CHAPTER IV

TREATMENT BEHAVIOUR OF TB PATIENTS

a: Treatment Failure & The Problem of Non Adherence

199
AU: Sen PK & Nundy GS
TI : Fall-out and irregularities - Domiciliary chemotherapy.
SO: INDIAN J CHEST DIS 1964, 6, 200-210
DT: Per
AB: To determine the extent and causes of Fall-out (premature abandonment of chemotherapy) and Irregularities (chemotherapy continued with interruption), 1,274 TB cases registered at the domiciliary treatment section of the Chest Department, Medical College, Calcutta, were accepted for study. Among 668 who stopped attending the clinic, 277 (21.74%) fell-out (most fell-out within the first 3 months suggesting that home visits and other efforts for patient recall should be intensified at this time). After quiescence of lesions and stoppage of chemotherapy, 21.28% (of 329 cases) fell-out during a follow-up of 1-7 years, with the trend showing an increase in fall-out with time. The Irregulars who had at least 3 months of treatment (854 cases) were defined as Major and, Minor and Regular cases. Comparative studies of these two groups with regard to several factors revealed that the Irregulars fared much worse than the Regulars except in the group with minimal (extent I) lesions. Suggestions are offered to decrease the above problems.
KEYWORDS: DEFAULT; INDIA.

200
AU: Pathak SH
TI : Study of 450 TB patients who were irregular and non-cooperative in treatment.
SO: National Conference of Tuberculosis and Chest Diseases Workers, 20th, Ahmedabad, India, 3-5 Feb 1965, p. 217-224.
DT: CP
AB: A study was conducted at the NDTC to study 450 patients who included 225 patients who were non-cooperative in treatment. The patients were interviewed by six students from the Delhi School of Social Work and data on the patients' socio-economic background, the period of treatment until they became irregular (those who failed to visit the clinic twice or more after repeated attempts at retrieval) or non-cooperative, their diagnosis, status at the time of their irregularity or non-cooperation, and the patients' reasons for irregularity or non-cooperation, were filled in uniform schedules. The results and the major reasons for the patients' irregularity and leaving treatment are presented. Measures to minimise patients' default in treatment are recommended. Some supplementary remarks and suggestions on this study are presented by S.P. Pamra in the report on the 20th National Conference of TB and Chest Diseases Workers, Ahmedabad, India, Feb. 1965, p. 225-230.
KEYWORDS: SOCIAL BEHAVIOUR; SOCIAL LITERACY; DEFAULT; INDIA.

201

AU: Pamra SP

TI : Study of 450 TB patients who were irregular in taking treatment.

SO: National Conference of Tuberculosis and Chest Diseases Workers,20th, Ahmedabad, India, Feb 1965, p. 225-230.

DT: CP

AB: The necessity for this study arose due to our desire to learn first hand the reactions and reasons for irregularity and non-cooperation of the party i.e the patients. No doubt health visitors on repeated visits try to find out the main cause of irregularity; yet we felt that since health visitors are known to be a part of this institution, the patients may not tell them the real behind their non-cooperation. We felt that the students of the Delhi school of social work being unconnected with the centre and also by possessing proper attitude for this work would be able to bring out the real reasons.

KEYWORDS: HEALTH EDUCATION; DEFAULT; SOCIAL WORK.

Dr S P Pamra

202

AU: Pamra SP & Mathur GP

TI : Drug default in an urban community.

SO: INDIAN J TB 1967, 14, 199-203.

DT: Per

AB: The study was conducted in 1965-66 to ascertain whether an additional visit by a senior member of the domiciliary service staff at the NDTC, such as a Medical Officer or the Chief Public Health Nurse, could help retrieve defaulting patients, after three visits by the Health Visitor during a period of 2-3 weeks had failed. Of the 786 non-cooperators, 531 were visited by the Chief Public Health Nurse. The results showed that more than half (58%) of the non-cooperators could be retrieved by the senior staff member, while 24% completed the treatment thereafter and, 8% were still continuing. Only partial success was achieved with the remaining 16%. Counting those who did not attend at all (331) and those who did not complete treatment after being called (73), the experiment was

successful in nearly half the cases (382 out of 786). Therefore, it is recommended that the health visitors' attempts to retrieve the defaulters must be supplemented by at least one visit from a senior staff member for maximum effort.
KEYWORDS: MOTIVATION; DEFAULT; INDIA.

203

AU: Banerji D, Bordia NL, Singh MM, Menon KG & Pande RV

TI : Panel discussion on treatment default: administrative, organizational and sociological considerations.

SO: Tuberculosis and Chest Diseases Workers Conference, 22nd, Hyderabad, India, 3-6, 1967, p. 203-214.

DT: CP

AB: The panel discussion highlighted some basic administrative, organizational, technical and patient factors relevant to the problem of Treatment Default in the TB programme. In urban areas, the proper motivation of the patients, keeping of suitable records, prompt defaulter-action, adequate supply of drugs and the need to provide suitable facilities for patients coming from outside the clinic area, constituted the key administrative and organizational factors affecting treatment default. Regarding technical considerations, there was a need for a more precise definition of a case. It was pointed out that a large proportion of the patients were not really defaulters either because they were not cases of pulmonary TB at all or the patients took treatment from outside the clinic. Also, many so-called defaulters took the treatment after the expiry of the 12 months, while some were resistant to the treatment offered at the time of their first registration. In rural areas, the TB programme could only be strengthened with a concurrent strengthening of the over-all health administration.
KEYWORDS: DEFAULT; INDIA.

204

AU: Pande RV

TI : Treatment default of tuberculosis patients in a domiciliary service clinic at Lucknow.

SO: INDIAN J TB 1968, 15, 107-112.

DT: Per

AB: To understand the reasons for TB patients' default in treatment behaviour, data available at the Rajendra Nagar TB Clinic, Lucknow, from patients registered during 1964-66, were analysed. 3,609 (43%) cases out of 8,374 patients proven to have pulmonary TB were given treatment. The particulars and behaviours towards treatment, of these patients, is described. Initial and subsequent defaulters were reminded to resume treatment through: 1) a personal appeal posted to the defaulter (Type 1 action), 2) a local community leader or the head of the office was requested by post to persuade the patient (Type II action), 3) a member of the staff personally contacted the patient (Type III action). Default was not associated with gender, distance or severity of TB. Retrieved patients' versions for possible causes of default were more reasonable than those who did not come back to treatment. Some suggestions to reduce default are offered.
KEYWORDS: SOCIAL BEHAVIOUR; DEFAULT; INDIA.

205

AU: Singh MM & Banerji D

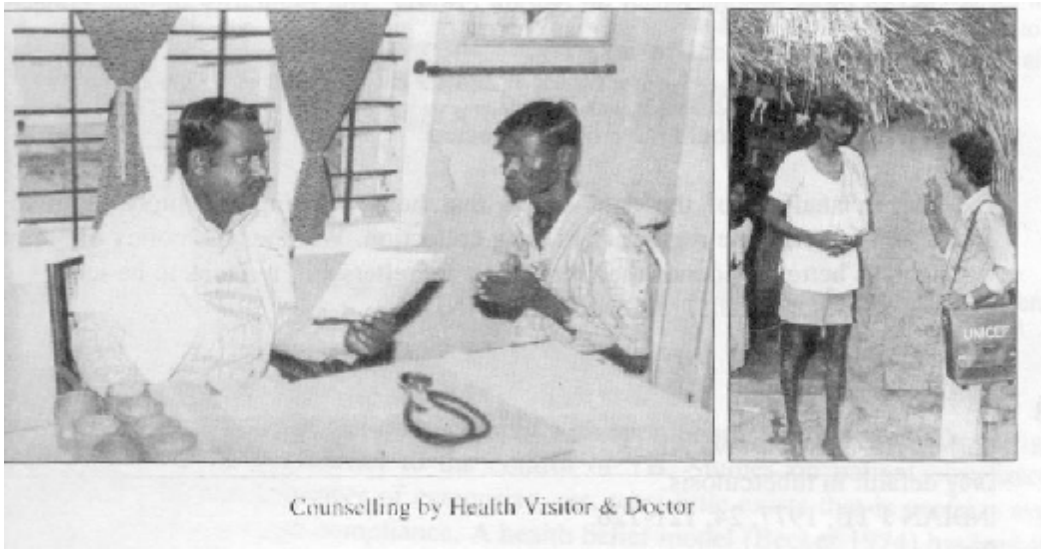
TI : A follow-up study of patients of pulmonary tuberculosis treated in an urban clinic.

SO: INDIAN J TB 1968, 15, 157-164.

DT: Per

AB: A two-year follow-up study of treatment default among 193 patients with pulmonary TB, who were receiving domiciliary treatment in a Delhi urban clinic, revealed that the percentage of defaulting (that is, collecting drugs for less than 10 months) fell from 57% to 44% when the duration for calculating drug collection was raised from 12 to 24 months. The propensity to default appeared to be inversely related to the precision of diagnosis and the extent of lesions. While the default rate was 20.2% among those who were initially sputum positive, it was 100% among those sputum negative cases who had only minimal radiological lesions. This study, thus, questions the rationality of assessing the performance of a TB clinic on the basis of the 'traditional' definition of a defaulter. It has presented data to make a case for a more precise definition of a defaulter by offering a longer period for calculation of drug collection and by stressing the need for greater precision in diagnosis of cases who are put under treatment.

KEYWORDS: SOCIAL BEHAVIOUR; DEFAULT; INDIA.



Counselling by Health Visitor & Doctor

206

AU: Ghosh TN, Basu BK & Bhagi RP

TI : Treatment defaults among tuberculosis patients seen in a rural clinic near Delhi.

SO: INDIAN J CHEST DIS 1972, 14, 28-31.

DT: Per

AB: The study, conducted during 1968-1971, examined reasons for treatment default. More than 50% of the patients (742 out of 1,342) became defaulters in a Rural TB Clinic near Delhi. The defaulters were contacted in three different ways. The findings revealed that males predominated among the defaulters. About two thirds of the defaulters visited the clinics within 2 months but the rest had to be persuaded after a visit to their home. Among the causes of defaults, carelessness on the part of patients and, lack of proper education by the health visitors of the clinic, predominated. In the patients who did not

come within 2 months of treatment, a visit by the health visitors was the most effective way to convert them. Communication to them by community representatives did not succeed. This shows that more members of staff (both the health visitors and doctors) are needed in rural clinics.
KEYWORDS: DEFAULT; INDIA.

207

AU: Govind Prasad, Saxena P, Mathur GP & Pamra SP

TI : An appraisal of different procedures of home visiting for reducing drug default - an interim report.

SO: INDIAN J TB 1977, 23, 107-109.

DT: Per

AB: The study was conducted to determine if homevisiting made any difference in the regularity of drug-taking, in the domiciliary treatment area of the NDTC. All cases of pulmonary TB in this area were included in the study. Every patient's home was visited once, within one week of starting treatment, to give routine advice, motivate and confirm that the patient was a bonafide resident of the area. Thereafter, the patients were randomly allocated to three groups based on certain criteria. The regularity in drug collection was defined as:

$$\frac{\text{Drugs collected any period}}{\text{Drugs which should have been collected}} \times 100$$

The interim analysis of the data shows that home visiting definitely helps to reduce default and increase the regularity of drug collection. Whether the policy of "Preventive" visiting pays better dividends than retrieving defaulters still remains to be seen.
KEYWORDS: DEFAULT; HOME VISIT; INDIA

208

AU: Khanna BK & Srivastava AK

TI : Drug default in tuberculosis.

SO: INDIAN J TB, 1977, 24, 121-126.

DT: Per

AB: Out of a total of 400 cases, only 272 cases could be followed up during the last 1 year in Kasturba TB clinic Lucknow. Of these, 112 patients defaulted 210 times during a period ranging from 4 months to 1 year. 82 cases were "lost". The causes of default and their remedy have been discussed. The implementation of the urban TB control programme in the city of Lucknow is considered essential to minimise this problem.
KEYWORDS: DEFAULT; INDIA.

209

AU: Sharma SK, Patodi RK, Sharma PK & Mittal MC

TI : A study of default in drug intake by patients of pulmonary tuberculosis in Indore.(MP).

SO: INDIAN J PREV & SOC MED 1979, 10, 216-221.

DT: Per

AB: To examine the problem of default in drug intake, a study of 320 patients with pulmonary TB and who were taking treatment at home from the domiciliary section of the TB Clinic in Indore, (Jan. 1969 - June 1970), was undertaken. Of 320 patients, 182 (56.2%) were defaulters. Sixty-six of these defaulters could not be studied for various reasons. Age and gender did not affect drug default while socio-economic factors such as caste, literacy status, social status and family system proved highly significant to default behaviour. Default was common in the joint family system, perhaps, due to lack of individual care when many members shared a common economy. Many defaults were due to family events, typically, births, deaths and marriages. Other important reasons for default were the patients' feeling of having got well, toxicity of drug and carelessness, ignorance, financial difficulty and non-availability of drugs in TB Clinic. Suggestions to overcome the default problem include improving the general standard of living, eliminating poverty, illiteracy and backwardness, increasing patients' awareness of the gravity of the disease and the need to take regular treatment, providing facilities for patients to continue domiciliary treatment under the supervision of the nearest medical center after initial check-up at the District TB Clinic, to avoid a long journey and expenses.

KEYWORDS: DEFAULT; SOCIO-ECONOMICS; INDIA.

210

AU: Addington WW

TI : Patient compliance: The most serious remaining problem in the control of tuberculosis in the United States.

SO: CHEST 1979, 76, 741-743.

DT: Per

AB: In the United States, failure to comply with appropriate anti-TB chemotherapy is the most serious remaining barrier to the control of TB. Studies on patient compliance can be separated into a number of categories, yet, very little exists that is useful in overcoming the problem of non-compliance. A health belief model (Becker 1974) has been developed that contains the patient's perception of susceptibility to and severity of his/her illness and, the costs and benefits of the recommended treatment. It was found that patients often report that they stop taking their medicine as soon as they feel better, a crucial phenomenon in the patient's non-compliance. The author's perception was that non-compliance represented self-destructive forces in the patient that were poorly understood by both the patient and the health care provider. Examples of such destruction were evident even within the health belief model. Data from reports on TB patients who completed their chemotherapy, received within 24 months by the Center for Disease Control, USA, revealed that approximately 23-31% of newly-diagnosed TB patients did not complete their chemotherapy within 24 months and, this result extrapolated for all patients in the US, led to an estimated 7,130 - 11,512 non-completers for the years 1970-1975.

Experience at Cook County Hospital in Chicago for 5 years is discussed in detail. The study, here, concluded that directly supervised chemotherapy was the only possible solution to poor compliance in inner city TB programmes. Organising the supervision of therapy was more crucial than the type of regimen chosen. It was suggested that the cost of such initial therapy would be less as multiple hospitalizations and treatment failures could be prevented.
KEYWORDS: COMPLIANCE; USA.

211

AU: Crofton J
TI : Failure in the treatment of pulmonary tuberculosis : Potential causes and their avoidance.
SO: BULL IUAT 1980, 55, 93-99.
DT: Per
AB: There are a number of potential causes of failure in the treatment of pulmonary TB, but some are unimportant in practice. Criteria of failure are suggested. Default from treatment is the commonest cause of treatment failure. Various remedies are discussed. Common errors are outlined. In many countries, a major educational effort is needed to ensure that all doctors treating TB are aware of potential causes of failure and how they can be avoided. The only drug regimen which should be used are those which have been proved by large scale, controlled trials to give virtually uniform success. Knowledge of these regimens needs to be regularly updated.
KEYWORDS: DEFAULT; UK

212

AU: Sloan JP & Sloan MC
TI : An assessment of default and non-compliance in tuberculosis control in Pakistan.
SO: TRANS R SOC TROP MED HYG 1981, 75, 717-718.
DT: Per
AB: A study was conducted in a rural hospital in the Sind area of Pakistan, where the standard treatment was an 18-month course of isoniazid and thiacetazone, combined with PAS for the first three months. All patients were being treated for pulmonary TB although several also had orthopaedic, abdominal and neurological complications. The case notes of each of the 300 patients attending the TB Control Clinic at the hospital over a three-year period were studied. From this group, both attendance and default patterns were assessed. Sixty of these patients attending the clinic at the time of the study (Aug.-Sept. 1977) were individually assessed regarding compliance to the prescribed treatment. Compliant patients were compared with non-compliant ones. The results revealed a default rate of 66 percent and a compliance rate of 53 percent for PAS and 60 percent isoniazid measured by objective pharmacological tests. Suggestions were made for a change from the prescribed out-patient approach, to intermittent dose chemotherapy administered by health care workers in the community.
KEYWORDS: COMPLIANCE; DEFAULT; PAKISTAN.

213
AU: Snider Jr DE
TI : An Overview of Compliance in Tuberculosis Treatment Programmes
SO: BULL IUAT 1982, 57, 246-251.
DT: Per
AB: To solve compliance problems, they must first be detected by identifying patients who fail to keep appointments, identifying treatment failures, and identifying less overt forms of non-compliance by interviewing patients and performing pill counts and urine tests. To improve compliance, simple, specific instructions about the behaviour desired, must be given. If problems develop, the patients should be heard and obstacles to the desired compliant behaviour should be identified. The regimens to overcome these obstacles must be restructured and the support of family and friends elicited. Behavioural strategies such as verbal encouragement, tailoring, incentives, awards and contracts must be tried. Supervised therapy must be used whenever non-compliant behaviour persists. Institutionalization should be avoided whenever possible, but used if no other options remain. There are several methods of detecting non-compliant behaviour and a growing list of validated ways of improving compliance. Their judicious use can help prevent the additional cost, morbidity and mortality inevitably associated with poor compliance.
KEYWORDS: COMPLIANCE; MOTIVATION; SOCIAL BEHAVIOUR; USA.

214
AU: Teklu B
TI : Reasons for failure in treatment of pulmonary tuberculosis in Ethiopians.
SO: TUBERCLE 1984, 65, 17-21.
DT: Per
AB: This study was undertaken to determine the number of patients who started anti-TB treatment at the TB Centre in Addis Ababa, but never completed a full regular course for one year. There were 460 or 6 percent of all the TB patients that were treated for the disease in this period. The reasons for treatment failure were analyzed. Although the commonest cause of default was clinical improvement before completion of therapy, many of the reasons related to the socio-economic situation and cultural background in Ethiopia. Despite defaulting, there was sputum conversion to negative in 85 percent of these cases, which is a good result for unsupervised TB chemotherapy, in a country such as Ethiopia.
KEYWORDS: DEFAULT; SOCIAL BEHAVIOUR; ETHIOPIA.

215
AU: Chaulet P
TI : Compliance with anti-tuberculosis chemotherapy in developing countries.
SO: TUBERCLE 1987, 68, 19-24.
DT: Per
AB: The paper discusses various aspects of compliance with anti-TB chemotherapy in developing countries. The problem of definition of compliance in a developing-country context, the classification and consequences of non-compliance and the entity (ies) responsible for compliance are elaborated. A description of the direct methods (several

biological methods such as qualitative urine tests revealing the presence of isoniazid metabolites a day after drug is taken) and indirect methods of evaluating compliance such as monitoring patient attendance at the dates appointed for drug administration or receipt of drugs, is presented. Several steps are recommended to be taken to improve compliance in developing nations.
KEYWORDS: COMPLIANCE; ALGERIA.

216

AU: Reichman LB
TI : Compliance in developed nations.
SO: TUBERCLE 1987 (Suppl), 68, 25-29.
DT: Per
AB: The problems of compliance among TB patients are similar in developed and developing nations and the solutions are a little different. The reasons for non-compliance, the kind of patients in whom non-compliance is high, the problems in detecting compliance, patients' attitudes which affect compliance and suggestions to overcome these attitude problems are presented. Ways to reduce non-compliance include such means as providing SCC, directly administered therapy, providing all treatment medications only once daily, providing a fixed-dose combination of treatment drugs and, treating the patients on an out-patient basis.
KEYWORDS: COMPLIANCE; USA.

217

AU: Seetha MA
TI : Patients' compliance towards different drug regimens under District Tuberculosis Programme.
SO: NTI NL 1988, 24, 46-51.
DT: Per
AB: Today, treatment of TB has developed into the concept of "case-holding" which involves the health agency, the patient, his/ her family and the community for the completion of treatment by the patient. The drug regimen plays a relatively minor role in case-holding when compared with other factors such as the active participation of the patient, family and close friends, the attitude and behaviour of the health staff who offer the treatment and, a constant supply of drugs and their availability to the patient. The services offering the treatment play a major role in reducing drug-default which is a primary problem in case-holding. The drug-default pattern in different situations is listed and the reasons for drug-default are discussed under three categories, technical, organizational and, administrative and socio-psychological.
KEYWORDS: COMPLIANCE; INDIA.

218

AU: Geetakrishnan K

TI : Case-holding and treatment failures under a TB clinic operating rural setting.

SO: INDIAN J TB 1990, 37, 145-148.

DT: Per

AB: A retrospective cohort of 996 TB patients, between Jan. 1986 and Feb. 1987, diagnosed and treated at a rural TB clinic in 24 Parganas District of West Bengal, was analysed with regard to case-holding, treatment completion and failure to achieve a successful result vis-a-vis sputum-positive patients. The overall treatment completion rate was 67% and sputum-conversion among the bacillary cases was 57%. The study revealed that the treatment completion rate in the project area cases, who got home visits and remotivation in the event of a default in drug collection, was no better than that of non-project patients who merely got postal reminders. Treatment compliance rate was significantly better among those below 30 years of age and females when compared with older and male patients. Other study results were comparable to those obtained in a DTC TB clinic in urban conditions.

KEYWORDS: DEFAULT; CASE HOLDING; INDIA.

219

AU: Chuah SY

TI : Factors associated with poor patient compliance with anti-tuberculosis therapy in Northwest Perak, Malaysia.

SO: TUBERCLE & LUNG DIS 1991, 72, 261-264.

DT: Per

AB: A retrospective study of factors associated with poor patient compliance with anti-TB therapy was conducted in Taiping Perak, Malaysia. 219 patients were studied. Male patients and hospital referrals were significantly more likely to default. Patients with tuberculous lymphadenitis alone had a greater rate of default, but this just failed to reach significance ($0.05 < P < 0.10$). Six of 7 male hospital referrals with tuberculous lymphadenitis alone defaulted. Patients treated as out-patients from the start were more compliant. Housewives were also highly compliant. It was noticed that patients who defaulted tended to do so during early stages of treatment.

KEYWORDS: COMPLIANCE; MALAYSIA.

220

AU: Barnhoorn F & Driaanse H

TI : In search of factors responsible for non-compliance among tuberculosis patients in Wardha district, India.

SO: SOC SCI MED 1992, 34, 291-306.

DT: Per

AB: From September 1988 to February 1989, 52 compliant and 50 non-compliant TB out-patients who were prescribed anti-TB drug regimens were interviewed in Wardha District, India. Patients were compared by means of a questionnaire with previously fixed response options in order to identify the factors which were responsible for compliance and for non-compliance. Discriminant analysis demonstrated differences between completers and

non-completers on several health belief items, in particular, those regarding health motivation, the perceived severity of the disease, costs and benefits of the treatment regimen and self-efficacy. Compliers reported more physical symptoms at the onset of the disease, whereas more non-compliers mentioned a deteriorated health condition at the time of interviewing. Low associations were found between demographic and socio-economic variables and adherence, except for some indicators of income level. The relationship between presence of social support and co-operation with the treatment procedures was confirmed. An indication of an educational problem was the association between the compliance behaviour of a patient and his or her knowledge of specific aspects of the disease, the origin of TB and features of the drug regimen. Satisfaction with the health care provider contributed positively to the continuation of drug intake.
KEYWORDS: SOCIAL BEHAVIOUR; NON-COMPLIANCE; INDIA.

221

AU: Grange JM & Festenstein F
TI : The human dimension of tuberculosis control.
SO: TUBERCLE & LUNG DIS 1993, 74, 219-222.
DT: Per
AB: A case is made for devoting serious attention to the human element in reducing the world-wide incidence of TB. Poor patient compliance remains the principal cause of treatment failure in both developing and developed nations. Contributory factors to treatment failure include the lack of effective communication between national TB services and private practitioners, physicians' attitudes, behaviour and lack of understanding of cultural differences in patients' attitudes to TB, its diagnosis and therapy. Other local factors affecting compliance, the relationship between education and TB control and human factors that impact anti-TB programmes at the national and international levels are discussed.
KEYWORDS: COMPLIANCE; SOCIAL ASPECTS; UK.

222

AU: Sumartojo E
TI : When tuberculosis treatment fails: A social behavioural account of patient adherence.
SO: AME REV RES DIS 1993, 147, 1311-1320.
DT: Per
AB: The report provides an account of the research on patient adherence as it relates to the treatment and prevention of TB. It summarizes the literature on social and behavioural factors that relate to whether patients take anti-TB medicines and complete treatment and it suggests issues that require the attention of researchers who are interested in behavioural questions relative to TB. Several conclusions about measuring adherence can be drawn. Probably the best approach is to use multiple measures, including some combination of urine assays, pill counts and detailed patient interviews. Careful monitoring of patient behaviour early in the regimen will help predict whether adherence is likely to be a problem. Microelectronic devices in pill boxes or bottle caps have been used for measuring adherence among patients with TB, but their effectiveness has not been established. The use of these devices may be particularly troublesome for some groups such as the elderly, or precluded

for those whose life styles might interfere with their use such as the homeless or migrant farm workers.

Carefully designed patient interviews should be tested to determine whether they can be used to predict adherence. Probably the best predictor of adherence is the patient`s previous history of adherence. However, adherence is not a personality trait but a task specific behaviour. For example, someone who misses many doses of anti-TB medication may successfully use prescribed eye drops or follow dietary recommendations. Providers need to monitor adherence to anti-TB medications early in the treatment in order to anticipate future problems and to ask patients about specific adherence tasks. Ongoing monitoring is essential for patients taking medicine for active TB. These patients typically feel well after a few weeks and either may believe that the drugs are no longer necessary or may forget to take medication because there are no longer physical cues of illness. Demographic factors, though easy to measure, do not predict adherence well. Tending to be surrogates for other causal factors, they are not amenable to interventions for behaviour change. Placing emphasis on demographic characteristics may lead to discriminatory practices. Patients with social support networks have been more adherent in some studies and patients who believe in the seriousness of their problems with TB are more likely to be adherent. Additional research on adherence predictors is needed, but it should reflect the complexity of the problem. This research requires a theory based approach which has been essentially missing from studies on adherence and TB. Research also needs to target predictors for specific groups of patients.

There is clear evidence on adherence, culturally influenced beliefs and attitudes about TB and its treatment. Therefore, culturally sensitive, targeted information is needed. A taxonomy of groups and their beliefs would assist in the development of educational materials. Educational interventions should emphasize adherence behaviours rather than general information about TB or treatment. Further research is needed to define the social and behavioural dimensions of effective treatment and control and, creative programming must take advantage of the latest research.
KEYWORDS: SOCIAL BEHAVIOUR; CASE HOLDING; DEFAULT; USA.

223

AU: Menzies R, Rocher I & Vissandjee B
TI : Factors associated with compliance in treatment of tuberculosis.
SO: TUBERCLE & LUNG DIS 1993, 74, 32-37.
DT: Per
AB: The most important cause of failure of anti-TB therapy is that the patient does not take the medication as prescribed. To assess this problem, a retrospective review was conducted using medical and nursing records, of adult patients treated at the TB clinic of the Montreal Chest Hospital in 1987-88. In all, 352 patients were identified of whom 59 percent were judged to have completed therapy. Completion of therapy was recorded in 92 percent of those with culture-positive disease, 76 percent of those with active but culture-negative disease and 54 percent among the 300 prescribed preventive therapy ($p<0.001$). Compliance with preventive therapy was highest among those who had been in contact with an active case, and lowest among those identified through a workforce

screening survey (p<0.01). At the time of the first follow-up visit, patients identified to have suboptimal compliance were more likely to fail to complete therapy (p<0.001). Compliance was higher among those initially hospitalized, those assessed to have better understanding (p< 0.05), those prescribed 6-9 rather than 12 months of therapy (p <0.01), and those who returned for follow up within 4 weeks of initiation of therapy (p< 0.01). Compliance could be improved by enhancing patient understanding, closer follow-up and shorter therapy particularly, for those at lower risk of reactivation. Also, additional compliance enhancing interventions can be targeted to those patients with suboptimal compliance who can be accurately identified early in the course of therapy.
KEYWORDS: COMPLIANCE; DEFAULT; CANADA.

224

AU: Pozsik CJ
TI : Compliance with tuberculosis therapy.
SO: MED CLIN NORTH AM 1993, 7, 1289-1301.
DT: Per
AB: Historical evidence of non-compliance of TB patients is described to stress that non-compliance is a persistent and significant problem faced by health professionals. While there is no positive predictor of compliance, certain behavioural patterns have been identified as predicting compliance. A description of the groups exhibiting such behavioural patterns, identified from experience, are described. They include previous treatment failures, substance abusers, those with mental, emotional and physical impairments, persons comprising health workers and professionals who ought to be the most trustworthy, those who are blatantly honest (about not taking their medications even when intending to) or rebellious, persons who have failed on preventive treatment and where poor relationships have existed between the caregivers and the patients. Miscommunication because of the use of specialised technical vocabulary, cultural differences between patients and providers and institutional constraints on the forms of interaction that can take place, is a threat to any kind of personal interaction. A variety of strategies to deal with non-compliance including pill counts, urine testing for drugs or their metabolites, blood testing for the presence of anti-TB drugs and DOT are discussed. How to give DOT and problems faced in giving DOT are elaborated. Using various incentives and enablers to enhance compliance is recommended.
KEYWORDS: COMPLIANCE; USA.

225

AU: Bellin E
TI : Failure of tuberculosis control: a prescription for change.
SO: JAMA 1994, 271, 708-709.
DT: Per
AB: This article presents some studies to depict the dramatic increase in TB incidence in the United States due to its failure to co-ordinate the medicare care provision, disease surveillance and societal will to consistently provide TB therapy and monitor TB control. The author considers that the collective apathy has led to increase in multi-drug resistance. Using incidence rates to track TB (thus failing to track the completion of

therapy) and, having no systematic national reporting of completion rates are regarded as evidence of institutionalised apathy. Maintaining a prevalence registry is administratively labor-intensive, therefore, it is suggested that local health departments must enter data into computers as reports arrive rather than perform batch entry, three months later. Generating monthly reports for field workers identifying non-compliant patients or non-reporting physicians, offering non-compliant patients, DOT, education and appropriate incentives are other steps to curb TB. Having automated laboratory surveillance of antibiotic susceptibilities of mycobacterial isolates is essential to produce timely reports to enable physicians to adjust their prescribing practices, to facilitate outcome research, to suggest useful regimens for study and allow for the creation of infrastructure necessary for organising countrywide clinical therapy trials.
KEYWORDS: COMPLIANCE; DEFAULT; USA.

226

AU: Wilkinson D
TI : High-compliance tuberculosis treatment programme in a rural community.
SO: LANCET 1994, 343 (March), 647-648.
DT: Per
AB: A community-based TB treatment programme of fully supervised, intermittent (twice weekly) ambulatory (SIAT) treatment, in Zululand, S. Africa, is described. The area served was about 3,000 sq. kms. and 200,000 people who lived in scattered kraals. SIAT points were designated, starting with clinics and community health workers, and involving stores, tea rooms, schools and other non-health care sites as need arose. All patients, including children, were offered SIAT and the only indication for hospital admission was severe illness. Each patient was allocated a supervisor of his/ her choice and the emphasis was on the convenience of the patient, not the health service. All patients were transported to their supervisor who was given a 6-month supply of treatment for the patient. Verbal and written instructions were given to all supervisors, who were asked to watch the patient take the medication and then sign the TB card which they retained. The TB health worker visited each supervisor monthly, checked compliance, only visited patients if there was a problem with compliance, and attempted to trace defaulters. Most of the patients who absconded and were not traced had left the area in search of work. Over the study period, only one store refused to supervise a patient, and over 60 different stores were used. Non-health worker supervisors were unpaid.

The findings showed that 89% of surviving patients completed treatment under programme conditions. It was concluded that high completion of treatment rates were possible if services were well-structured, use an intermittent regime, utilise all possible community resources to ensure full supervision of treatment, and are regularly audited. Above all, the service must actively involve and be fully acceptable to the patient.
KEYWORDS: COMPLIANCE; AFRICA.

227

AU: Johansson E, Diwan VK, Huong ND & Ahlberg BM

TI : Staff and patient attitudes to tuberculosis and compliance with treatment: an exploratory study in a district in Vietnam

SO: TUBERCLE & LUNG DIS 1996, 77, 178-83

DT: Per

AB: The study, a collaboration between the National Tuberculosis Institute, Hanoi, Vietnam and the Karolinska Institutet, Stockholm, Sweden, was carried out in a district of Quang Ninh Province in North Vietnam.
To describe TB services, attitudes of staff and attitudes of patients considered as defaulters to TB treatment.

Two focus group discussions were carried out with staff at the district hospital. Ten defaulter patients were interviewed in their homes.

This exploratory study has revealed some important aspects of staff and patients' attitudes to TB and its treatment. TB is considered a 'dirty' disease, which mainly affects poor people. There is a tendency to avoid telling others about it. Obvious symptoms are explained as 'being over-worked'. A patient with TB feels 'less respected' by others. The social stigmatization leads to delays in seeking medical care, often only after self-medication: anti-TB drugs can be brought without prescription in various pharmacies. The patient's economic situation is also an important determinant of compliance and non-compliance. These factors need to be taken into consideration in TB control in Vietnam.
KEY WORDS: COMPLIANCE; HEALTH EDUCATION; ATTITUDES; SOCIAL BEHAVIOUR; VIETNAM.

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AU: Dick J & Schoeman JH

TI : Tuberculosis in the community: 2. The perceptions of members of a tuberculosis health team toward a voluntary health worker programme

SO: TUBERCLE & LUNG DIS 1996, 77, 380-83

DT: Per

AB: The setting is a voluntary health worker programme, in the Western Cape South Africa, utilizing volunteers to administer DOT to TB patients. This study describes the perceptions of health team members regarding the voluntary community health worker project. A qualitative, participatory research study utilizing focus groups.
TB was perceived by the health team to be a stigmatized disease causing some patients to be reluctant to be associated with the TB control programme. Despite the project's dedicated approach to case-holding volunteers expressed the need to develop skills in providing more comprehensive care. The volunteers appear to administer a more personalized service to TB patients and can bridge the gap between TB patients and the health agency. Sustained evaluation and support seem to be a vital tool in integrating a volunteer project into a health team approach. Its effectiveness appears to depend to a large degree on the people involved.
KEY WORDS: VOLUNTARY ORGANIZATION; SOCIAL AWARENESS; HEALTH TEAM; AFRICA.

229

AU: Rom WN & Garay SM

TI : Tuberculosis : Adherence to regimens and Directly Observed Therapy

SO: Tuberculosis, Little, Brown & Company, Boston, 1996, p. 927-934

DT: M

AB: Since chemotherapy first proved efficacious for TB, a significant number of patients have failed to complete an adequate course of therapy. An enormous research performed over the last 40 years has contributed greatly to our understanding of the complex nature of why patients fail to take their medication as prescribed. Despite our increased knowledge of such patient behaviours, modern medical practitioners, to date, have neither the means to identify in advance all patients who will fail to take their medication, nor the means to detect all those who are not taking their medication during the course of their therapy. In the case of a communicable disease such as TB, the well-being of the patient and the interest of the public health overlap. Physicians, in general, and public health officers, in particular, are charged not only with ensuring that individuals are adequately treated so that they may be cured of their disease, but health care professionals are legally obligated to ensure that adequate treatment occurs to protect the public from the threat of TB.

The authors have deduced six steps to optimize patient adherence which is termed as “Denver Model” The principles of using these steps would maximize the efficiency of DOT by eliminating as many barriers as possible and by creating a structure that readily locate the “lost” patient. They are: (i) Know the patient: Initial encounters with the patient should be used to aggressively gather information. The goal of these sessions should be to identify as many points as possible at which the patient connects with the community. (ii) Assign a case manager: Each patient should have one health care professional who is identified as a specific contact. If at all possible, this contact should have fluency in the patient’s first language; if that is not possible, the contact should arrange for an adequate translator to be present for sessions with the patient. Ideally, the case worker and patient will establish a sound and stable therapeutic relationship. (iii) Establish inducements and enablers: Many patients with TB are afflicted with numerous social ills in addition to their disease. Homelessness, hunger, and substance abuse can make TB seem the least of their worries; thus, adherence to medication assumes a low priority. If the TB clinic can meet some of the patient’s other needs, contact with the clinic assumes a higher priority, and the likelihood of adherence to therapy is much greater. The use of “enablers” has also been advocated. Enablers are services that remove barriers to the patient’s participation. For a patient without transportation an enabler might be a bus token or a taxi voucher; for a mother it might be child care so that she can come to the clinic. All of this sounds expensive, but the ultimate total cost of inducements and enablers is far less than the cost of inpatient care in the case of the patient who fails these outpatient efforts, not to mention the cost of caring for the additional cases that will result from failure to treat. (iv) Be flexible: Every attempt should be made to accommodate the patient’s needs and schedule. Whenever possible, reliable contacts in the community should be identified so the patient can get medication 24 hours a day. (v) Involve community workers: Part-time employment of reliable members of the patient’s community can prove invaluable. Ideally, this would be an individual who knows the patient and the patient’s neighbourhood, someone who could quickly locate the patient if he/she failed to show for an appointment and who could determine the reason for the missed appointment as well as administer the missed dose. (vi) Issue an order of quarantine: Patients

should clearly understand that their adherence to medical therapy is legally mandated and is offered in lieu of physical quarantine. The patient should receive an order of quarantine that clearly explains this and makes clear that failure to present for medication doses may result in incarceration for the duration of therapy.

Nearly thirty years of experience with the direct observation of antituberculous chemotherapy in Denver have proven these to be effective measures. Each case of TB in Denver County is treated with impartiality. Every patient with TB received DOT and no exceptions are made.
KEY WORDS: CASE HOLDING, DOTS, ADHERENCE; USA

230

AU: Sophia Vijay, Balasangameshwara VH & Srikantaramu N

TI : Treatment dynamics and profile of tuberculosis patients under the District Tuberculosis Programme (DTP) – A prospective cohort study

SO: INDIAN J TB 1999, 46, 239-249

DT: Per

AB: A prospective cohort study among new smear positive pulmonary TB cases initiated on SCC was undertaken in Kolar district of Karnataka. The objective was to study the treatment outcome and patient profile of treatment adherent (completed) and non-adherent (lost) patients. Data collection was done through interviews based on pre-tested structured schedules, soon after diagnosis and at the end of treatment. Of the 224 available patients in the cohort, 120 (53.6%) completed treatment, 68 (30.4%) were lost, 29 (12.9%) died and 7 (3.1%) migrated outside the district.

Persistence of cough at the end of treatment was significantly more among lost patients. The general profile of the patients, relating to socio-economic, demographic, literacy and employment details did not differ significantly between the 2 subgroups. However, the treatment related factors like distance from health centre, knowledge of treatment duration, advice on treatment given after diagnosis, payments made to staff and for tonics were significantly more among patients lost to treatment. Raising of money to meet the expenditure, particularly through selling of valuables too was proportionately more among lost patients. Defaulter retrieval action was not taken for more than 85% of all eligibles, both among completed and lost groups. The reasons for non-adherence to treatment as emerged from the study are mainly related to the treatment organization.

The study results emphasize the need to strengthen the treatment organization to achieve the desired treatment outcome. This would also be essential for a successful implementation of DOTS strategy.
KEY WORDS: COMPLIANCE; COHORT STUDY; CASE HOLDING; INDIA.

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AU: Kumaresan JA, de Colonbani P & Karim E

TI : Tuberculosis and health sector reform in Bangladesh

SO: INT J TB & LUNG DIS 2000, 4, 615-621

DT: Per

AB: Bangladesh is the most densely populated country in the world, with 122 million people. In spite of many challenges such as poverty, illiteracy, political instability, natural disasters, the national population and health programmes have made significant progress in the recent decades. In 1977, the annual incidence of all TB was 246 / 100,000 population; death due to TB was 68,000 in the whole country. The annual risk of infection was estimated to be 2.2% with an annual decline of 1%. In 1965, the TB services were organized into 44 TB clinics and 12 TB hospitals situated in different districts of the country.

In 1975, the health and population sector, with the international assistance had been successfully implemented, but the philosophy of fourth population and health project (FPHP) was project oriented and had several weaknesses i.e., centralized authority, delays in fund release, etc. In 1998 the GOB changed its policy to sector wide management known as Health and Population sector programme (HPSP). This involves strengthening the management capacity of the Ministry by integrating the two wings of health and population control. The reforms were made to address the inefficient, fragmented and duplicated services provided by the project oriented approach. The essential service package will receive 60% of the total funds. The five areas identified are reproduction, child health care, communicable disease control, curative care and behaviour change communication. TB & leprosy services were identified as important programmes within the communicable diseases.

The NTP organized within the FPHP provided effective TB control services within the existing health care system in Bangladesh. In 1992, Government of Bangladesh (GOB) adopted the WHO recommended World Bank sponsored DOTS programme. Will the integrated approach in fifth HPSP, the priority and commitment given to TB will be sustained? Having reached high cure rates, the NTP needs to reach out to private practitioners and other academic institutions. This needs monitoring of the changed strategy and reformed sectoral approach through indicators such as case detection and cure rates. Many challenges are foreseen in the transition period of implementation of HPSP. The essential programmes should be further integrated for their sustainability and participation by the NGOs, community and the private practitioners should be strengthened.

KEY WORDS: DOTS STRATEGY; PRIVATE HEALTH SECTOR; BANGLADESH

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AU: Chee CBE, Boudville IC, Chan SP, Zee YK & Wang YT.

TI : Patient and disease characteristics, and outcome of treatment defaulters from the Singapore TB control unit – a one-year retrospective survey

SO: INT J TB & LUNG DIS 2000, 4, 496-503

DT: Per

AB: The annual incidence of TB cases among Singapore residents fell steadily from 306 per 100,000 population in 1960 to 56/100,000 in 1987 but has since remained at between 50 and 55/100,000. One of the possible reasons for this non-decline may be persistence of

transmission of TB in the community due to delayed diagnosis, treatment and ineffective case holding.

Compared to non-defaulting patients as controls, defaulters were mostly non-Chinese, and those live on their own or with friends. There was no significant association of defaulting with age, sex, marital or employment status, disease characteristics, or treatment-related factors. Seventy per cent defaulted during the continuation phase of treatment.

The study was a retrospective patient record based case control study conducted in the TB Control Unit (TBCU), Singapore. This being the main treatment centre, which treats about 50% of the cases was the venue of the study. The objectives were to: (i) identify any demographic, social, disease or treatment-related characteristics which may be predictive of patients defaulting from treatment; (ii) assess the effectiveness of home visits as a means of defaulter recall; and (iii) ascertain outcome in these patients. TB treatment defaulters were defined as the patients who missed their scheduled appointments and required a home visit to recall for treatment. Equal number of controls were randomly selected from non-defaulting patients who started treatment on the same dates as the defaulters. Majority of the patients were supplied drugs for self-administration at home and there were about 10% of the patients who were on DOTS during the study period.

Of the 44 treatment defaulters, 6 (13.6%) were contacted directly, 20 (45.5%) through a person at home during the visit and for 18 (40.9%) a recall letter was slipped through the door due to no contact with patient or any other person at home. Following home visits, 20 (45.5%) returned within 7 days. The treatment outcome was not very encouraging as only 19 (43.2%) completed treatment, 21 (47.7%) were not traceable, 1 was dead and 3 were hospitalized. However, of the 21 patients who were lost to follow-up, all except one had culture negative results. The study identifies the future prediction of default as those who were non-Chinese, living alone, male and had a previous history of treatment.
KEY WORDS: DEFAULT; CASE HOLDING; SOCIAL CHARACTERISTICS; HOME VISIT; SINGAPORE.

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AU: Liefooghe R, Suetens C, Meulemans H, Moran MB & De Muynck A

TI : A randomised trial of the impact of counselling on treatment adherence of tuberculosis patients in Sialkot, Pakistan

SO: INT J TB & LUNG DIS 1999, 3, 1073-1080

DT : Per

AB : In Pakistan, TB is a major health problem and is perceived as a stigmatised disease. Implementation of DOTS is limited to only few districts due to poor functioning of primary health care and inability to strengthen them before DOTS implementation. Bethania Hospital (BH) in Sialkot town of Punjab province in Pakistan is the acknowledged centre for treatment of TB patients since 1970. Still the major problem faced by BH has been poor compliance. Various alternatives to improve compliance were tried e.g., hospitalization for initial 6 weeks, introduction of SCC of 8 months, which had some improvement, but was not appreciable as SCC regimen had 12% initial defaulter and 34% of these put on treatment did not complete the treatment.

Keeping in view the social attitude and the health beliefs of the local people, it was decided to offer intensive counselling to improve treatment adherence. The objective of the study was to assess the overall impact of counselling on treatment defaulting and to identify sub-groups in which counselling was the most effective. The statistical design was a randomised controlled intervention trial. A total of 1019 adult TB patients were interviewed and taken into the study and the control group during full one year of 1995. Baseline data were obtained through semi-structured interviews by trained para-medicals of both genders and belonging to the same socio-economic background. Patients were followed until the end of treatment. The counselling was given at the start of treatment and at each subsequent visit for ambulatory patients, or weekly for hospitalized patients in the study group. The counselling, combined health education with strategies was aimed to strengthen the self-efficacy. Control group patients received the usual care. According to treatment policy, patients scheduled for SCC were advised to accept hospitalisation for the 2 months of intensive phase of treatment. Ambulatory patients mainly received a 12-month regimen. Of the 63% of patients who accepted hospitalisation, only 40% remained hospitalised for the full 2 months. The outcome measure was treatment default, cure, referral or death. Results showed that the default rate was 54% in the control and 47% in the intervention group; the default risk ratio was 8.7, implying a reduction in defaulting of 13%. Intensive counselling has a significant, although limited, impact on treatment adherence. The impact was stronger in women, ambulatory patients, re-treatment patients, women who worked at home, and patients who were not the main providers, those with poor knowledge of the disease or those with a short treatment delay. Counselling does not eliminate the need for closely supervised treatment but it is a useful additional strategy for improving treatment adherence. In the long run counselling has the potential to reduce the stigmatisation of TB patients. In countries like Pakistan, where the implementation of DOT is currently hampered by the absence of functional health infrastructure at the peripheral level, the combined strategy of counselling and family based DOT could offer a valid alternative to the immense and urgent problem of TB control.

KEY WORDS: COUNSELLING; INTERVENTION; COMPLIANCE; ADHERENCE; PAKISTAN

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AU: Connolly C, Davies GR & Wilkinson D

TI : Who fails to complete tuberculosis treatment? Temporal trends and risk factors for treatment interruption in a community-based directly observed therapy programme in a rural district of South Africa

SO: INT J TB & LUNG DIS 1999, 3, 1081-1087

DT: Per

AB : Several studies have been carried out on the community based DOT in a variety of settings. However, although some have been very large, most of them have been relatively small. The Hlabisa TB Control Programme in rural south Africa has used community-based DOT extensively since mid 1991. A detailed analysis of the data belonging from 1991 to 1996 is done to find out reporting trends in adherence, timing of treatment interruption and risk factors for failing to complete therapy. The study was carried out in a population of 2.1 lakh zulu speaking people who are mostly farmers, labourers and pensioners with middle income

and 69% literacy rate. HIV seroprevalence among adult TB patients increased from 36% in 1991 to 66% in 1997 and consequent to that annual case detection increased from 321 to 1250 by 1996. Of the 3610 surviving patients, 629 (17%) failed to complete treatment ranging from 11% in 1991-92 to 22% in 1996. Association of treatment interruption with age, sex, type of TB and HIV status was observed as follows: Age specific frequency distribution for treatment interruption was higher among those aged 25-34 years and significantly greater than among the patients aged 0-14 years and those aged 55 years and over. A similar age specific frequency distribution for treatment interruption was observed each year. Treatment interruption was higher in men than women. The interruption rate was similar among patients with smear positive pulmonary TB, smear negative and extra pulmonary disease. Treatment interruption was more frequent among patients known to be HIV infected (25%) than among those whose HIV status was unknown (17%) and those known to be HIV infected (12%). The pattern was observed each year and was unaffected by age or sex. The interruption of treatment among HIV infected and not tested for HIV patients was high when supervised by health worker. The interruption of treatment increased between 1991/92 – 1996 and was greatest among patients supervised at clinics. The single independent risk factor for treatment interruption was diagnosis between 1994-1996 compared with 1991-93 (odds ratio [OR] 1.9, 95% confidence interval [CI] 1.6-2.4). The second factor was known HIV- positive status versus known HIV-negative status (OR 1.8, 95% CI 1.4-2.4); supervised by village clinic with community worker (OR 1.9) and male versus female (OR 1.3). In conclusion, adherence to therapy in a community with high caseload, migration remains a challenge even with the community based DOTS.
KEY WORDS: DOTS; TREATMENT INTERRUPTION; COMMUNITY CARE; COMPLIANCE; SOUTH AFRICA

No. of Records: 36