TYPES OF CASES

New

A patient who has never had treatment for tuberculosis or has taken anti-tuberculosis drugs for less than one month.

Relapse

A patient declared cured of TB by a physician, but who reports back to the health service and is found to be bacteriologically positive.

Transferred In

A patient who has been received into a Tuberculosis Unit/District, after starting treatment in another unit where he has been recorded.

Treatment After Default

A patient who received anti-tuberculosis treatment for one month or more from any source and who returns to treatment after having defaulted, i.e. not taken anti-TB drugs consecutively for two months or more.

Failure

A smear-positive patient who is smear-positive at 5 months or more after starting treatment. Failure also includes a patient who was initially smear-negative but who becomes smear-positive during treatment.

Chronic

A patient who remains smear-positive after completing a retreatment regimen.

"Other"

Patients who do not fit into the above-mentioned categories. Reasons for putting a patient in this category must be specified.

TREATMENT OUTCOMES

Cured

Initially smear-positive patient who has completed treatment *and* had negative sputum smears, on at least two occasions, one of which was at completion of treatment.

Treatment completed

Sputum smear-positive case who has completed treatment, with negative smears at the end of the initial phase but none at the end of treatment.

Or: Sputum smear-negative TB patient who has received a full course of treatment and has not become smear-positive during or at the end of treatment.

Or: Extra-pulmonary TB patient who has received a full course of treatment and has not become smear-positive during or at the end of treatment.

Died

Patient who died during treatment, regardless of cause.

Failure

Smear-positive case who is smear-positive at 5 months or more after starting treatment. Also, a patient who was initially smear-negative but who became smear-positive during treatment.

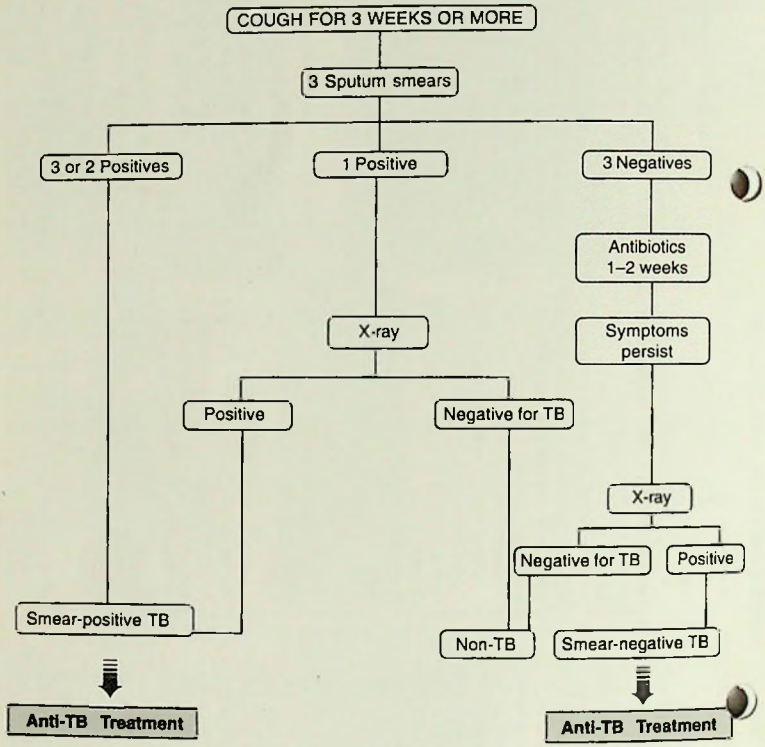
Defaulted

A patient who, at any time after registration, has not taken anti-TB drugs for 2 months or more consecutively.

Transferred out

A patient who has been transferred to another Tuberculosis Unit/District and his/her treatment results are not known.

DIAGNOSIS

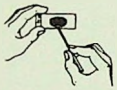

COUGH FOR 3 WEEKS OR MORE
3 Sputum smears
3 or 2 Positives
1 Positive
3 Negatives
Antibiotics 1–2 weeks
X-ray
Symptoms persist
Positive
Negative for TB
X-ray
Negative for TB
Positive
Smear-positive TB
Non-TB
Smear-negative TB
Anti-TB Treatment
Anti-TB Treatment

Key steps in the preparation and staining of smears

Step 1

Break a broomstick into two

Pick up the large, yellow purulent portion of sputum

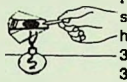


Spread evenly onto 2/3 of central portion of the numbered slide

Step 2

Air-dry the slide for 15–30 minutes

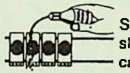
Step 3



Fix the dry slide by heating briefly 3–5 times for 3–4 seconds each time

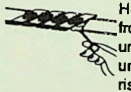
Step 4

Place the slides in serial order on the staining rack



Stain the slides with 1% carbol fuchsin

Step 5

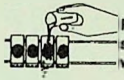


Heat the slides from underneath until vapours rise

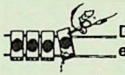
Step 6

Let the slides stand for 5 minutes

Step 7



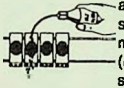
Rinse the slides with tap water



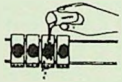
Drain off excess water

Step 8

Decolourize with 25% sulphuric acid and let it stand for 2–4 minutes (repeat, letting stand for 1–3 minutes, if necessary)



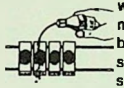
Step 9



Rinse away excess stain with tap water

Drain off the water

Step 10



Counterstain with 0.1% methylene blue and let stand for 30 seconds

Gently rinse the slides with tap water, drain the water off, and allow the slide to dry

Examine the slides under the microscope

STAINING METHOD

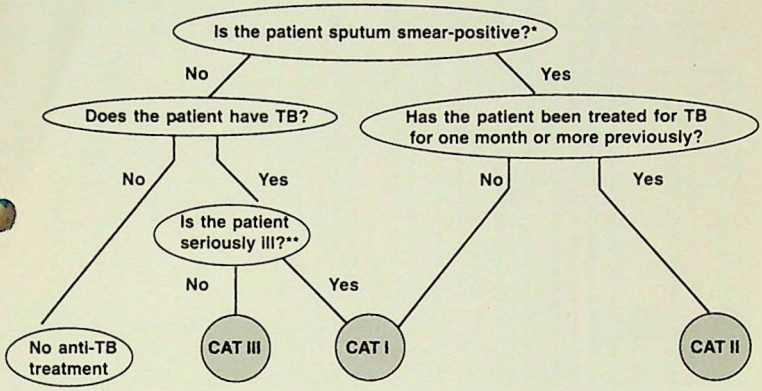
Ziehl–Neelsen staining

1. Select a new unscratched slide and label the slide with the Laboratory Serial Number.
2. Spread sputum on the slide using a broomstick.
3. Allow the slide to air dry for 15–30 minutes.
4. Fix the slide by passing it over a flame 3–5 times for 3–4 seconds each time.
5. Pour filtered carbol fuchsin to cover the entire slide.
6. Gently heat the slide with carbol fuchsin on it until vapours rise. Do not boil.
7. Leave carbol fuchsin on the slide for 5 minutes.
8. Gently rinse the slide with tap water until all free carbol fuchsin stain is washed away.
9. Pour 25% sulphuric acid onto the slide.
10. Let the slide stand for 2–4 minutes.
11. Rinse gently with tap water. Tilt the slide to drain off the water.
12. If the slide is still red, reapply sulphuric acid for 1–3 minutes and rinse gently with tap water.
13. Pour 0.1% methylene blue onto the slide.
14. Leave methylene blue on the slide for 30 seconds.
15. Rinse gently with tap water.
16. Allow the slide to dry.
17. Examine the slide under the microscope using x40 lens to select the suitable area and then examine under x100 lens using a drop of immersion oil.
18. Record the results in the Laboratory Form and the Laboratory Register appropriately as per the table given below:

Examination	Result	Grading	No. of fields to be examined
More than 10 AFB per oil immersion field	Pos	3 +	20
1–10 AFB per oil immersion field	Pos	2 +	50
10–99 AFB per 100 oil immersion fields	Pos	1 +	100
1–9 AFB per 100 oil immersion fields	Scanty	Record exact number seen	200
No AFB in 100 oil immersion fields	Neg	0	100

19. Store all positive and negative slides until instructed by the supervisor.
20. Disinfect all contaminated material before discarding.

TREATMENT



* Patients with extra-pulmonary TB should receive Category III treatment unless they are seriously ill, in which case they should recieve Category I treatment.

** Examples of seriously ill patients are those suffering from meningitis, disseminated TB, tuberculous pericarditis, peritonitis, bilateral or extensive pleurisy, spinal TB with neurological complications, smear-negative pulmonary TB with extensive parenchymal involvement, intestinal and genito-urinary TB.

Expected breakup of 135 cases under RNTCP

New smear-positive : New smear-negative	50 : 50
New smear-positive (CAT I) : Retreatment smear-positive (CAT II)	50 : 25 (initially)
New smear-positive : Extra-pulmonary	50 : 10
Non-seriously ill smear-negative : Seriously ill smear-negative	40 : 10
Non-seriously ill extra-pulmonary : Seriously ill extra-pulmonary	8 : 2

Treatment	Smear-positive	Smear-negative	Extra-pulmonary	Total
Category I	50	10 (seriously ill)	2 (seriously ill)	62
Category II	25	Nil	Nil	25
Category III	0	40	8	48
Total	**75**	**50**	**10**	**135**

TREATMENT REGIMEN			SPUTUM EXAMINATIONS FOR PULMONARY TB			
Category of treatment	Type of patient	Regimen*	Pre-treatment sputum	Test at month	IF: result is	THEN:
Category I	New sputum smear-positive	$2(HRZE)_3$ $4(HR)_3$	+	2	−	Start continuation phase, test sputum again at 4 and 6 months‡
					+	Continue intensive phase for one more month‡
	Seriously ill sputum smear-negative Seriously ill extra-pulmonary**		−	2	−	Start continuation phase, test sputum again at 6 months‡
					+	Continue intensive phase for one more month, test sputum again at 3, 4 and 7 months‡
Category II	Sputum smear-positive Relapse*** Sputum smear-positive Failure*** Sputum smear-positive Treatment After Default	$2(HRZES)_3$ $1(HRZE)_3$ $5(HRE)_3$	+	3	−	Start continuation phase, test sputum again at 5 and 6 months
					+	Continue intensive phase for one more month, test sputum again at 4, 6 and 9 months
Category III	Sputum smear-negative, not seriously ill Extra-pulmonary, not seriously ill	$2(HRZ)_3$ $4(HR)_3$	−	2	−	Start continuation phase, test sputum again at 6 months‡
					+	Re-register the patient and begin Category II treatment‡

* The number before the letters refers to the number of months of treatment. The subscript after the letters refers to the number of doses per week. H: Isoniazid (600 mg), R: Rifampicin (450 mg), Z: Pyrazinamide (1500 mg), E: Ethambutol (1200 mg), S: Streptomycin (750 mg). Patients who weigh more than 60 kg receive additional rifampicin 150 mg. Patients more than 50 years old receive streptomycin 500 mg. Patients in categories I and II who have a positive sputum smear at the end of the initial intensive phase receive an additional month of intensive phase treatment.

** Examples of seriously ill extra-pulmonary TB cases are meningitis, disseminated TB, tuberculous pericarditis, peritonitis, bilateral or extensive pleurisy, spinal TB with neurological complications and intestinal and genito-urinary TB.

*** In rare and exceptional cases, patients who are sputum smear-negative or who have extra-pulmonary disease can have Relapse or Failure. This diagnosis in all such cases should always be made by an MO and should be supported by culture or histological evidence of current, active tuberculosis. In these cases, the patient should be categorized as 'Other' and given Category II treatment.

‡ Any patient treated with Category I or Category III who has a positive smear at 5, 6 or 7 months of treatment should be considered a Failure and started on Category II treatment afresh.

MEDICATION

Medication	Dose (thrice a week)	Number of pills in combipack
Isoniazid	600 mg	2
Rifampicin	450 mg*	1
Pyrazinamide	1500 mg	3
Ethambutol	1200 mg	3
Streptomycin	0.75 g**	—

* Patients who weigh 60 kg or more are given an extra 150 mg dose of rifampicin

** Patients over 50 years of age and those who weigh less than 30 kg are given 0.5 g of streptomycin

Phases and duration of treatment

Category	Duration (number of doses)		Total
	Intensive phase	Continuation phase	
CAT I	8 weeks (24 doses)	18 weeks (54 doses)	26 weeks (78 doses)
CAT II	12 weeks (36 doses)	22 weeks (66 doses)	34 weeks (102 doses)
CAT III	8 weeks (24 doses)	18 weeks (54 doses)	26 weeks (78 doses)

Duration of treatment if sputum smear is positive at 2/3[1] months

Category	Duration (number of doses)		Total
	Intensive phase	Continuation phase	
CAT I	12 weeks (36 doses)	18 weeks (54 doses)	30 weeks (90 doses)
CAT II	16 weeks (48 doses)	22 weeks (66 doses)	38 weeks (114 doses)

[1] CAT I—positive at 2 months CAT II—positive at 3 months

MANAGEMENT OF PATIENTS WHO INTERRUPT TREATMENT

Management of patients who were *smear-negative* at diagnosis and who interrupt treatment

Treatment received before interruption	Length of interruption	Do a sputum smear examination	Result of sputum smear examination	Outcome	Re-registration	Treatment
Less than 1 month	Less than 2 months	No	—	—	—	Resume treatment and complete all doses
	2 months or more	Yes	Negative	—	—	Resume treatment
			Positive	Default	New	Begin CAT I afresh
More than 1 month	Less than 2 months	No	—	—	—	Resume treatment and complete all doses
	More than 2 months	Yes	Negative	—	—	Resume treatment and complete all doses
			Positive	Default	Treatment After Default	Begin CAT II treatment afresh

MANAGEMENT OF PATIENTS WHO INTERRUPT TREATMENT

Management of *New smear-positive* cases who interrupt treatment (Category I)

Treatment received before interruption	Length of interruption	Do a sputum smear examination?	Result of sputum smear examination	Outcome	Re-registration	Treatment
Less than 1 month	Less than 2 weeks	No	—	—	—	Continue CAT I*
	2–7 weeks	No	—	—	—	Start again on CAT I**
	8 weeks or more	Yes	Positive	Default	New	Start again on CAT I**
			Negative	—	—	Continue CAT I*
1–2 months	Less than 2 weeks	No	—	—	—	Continue CAT I*
	2–7 weeks	Yes	Positive	—	—	1 extra month of intensive phase of CAT I
			Negative	—	—	Continue CAT I*
	8 weeks or more	Yes	Positive	Default	Treatment After Default	Start on CAT II**
			Negative	—	—	Continue CAT I*
More than 2 months	Less than 2 weeks	No	—	—	—	Continue CAT I*
	2–7 weeks	Yes	Positive	Other	Default***	Start on CAT II**
			Negative	—	—	Continue CAT I*
	8 weeks or more	Yes	Positive	Default	Treatment After Default	Start on CAT II**
			Negative	—	—	Continue CAT I*

* A patient must complete all **24 doses** of the initial intensive phase. For example, if a patient has to **continue** his previous treatment and he took 1 month of treatment (12 doses) before interrupting, he will have to take 1 more month (12 doses) of the intensive phase treatment. He will then start the continuation phase of treatment.

** A patient who must 'start again' will *restart treatment from the beginning.*

*** Although this patient does not strictly fit the definition of default, default most closely describes the outcome of this patient, although at re-registration they should be categorized as 'Other'.

MANAGEMENT OF PATIENTS WHO INTERRUPT TREATMENT

Management of *retreatment smear-positive* cases who interrupt treatment (Category II)

Treatment received before interruption	Length of interruption	Do a sputum smear examination?	Result of sputum smear examination	Outcome	Re-registration	Treatment
Less than 1 month	Less than 2 weeks	No	—	—	—	Continue CAT II*
	2–7 weeks	No	—	—	—	Start again on CAT II**
	8 weeks or more	Yes	Positive	Default	Treatment After Default	Start again on CAT II**
			Negative	—	—	Continue CAT II*
1–2 months	Less than 2 weeks	No	—	—	—	Continue CAT II*
	2–7 weeks	Yes	Positive	—	—	1 extra month of intensive phase of CAT II
			Negative	—	—	Continue CAT II*
	8 weeks or more	Yes	Positive	Default	Treatment After Default	Start again on CAT II**
			Negative	—	—	Continue CAT II*
More than 2 months	Less than 2 weeks	No	—	—	—	Continue CAT II*
	2–7 weeks	Yes	Positive	Default**	Other	Start again on CAT II
			Negative	—	—	Continue CAT II*
	8 weeks or more	Yes	Positive	Default	Treatment After Default	Start again on CAT II
			Negative	—	—	Continue CAT II*

* A patient must complete all **36 doses** of the initial intensive phase.

** Although this patient does not strictly fit the definition of default, default most closely describes the outcome of this patient, although at re-registration they should be categorized as 'Other'.

TREATMENT OF CHILDREN

Dosages for children

Drugs	Therapy per dose (thrice a week)
Isoniazid	10–15 mg/kg
Rifampicin	10 mg/kg
Pyrazinamide	35 mg/kg
Streptomycin	15 mg/kg
Ethambutol*	30 mg/kg

* Should not be given to children below 6 years of age

How to proceed with preventive chemotherapy in children under 6 years of age who were in contact with a smear-positive case

IF:	AND:	THEN:	
The child has symptoms of tuberculosis	an MO determines (preferably in consultation with a paediatrician) that the child has tuberculosis	a full course of anti-tuberculosis treatment (CAT III) should be given.	
The child does not have symptoms of tuberculosis	a tuberculin test is **not** available	the child should receive preventive chemotherapy for 6 months (isoniazid daily—5 mg per kg body weight).	
	a tuberculin test is available	the child should receive 3 months of INH preventive chemotherapy and a tuberculin test should then be done.	
		IF:	**THEN:**
		The child's induration to the tuberculin test is less than 6 millimetres in diameter	stop the preventive chemotherapy and give BCG vaccination (if not previously vaccinated).
		The child's induration to the tuberculin test is 6 millimetres or more in diameter	continue isoniazid preventive chemotherapy for another 3 months.

POSSIBLE SIDE-EFFECTS OF ANTI-TUBERCULOSIS DRUGS

Symptom	Drug (abbreviation)	Action to be taken
Drowsiness	Isoniazid (H)	Reassure patient
Red–orange urine/tears	Rifampicin (R)	Reassure patient
Gastrointestinal upset	Any oral medication	Reassure patient Give drugs with less water Give drugs over a longer period of time (e.g. 20 minutes) Do not give drugs on empty stomach If the above fails, give anti-emetic if appropriate
Burning in the hands and feet	Isoniazid (H)	Give pyridoxine 100 mg/day until symptoms subside
Joint pains	Pyrazinamide (Z)	If severe, refer patient for evaluation
Impaired vision	Ethambutol (E)	STOP ethambutol, refer patient for evaluation
Ringing in the ears	Streptomycin (S)	STOP streptomycin, refer patient for evaluation
Loss of hearing	Streptomycin (S)	STOP streptomycin, refer patient for evaluation
Dizziness and loss of balance	Streptomycin (S)	STOP streptomycin, refer patient for evaluation
Jaundice	Isoniazid (H) Rifampicin (R) Pyrazinamide (Z)	STOP treatment, refer patient for evaluation

In all cases of jaundice, anti-tuberculosis drugs should be stopped immediately and the patient referred for evaluation.

SUPERVISORY VISITS

Category of supervisor	Methodology of supervision	Number of supervisory visits
DTO/MO (DTC)	**Interview** the MO-TC, MO I/C of PHC-CHC, STS, STLS and the person incharge of anti-TB drug storage. **Random interview** of patients and community leaders. **Inspection** of records of the TU, PHC and CHC, and stock of anti-TB drugs and laboratory consumables. **Random checking** of the microscopy centre and sub-centre.	To visit all TUs every month, all CHCs and Block PHCs in the district every quarter, one sub-centre from each Block PHC area and a proportion of tribal sub-centres every quarter.
MO-TC (Tuberculosis Unit)	**Interview** the MO I/C BPHC/CHC/ PHC. **Random interview** of patients and community leaders. **Random checking** of the microscopy centre and sub-centre stock of anti-tuberculosis drugs and laboratory consumables.	To visit at least once every quarter all CHCs/BPHCs/ PHCs, microscopy centres, and a proportion of sub-centres.
STS	**Interview** MPHS and MPWs at the PHC sub-centre. **Inspect** records, Tuberculosis Treatment Cards and Tuberculosis Laboratory Register. **Random interview** of patients.	To visit all PHCs and CHCs every month and all sub-centres every quarter.
STLS	**Inspect** all microscopy centres and laboratory records.	To visit all microscopy centres in the jurisdiction of the TU at least once a month.

Quarterly Report	Indicator	Possible Actions
New and retreatment cases		
Expected: New smear-positive cases: 40–85/100 000	Calculated annualized incidence of New smear-positive cases is less than 40/100 000	Ensure that chest symptomatics in all facilities undergo sputum smear examination (at least 2% adult outpatients). Ensure that three sputum smear examinations are being done on all chest symptomatics. Ensure that sputum smear microscopy is being done correctly (5%–15% positivity among patients examined for diagnosis). Intensify review of slides read as smear-negative, particularly those of patients placed on treatment. Ensure that all smear-positives in the Laboratory Register are recorded in the Tuberculosis Register. Ensure that sputum smear microscopy is accessible to patients throughout the assigned area, with trained laboratory technicians in place.
	Calculated annualized incidence of New smear-positive cases is more than 85/100 000	Ensure that active case-finding is not being done in any area. Ensure that sputum smear microscopy is accurate. Ensure review of slides of smear-positive patients. Ensure that only patients who reside in the area are being treated.
Expected: Retreatment smear-positive cases are 50% of New smear-positive cases in initial years of RNTCP implementation	Retreatment cases are less than 40% of New smear-positive cases	Ensure that accurate history-taking is being done at all levels. Patients must be questioned carefully about prior treatment for tuberculosis from any source. It should be explained to patients that only if they provide accurate information can the most effective treatment be given. Make sure that definitions are being applied correctly. Any smear-positive patient treated in the past for more than one month and has defaulted for more than two months, should receive the retreatment (CAT II) regimen.
	Retreatment cases are more than 70% of New smear-positive cases	Ensure that active case-finding is not occurring. With active case-finding, many 'old' TB cases are reported. Ensure that history-taking is accurate and definitions are being correctly applied. Ensure that new symptomatic patients undergo three sputum smear examinations for acid-fast bacilli (AFB).
Expected: At least 50% of all New pulmonary cases will be smear-positive	Among New pulmonary cases, proportion which are smear-positive is less than 40%	Ensure that over-diagnosis of sputum smear-negative patients is not occurring on account of over-reliance on radiography. No patient should begin treatment without having three sputum smear examinations done. Ensure that three sputum smear examinations are being done on all chest symptomatics. Ensure that sputum smear microscopy is being done correctly. Consider review of slides of smear-negative patients placed on treatment.

Quarterly Report	Indicator	Possible Actions
New and retreatment cases (continued)		
Expected: No more than 20% of smear-negative/ extra-pulmonary patients are considered seriously ill and placed under CAT I	The proportion of smear-negative or extra-pulmonary seriously ill patients included in CAT I is greater than 25%	Ensure that only seriously ill patients are given CAT I treatment. Non-seriously ill smear-negative New patients should receive CAT III treatment. Ensure that sputum microscopy is being done correctly. Consider review of slides of smear-negative patients placed on treatment.
Conversion		
Expected: Conversion rate is 90%	Less than 85% of smear-positive CAT I patients are documented to become sputum smear-negative at 3 months	Ensure that Medical Officers, treatment supervisors, and all staff in the programme and at peripheral centres understand the importance of follow-up sputum examinations. Follow-up sputum examinations are the best measure of patient response to treatment. Results of sputum examinations change patient treatment and are critical to programme evaluation. Visit all centres with low rates of sputum conversion and resolve any problems with the help of the staff. Make sure defaulter rates in the first two months are <5%, and that there is not an excess of patients who die or who are transferred out. Visit centres with a low sputum smear conversion rate to discuss with patients and staff about potential reasons. Make sure each centre is aware of their result so that they may take steps to improve performance. Ensure that accurate history-taking is being done at all levels. Patients must be questioned carefully about prior treatment for tuberculosis from any source. It should be explained to patients that only if they provide accurate information can the most effective treatment be given. If previously treated patients are not given the retreatment regimen, they may not respond well to treatment. Make sure that definitions are being applied correctly. Any smear-positive patient treated for more than one month in the past, and with default of more than two months, should receive the retreatment (CAT II) regimen. If previously treated patients are not given the retreatment regimen, they may not respond well to treatment. Ensure that sputum microscopy is accurate. Ensure review of slides of patients who remained smear-positive at the end of the intensive phase. Ensure that every dose of medication is observed during the intensive phase of treatment. Observation sites should be convenient to the patient. The possibility that DOTS is not being strictly followed should be checked by observation, including checking and comparing Treatment Cards with the drugs available in patient-wise boxes.

Quarterly Report	Indicator	Possible Actions
Treatment outcome		
Expected: Cure rate is 85% or more	Cure rate of smear-positive patients is less than 80%	Visit centres with low cure rates to discuss with patients and staff the reasons and possible solutions. Make sure that each centre is aware of its cure rate so that it can take steps to improve performance. Ensure that accurate history-taking is being done at all levels. Patients must be questioned carefully about prior treatment for tuberculosis from any source. It should be explained to patients that only if they provide accurate information can the most effective treatment be given. If previously treated patients are not given the retreatment regimen, they may not respond well to treatment. Make sure that definitions are being applied correctly. Any smear-positive patient treated for more than one month in the past, with default of more than two months, should receive the retreatment (CAT II) regimen. Ensure that every dose of medication is observed during the intensive phase of treatment, and at least one dose per week in the continuation phase. Ensure return of empty blister packs during weekly collection of drugs. Observation sites should be convenient for the patient. Ensure that health workers are dispensing medication properly as per technical guidelines. Ensure that follow-up sputum smear examinations are being done according to guidelines.
	Cure rate of smear-positive CAT I patients is more than 95%	Check to make sure the report is correct. If it is, consider checking to make sure that reporting and classification of treatment outcomes is being done correctly and that all detected smear-positive patients are registered.
Expected: No more than 3% of smear-positive patients are given the treatment outcome 'complete'	Per cent of New smear-positive patients who are classified as having 'completed' treatment is more than 5%	Ensure that follow-up sputum examinations are being done as per policy. Carefully track this at all New treatment units. Explain to Medical Officers and others the crucial importance of the follow-up sputum examinations. Locate patients who have recently completed treatment and obtain sputum samples for examination. Carefully review all data on patients to ensure accuracy of information and to ensure that treatment is being given under direct observation as per policy.
Expected: No more than 4% New smear-positive patients die during treatment	Per cent of New smear-positive patiens who die during treatment is more than 5%	Ensure that every dose of medication is observed during the intensive phase of treatment, and at least one dose per week in the continuation phase. Observation sites should be convenient to the patient. Review information on patients who died to determine the reasons. If patients are presenting for treatment when already moribund, consider ways and means to encourange more prompt referral and diagnosis so that patients can be treated earlier in the course of their TB illness. If all of the above has been done and death rate is still more than 5%, consider evaluation of the prevalence of HIV infection among TB patients, to be done strictly as per policy with safeguards of confidentiality.

Quarterly Report	Indicator	Possible Actions
Treatment outcome		
Expected: Failure: No more than 4% of New smear-positive patients are smear-positive 5 or more months after the start of treatment	Per cent of New smear-positive patients who fail treatment is more than 5%	Ensure that accurate history-taking is being done at all levels. Patients must be questioned carefully about prior treatment for tuberculosis from any source. It should be explained to patients that only if they provide accurate information can the most effective treatment be given. If previously treated patients are not given the retreatment regimen, they may not respond well to treatment. Make sure that definitions are being applied correctly. Any smear-positive patient treated for more than one month in the past, with default of more than two months, should receive the retreatment (CAT II) regimen. Ensure that every dose of medication is observed during the intensive phase of treatment, and at least one dose per week in the continuation phase. Ensure return of empty blister packs during weekly collection of drugs. Observation sites should be convenient for the patient. Ensure that health workers are dispensing medication properly as per technical guidelines. Ensure that drugs are of acceptable quality, that drugs are stored in appropriate conditions, and that they are being used before their expiry period. If all of the above has been done and failure rate remains higher than 5%, consider evaluation of the level of primary drug resistance in the community.
Expected: Default rate is less than 5%	Default rate of smear-positive CAT I patients is more than 10%	Visit centres which have the highest default rates and interview staff and patients to determine the efforts made to retrieve patients, the reasons for default and possible solutions. Make sure that centres are aware of their default rate so they can take steps to reduce it. Ensure that patient history is being carefully ascertained, including the address. A visit to patients' homes should be made to verify addresses, and landmarks near the house should be recorded in the Treatment Card. To the greatest extent possible, services should be convenient to the patient in terms of distance, time and staff attitudes. During the visit to the house for verification of address, note the name and address of a person who can be contacted in the event the patient defaults. Ensure that directly observed treatment is being given to patients in the intensive phase and at least one dose per week is being directly observed during the continuation phase. Ensure that each centre is aware of its own default rate so that it can take steps to improve performance.
Expected: Transferred out is less than 3%	Percentage of patients who fall under outcome category 'Transferred out' is more than 5%	'Transfer out' can be a way of disguising default. Patients should only be categorized as 'Transferred out' if they have been given a Transfer Form to bring to the jurisdiction to which they are being transferred. Ensure that counterfoils have been received.

REPORTING

Due dates for reports from Tuberculosis Units to DTC

Due On	Quarterly Report	Period Covered
7 April 1997	Case-finding	1 January–31 March 1997
	Programme Management	1 January–31 March 1997
	Sputum Conversion cohort	1 October–31 December 1996
	Treatment Outcome cohort	1 January–31 March 1996
7 July 1997	Case-finding	1 April–30 June 1997
	Programme Management	1 April–30 June 1997
	Sputum Conversion cohort	1 January–31 March 1997
	Treatment Outcome cohort	1 April–30 June 1996
7 October 1997	Case-finding	1 July–30 September 1997
	Programme Management	1 July–30 September 1997
	Sputum Conversion cohort	1 April–30 June 1997
	Treatment Outcome cohort	1 July–30 September 1996
7 January 1998	Case-finding	1 October–31 December 1997
	Programme Management	1 October–31 December 1997
	Sputum Conversion cohort	1 July–30 September 1997
	Treatment Outcome cohort	1 October–31 December 1996
7 April 1998	Case-finding	1 January–31 March 1998
	Programme Management	1 January–31 March 1998
	Sputum Conversion cohort	1 October–31 December 1997
	Treatment Outcome cohort	1 January–31 March 1997
7 July 1998	Case-finding	1 April–30 June 1998
	Programme Management	1 April–30 June 1998
	Sputum Conversion cohort	1 January–31 March 1998
	Treatment Outcome cohort	1 April–30 June 1997
7 October 1998	Case-finding	1 July–30 September 1998
	Programme Management	1 July–30 September 1998
	Sputum Conversion cohort	1 April–30 June 1998
	Treatment Outcome cohort	1 July–30 September 1997
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	Sputum Conversion cohort	1 July–30 September 1998
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	Programme Management	1 January–31 March 1999
	Sputum Conversion cohort	1 October–31 December 1998
	Treatment Outcome cohort	1 January–31 March 1998
7 July 1999	Case-finding	1 April–30 June 1999
	Programme Management	1 April–30 June 1999
	Sputum Conversion cohort	1 January–31 March 1999
	Treatment Outcome cohort	1 April–30 June 1998
7 October 1999	Case-finding	1 July–30 September 1999
	Programme Management	1 July–30 September 1999
	Sputum Conversion cohort	1 April–30 June 1999
	Treatment Outcome cohort	1 July–30 September 1998

Reports should be received from the DTO to the STO, the Central TB Division of the Directorate General of Health Services, Ministry of Health and Family Welfare, Nirman Bhavan, New Delhi 110011, and National Tuberculosis Institute, 8 Bollary Road, Bangalore 560003 no later than 14 days after the dates listed above.