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

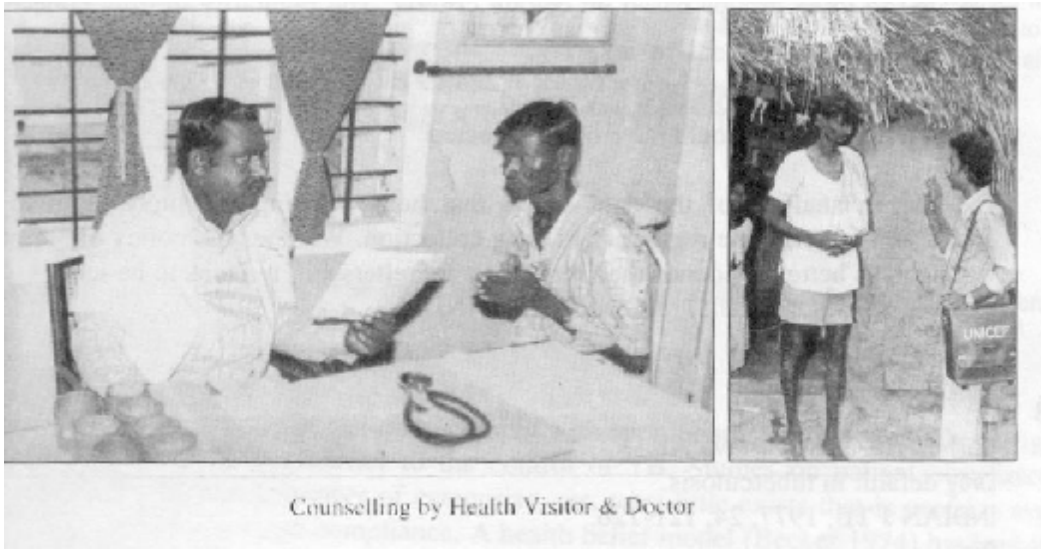
TI : A follow-up study of patients of pulmonary tuberculosis treated in an urban clinic.

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.

228

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.

231

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

232

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.

233

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

234

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

b. Measures To Improve Treatment Adherence

235

AU: Kessler AE
TI : Changes affecting community health education practice since 1944.
SO: BULL IUAT 1960, 30, 486-493.
DT: Per
AB: The control of TB and its eventual eradication throughout the world will be slow if clinical and epidemiological procedures alone are used. However, if the health education process is added at the administrative level, and sufficient qualified health education specialists engaged, the eradication may proceed more rapidly. More people will assume greater responsibility for their own health protection, local communities will show stronger leadership for their own health programs and, public health and TB services will be strengthened. Health education practice has met the demands of the period since the major change in TB therapy was instituted in 1944.
KEYWORDS: HEALTH EDUCATION; USA.

236

AU: Mathur KB
TI : Health education in tuberculosis.
SO: Tuberculosis and Chest Diseases Workers Conference, 17th, Cuttack, India, 31Jan-3Feb 1961, p. 108-116.
DT: CP
AB: All public health programmes are for the benefit of the public and their success depends on public co-operation and, voluntary participation is hard to obtain even in programmes for its good. The purpose of health education is to resolve this paradox by concerning itself with the task of bringing about a change in knowledge, feelings and behaviour of the people so that practice of healthy living and participation in health programme can be ensured. Twelve basic principles of health education in TB, to achieve this purpose, are listed.
KEYWORDS: HEALTH EDUCATION; INDIA.

Health Education

Health Education

237

AU: Selvapathy VS

TI : Effect of financial incentive on attendance of tuberculosis patients receiving supervised twice-weekly treatment in an urban clinic.

SO: National Conference on Tuberculosis and chest Diseases, 26th, Bangalore, India 3-5 Jan 1971 p. 325-327

DT: CP

AB: From the limited experience gained in the treatment of patients in an urban clinic, it is found that offering of financial incentive to patients to promote regularity of attendance is a rewarding procedure in the out-patient treatment of pulmonary TB. If funds permit such a scheme is worth a trial to reduce the defaulter rate and to ensure regularity of supervised drug administration, especially in the early phase of chemotherapy.
KEYWORDS: SOCIAL WELFARE; INDIA.

238

AU: Sen PK & Sil AK

TI : Regularity of treatment in rural clinic - Influence of tape-recorded exposure.

SO: National Conference on Tuberculosis and Chest Diseases, Bangalore, India, 2-5 Jan 1971, p. 86-95

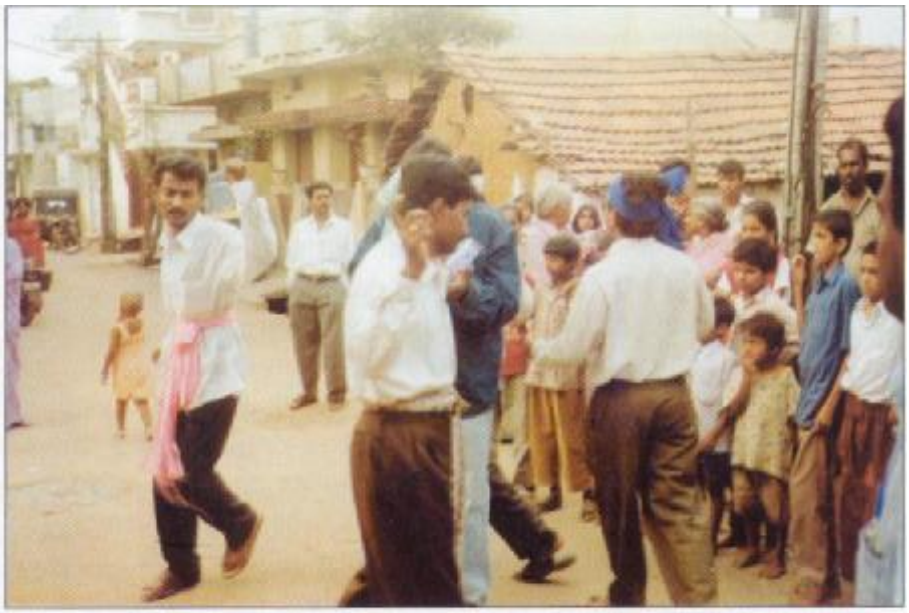
DT: CP

AB: Impact of health education, specially, in regard to domiciliary chemotherapy, by exposing the patients to a tape-recorded message in a rural TB clinic, was evaluated. The measure appeared to have signficantly improved self- administration of the drugs as assessed by tape and post-tape regularity of chemotherapy of the patients. (From 28 pre-tapes in 1965 to 72 post-tapes in 1969). The measure also appeared to have improved knowledge in other aspects of TB as found by a comparative study of answers to questions between a group of tape-

exposed tuberculous patients and another group of not exposed non-tuberculous persons on taped and untaped questions (on untaped questions, the difference was only 1.5 to 1, whereas on taped questions, this ratio was 18 to 1). It was therefore concluded, as a staff, time, and cost-saving measure, taped or gramophone recorded messages played at the clinic may prove of great educative value, specially for clinics serving predominantly illiterate patients.
KEYWORDS: DEFAULT; MOTIVATION; HEALTH EDUCATION, COUNSELLING; INDIA.

239

AU: Radha Narayan & Pramilakumari S
TI : A model for motivation of tuberculosis patients under the National Tuberculosis Programme.
SO: NTI NL 1972, 9, 20-22.
DT: Per
AB: The paper emphasises the necessity for research on motivation, particularly, in the context of the NTP, to achieve the goal of getting TB patients to remain sufficiently long on treatment. For any such study, motivation needs to be viewed as a psychological process wherein various social, cultural and situational factors, either singly or in combination may influence motivation and thus, the patient's behaviour, leading to regular or irregular patterns of treatment. The definition of a motive and its characteristics are presented in a model. The application of the model, explained in terms of the DTP, provides a broader focus in motivational research than the current, limited scope described in the DTP manuals. Viewing motivation as a psychological process allows for the identification of some of the patient's intrinsic factors, the external factors in the patient's environment and the factors pertaining to health institutions that could be manipulated for effective motivation. Therefore, the model can serve to make the NTP's motivational research efforts, comprehensive.
KEYWORDS: MOTIVATION; INDIA.



Community Health Education

240

AU: Radha Narayan

TI : The need to have a health education component for the National Tuberculosis Programme.

SO: NTI NL 1977, 14, 6-19.

DT: Per

AB: This paper describes the need for a Health Education Component in the NTP. The potential achievement of the programme activities viz., prevention, case finding and treatment has been established by studies conducted by the NTI. Corrective measures to achieve the potential would no doubt have to tackle all the three constituents of the programme viz., objectives, activities and resources. However, incorporation of a health education component in the crucial activities of the programme would help, where, under-achievement is due to the lack of knowledge and proper attitude both on the part of the patient and the health worker. In order to evolve an effective methodology, the goals of the health education component should be synchronised with those of the programme. While the health education aspects in the case-finding and treatment activities can be incorporated at health institutions and on an individual or group basis, education for the preventive activities has to be on a mass or community basis. While the nucleus of the community education should be on BCG vaccination, the mass media could be utilised for the overall TB education in the general population. Thus, there is scope for employing a variety of material, methods and media of health education in the NTP.

KEYWORDS: HEALTH EDUCATION; INDIA.

241

AU: Sbarbaro JA

TI : Compliance: inducements and enforcements.

SO: CHEST 1979, 76, 750-756.

DT: Per

AB: Laws found in almost every community make it clear that those involved in treatment of TB not only should but must concern themselves with patient compliance. Successful inducements and enforcements fall into three categories: 1) Changes in the health delivery system (example, elimination of long waiting hours, ease of access to treatment facilities), 2) Patient / Professional relationships - educational intervention and behaviour modification (example, incorporating the use of prescription drugs into some part of the patient's daily routine, establishment of a long term, one-to-one relationship between the patient and professional), 3) Direct administration of medication. There is increased recognition and demonstration that oral medications, when administered in above normal dosages, also have a prolonged duration of action, leading to the formulation of treatment regimens that allow the treatment of patients on an out-patient basis. The estimation of cost of treatment, illustrated for Denver city, Colorado, USA, demonstrates that when compared to the minimum costs associated with standard regimens, the maximum costs of a directly administered ambulatory programme are still less. More importantly, the compliance problem is eliminated when medications are directly administered. The use of a medication monitor of the type suggested by Tom Moulding would permit the early detection of potential non-compliers. DOT is

successful because patients quickly accept their part of the arrangement - freedom in exchange for co-operation.
KEYWORDS: COMPLIANCE; USA.

242

AU: Aneja KS, Seetha MA, Hardan Singh & Leela V
TI : Influence of initial motivation on treatment of tuberculosis patients.
SO: INDIAN J TB 1980, 27, 123-129.
DT: Per
AB: The effect of initial motivation on pulmonary TB patients in terms of regularity of drug collection and pattern of default for three months was studied at LWTDTC, by adopting three different schedules of motivation: (i) motivation as per routine procedures of DTP, (ii) issue of simple brief instructions only and, (iii) motivation with reduced contents and with change in sequence of points. The patients without history of previous treatment were randomly allocated to these 3 groups. All the three groups were similar in respect of age and sex composition, sputum status, extent of disease, duration of symptoms, education level and the distance that the patient had to travel for collection of drugs. However, there were more housewives in Group II.

The findings of the investigations were: Sixty nine patients (49.6%) of the 139 patients in Group I, 60 of the 126 (47.6%) in Group II and, 67 of the 142 in Group III (47.2%) had made all the three collections. On the whole different schedules of motivation did not significantly affect the behaviour of the patients in making all the three monthly collections. However, patients in Group II with simple instructions were more regular and made less number of defaults. There was also a suggestion that sputum negative patients required more than mere instructions. The best response in such cases was in Group III, wherein motivation was neither very elaborate nor very brief and in which sequence of points was so arranged that stress on important points was laid early enough to remain within the recalling memory of the patients.
KEYWORDS: MOTIVATION; INDIA.

243

AU: Seetha MA, Srikantaramu N, Aneja KS & Hardan Singh
TI : Influence of motivation of patients and their family members on the drug collection by patients.
SO: INDIAN J TB 1981, 28, 182-190.
DT: Per
AB: A controlled study was conducted at LWTDTC, Bangalore, among 250 randomly selected urban patients of pulmonary TB of whom 155 were in the 'motivation' group and 95 were in the 'control' group. In the motivation group, patients were interviewed by NTI Health Visitor and motivated by LWC staff; a month of drugs (TH) were given. Within 3 days of initiation of treatment they were motivated along with their household members during home visit by NTI staff every month for a period of three months. Control group patients were motivated at the clinic as per the programme guidelines.

In the motivation group, 59.9% of patients had made all the three collections during the first three months compared to 27.8% in the 'control' group. During the remaining months also the drug collection was 47% and 35.6% respectively. The drug collection pattern among the patients in the motivation group was found to be better than among the patients in control group who did not have the benefit of home visiting. Sputum conversion was also found accordingly better among the motivation group as compared to control group.
KEYWORDS: MOTIVATION; INDIA.

244

AU: Seetha MA & Aneja KS
TI : Problem of drug default and role of 'Motivation'.
SO: INDIAN J PUBLIC HEALTH 1982, 36, 234-243.
DT: Per
AB: The paper stresses the need for an interdisciplinary approach to the study of drug default among TB patients and presents several studies to discuss the role of motivation in reducing drug default, underscoring the importance of using an action-oriented definition of default. One study, conducted by the NTI, determined the number of defaults and the collection at which default occurred through a retrospective analysis of treatment cards. Analysis of the data collected from 2,419 patients showed that a large proportion of patients, whether they visited the (DTC - specialised institutions) or the Rural PHIs (GHIs), dropped out immediately after starting the treatment. Another study, on the influence of initial motivation, was conducted among adult patients newly diagnosed at the Bangalore LWTDTC. Three types of motivational contents for verbal communication were developed and a total of 407 patients were randomly distributed into three groups. The third study determined the influence of patient and family motivation on the drug collection of TB patients, using 250 newly diagnosed cases of TB at LWTDTC. It was concluded from the three studies that age, sex, education and occupation of the patients did not influence the drug collection pattern. Different schedules of motivation with variable quality of contents and, changed sequence of points did not appreciably affect the TB patients' behaviour. Sputum-positive cases needed strong and more effective motivation compared to sputum-negative ones. Family motivation had a positive influence on the patients' drug collection pattern.
KEYWORDS: MOTIVATION; DEFAULT; INDIA.

245

AU: Shukla K, Singh G, Jain SK, Agarwal RC & Singh M
TI : Impact of extra motivation among tuberculosis patients on the duration of their unbroken drug continuity- An approach.
SO: INDIAN J MED SCI 1983, 37, 23-39
DT: Per
AB: A prospective study was carried out to assess the impact of extra motivational efforts on the duration of unbroken drug-continuity in a cohort of 150 randomly selected TB patients undergoing anti-TB unsupervised domiciliary treatment at S.R.N. Hospital, M.L.N. Medical College, Alahabad. The contribution of extra-motivational efforts along with that of some

other socio-economic characteristics of the patients, was obtained by the use of multiple regression analysis. It revealed that if monthly additional efforts of extra-motivation are made, devoting 15-20 minutes only in terms of explaining to the patient about the necessity and importance of regular and complete treatment, the average duration of unbroken treatment of a group of patients can be increased by as much as two months, a substantial gain from both curative as well as preventive aspects of any TB control programme.
KEYWORDS: SOCIO-ECONOMICS; MOTIVATION; INDIA.

246

AU: Arora VK & Bedi RS

TI : Motivation assessment scoring scale-its impact on case holding under National Tuberculosis Programme.

SO: INDIAN J TB 1988, 35, 133-137.

DT: Per

AB: Sixty freshly diagnosed bacteriologically confirmed cases of pulmonary TB were thoroughly motivated and success of motivation was assessed using a 10-point "Motivation Assessment Scoring Scale". The results of regularity of treatment in this group (group `A`) were compared with a comparable group of 60 patients (group `B`) motivated routinely at DTC, Shimla. Seventy percent of group A cases received at least 12 monthly collections regularly as compared to 40 percent in group B ($P < 0.05$). The need for using the Scoring Scale for assessing success of motivation, in order to achieve better case holding results, is discussed.
KEYWORDS: CASE HOLDING; MOTIVATION; SOCIOMETRY; INDIA.

247

AU: Cuneo WD & Snider DE

TI : Enhancing patient compliance with tuberculosis therapy.

SO: CLINICS CHEST MED 1989, 10, 375-380.

DT: Per

AB: The article lists the factors that influence compliance and presents, in detail, the action steps that may improve compliance with descriptions of studies to support several of the recommended actions. These action steps include: 1) Provide patient education at the time of diagnosis and periodically, throughout, treatment and follow-up, preferably in the patient's native language, 2) Provide incentives as simple as coffee and conversation in the clinic or as complex as providing food and shelter for a homeless patient, 3) Provide appointment-keeping reminders through mail, phone calls or in pictorial form for illiterate/ low literacy patients, 4) Tailor the regimen, 5) Encourage self-monitoring, 6) Negotiate a health contract (this can be done only with those patients who have a strong, positive relationship with their providers and with those who would feel more motivated when they must depend on, or be accountable to, another person), 7) Provide supervised therapy (especially useful in the first 8 weeks of treatment), 8) Follow-up on broken appointments, 9) Provide training for health care personnel on current TB treatment regimens and on compliance-enhancing strategies. A possible solution to dealing with the major problem of patients who do not go to clinics such as the homeless is to create a cadre of urban "barefoot" doctors (former homeless, students

etc.) to provide outreach services to the indigent as done by the Center for Disease Control, state and local health departments, Atlanta, Georgia, USA.
KEYWORDS: COMPLIANCE; USA.

248

AU: Niruparani Charles
TI : Influence of initial and repeated motivation on case holding in North Arcot district.
SO: INDIAN J TB 1991, 38, 69-72.
DT: Per
AB: Treatment default and premature discontinuation of treatment continue to be major constraints for the successful implementation of the NTP. In order to assess the influence of motivation in overcoming this problem and improving patient compliance, a study was conducted at three of the major centres, namely, DTC, Vellore, and general hospitals at Gudiattam and Vaniyambadi in Tamil Nadu. All new smear-positive patients initiated to treatment between October, 1987 and April, 1989 were admitted to the study. In all, 278 patients were motivated. There was an increase in treatment completion rate among patients who had motivation initially. This was more evident in patients who had repeated motivation.
KEYWORDS: CASE HOLDING; MOTIVATION; SOCIAL WORK; INDIA.

249

AU: Pramila P
TI : Importance of motivation in District Tuberculosis Programme.
SO: NTI NL 1991, 27, 74-77
DT: Per
AB: The article presents the definition and aim of motivation in the DTP, the types of motivation and the factors in effective motivation. It is concluded that motivation, whether direct or indirect, plays an important role in the TB programme strategy. Prevention of default is easier than retrieval of the defaulter. Motivation provided in a proper manner and with the proper perspective can help to minimise the defaulter problem. Every cured patient is a motivator to the community and has a snowballing effect on the improvement of NTP's performance.
KEYWORDS: MOTIVATION; INDIA.

250

AU: Gupta PR, Gupta ML, Purohit SD, Sharma TN & Bhatnagar M
TI : Influence of prior information of drug toxicity on patient compliance.
SO: J ASSOC PHYSICIANS INDIA 1992, 40, 181-183.
DT: Per
AB: The findings of the Fifth TB Association of India's SCC trial for the Jaipur Center were reanalysed. Sixty patients with pulmonary TB, who had not received any chemotherapy in the past, were divided into two groups. All the patients were put on isoniazid, rifampicin and pyrazinamide for 8 weeks followed by isoniazid and rifampicin for another 18 weeks. Group

A patients were informed of the likely occurrence of anorexia and /or vomiting but Group B patients were not. Routine and default retrieval home visits were given to ensure maximal drug compliance.

Drug toxicity-related early defaults were significantly less common in Group A patients (1 of 30) as compared to group B (6 of 30).
KEYWORDS: MOTIVATION; COMPLIANCE; INDIA.

251

AU: Hill JP & Ramachandran G
TI : A simple scheme to improve compliance in patients taking tuberculosis medication.
SO: TROP DOCT 1992, 22, 161-163.
DT: Per
AB: Compliance with prescribed treatment remains a major problem in the control of TB, worldwide. A simple method of improving patient compliance with hospital-based treatment is described. Eighty-two patients paid a deposit at the start of their treatment which entitled them to cheaper drugs and was refundable on completion of the prescribed course. Sixty-two percent of patients completed the course compared with 23 percent of retrospective controls. A direct relationship was found between the amount of deposit paid and the rate of completion. Reasons why poor patients (who paid a lower deposit) may default include lack of understanding of the need for prolonged treatment due to inadequate education, poverty or low-income, preventing travel to the hospital and/ or paying for consultation and medication. Using a short regimen (2RHZ/4RH) for those who have never had previous TB treatment (and are therefore, unlikely to have resistance) and offering a cheaper regimen (2RHZ/10TH) to poorer patients, provided three sputum samples are negative for AFB at two months, would benefit even defaulters. It is recommended that similar schemes be assessed elsewhere.
KEYWORDS: COMPLIANCE; UK.

252

AU: Saroja VN & Rangachari S
TI : Motivation of tuberculosis patients.
SO: NTI BULL 1993, 29, 10-12
DT: Per
AB: In the context of domiciliary treatment for TB patients, the process of motivation starts from the time the patient enters a clinic for diagnosis or for drug collection. The doctor, the para-medical staff and significant others in the patient's environment also indirectly play a role in providing motivation. A number of points to be considered in motivating the TB patients are listed.
KEYWORDS: MOTIVATION; INDIA.

253

TI : Patient to patient motivation - an additional effort to improve compliance.

SO: Annual Report of TB Research Centre, 1993, p. 9-11

DT: AR

AB: A pilot study was initiated in 1990 to investigate the feasibility of patient-to-patient motivation by having a patient who had been regular for treatment to talk to a new patient. A controlled study was begun in 1991. Only those patients who were unsuitable for admission to the ongoing controlled clinical trial were admitted to the investigation. A stratified, random procedure was used to allocate patients to either routine motivation (motivation done by clinic staff only) and patient-to-patient motivation (motivation done by treated patients in addition to clinic staff, on admission and, at 1 and 4 months). Defaulter retrieval action was taken for both groups in accordance with the DTP manual. No home visits were made. Patients defaulting after retrieval actions for a month, were considered "lost." All 297 admitted patients completed six months of treatment. 281 patients remained for analysis (4 died and 16 had change of treatment). Forty percent (143) of 281 patients had more than 90% of treatment in both groups and nearly 60% of lost patients were in the first phase of treatment in both groups. The study revealed that patient-to-patient motivation did not result in any greater improvement in patient compliance.

KEYWORDS: MOTIVATION; COMPLIANCE; INDIA.

254

AU: Nagpaul DR

TI : Holistic health education: Editorial.

SO: INDIAN J TB 1993, 40, 107-108.

DT: Per

AB: The author emphasises the need to take a holistic approach to health education. In India, changes in the curricula of medical colleges have not gone far enough to change the prevalent focus on disease and the attitudes and practices that go with it. Some pragmatic social scientists have recognized that health education is needed, not only for the general public, but for health administrators and teachers of TB and chest diseases too, in order to change their behaviour. Therefore, they suggest that to generate additional felt need among the people, health education is needed only when the existing felt needs of the people have been met and there is surplus capacity left to meet the extra needs. This, then, is the need-based cutting edge of health education.

KEYWORDS: HEALTH EDUCATION; SOCIAL ATTITUDE; INDIA.

255

AU: Gaude G, Bagga AS, Pinto MJW, Lawande D & Naik A

TI : Compliance in alcoholic pulmonary tubercular patients - Role of motivation.

SO: LUNG INDIA 1994, 12, 111-116

DT: Per

AB: Four hundred and sixty eight newly diagnosed smear-positive pulmonary TB patients at the DTC, Goa Medical College, Goa, were studied on standard domiciliary therapy. 240 were suffering from alcoholism; 86.8 of non-alcoholics and 71.7 of alcoholic patients received full

drug therapy. 9.7 of the controls and 25 of the alcoholic group defaulted. Overall default rate was 20.1 in this study. Alcoholic patients do respond to intensive and repeated motivation and become more compliant.
KEYWORDS: COMPLIANCE, MOTIVATION; INDIA.

256

AU: Beyers N, Gie RP, Hchaaf HS, van Zyl S, Nel ED, Talent JM & Donald PR
TI : Delay in diagnosis, notification and initiation of treatment and compliance with tuberculosis.
SO: TUBERCLE & LUNG DIS 1994, 75, 260-265
DT: Per
AB: The mortality and morbidity from childhood TB may be influenced by the delay from the time of first symptoms until the start of and compliance with treatment. This study investigated these delay periods and the compliance with therapy in children with TB. During the study period in Cape Town, S. Africa, there were 49 children with probable and 123 with confirmed pulmonary TB (WHO criteria). The mean period from first symptoms until presentation was 4.3 weeks, from presentation until notification 5 weeks and from notification until therapy 0.9 weeks. Sixteen percent of children notified as having TB never received therapy. Significantly fewer children in the urban squatter communities received therapy than in urban settled (P = 0.02), rural agricultural (P = 0.0001) and rural settled (P = 0.09) communities. Twelve percent of the children did not complete their therapy. The delay in presentation ("patient delay") was shorter than the delay in diagnosis ("doctor delay"). Failure to trace children and to complete therapy was particularly likely to occur in urban squatter communities. Easier access to health care facilities may shorten the "patient delay", while greater awareness of TB and proper investigation of children may shorten the "doctor delay".
KEYWORDS: COMPLIANCE; DELAY; SOUTH AFRICA.

257

AU: Uplekar MW & Sheela Rangan
TI : Alternative approaches to improve treatment adherence in tuberculosis control programme.
SO: INDIAN J TB 1995, 42, 67-74.
DT: Per
AB: Non-adherence to treatment by patients is a major impediment, worldwide, in controlling TB. Failure of approaches attempted so far, in effectively tackling the problem of non-adherence, has led to the inclusion of directly observed or supervised chemotherapy as an essential element of the WHO's revised strategy for global TB control. Supervise chemotherapy has also been made the most important component of India's NTP being revitalized with the help of a loan from the World Bank and technical assistance from WHO. The reason for advocating supervised chemotherapy in India is the failure to ever achieve desirable cure rates, under a well designed NTP in operation for ever 3 decades. The demonstration projects of several NGO's, claiming success in achieving high cure rates, rarely provide hard data as evidence and their results are often considered anecdotal and unsuitable for wider application. This paper presents alternative approaches adopted by two NGO‘s providing services to large populations in different settings, one a most backward area of rural Gujarat and the other in

the slums of Bombay. Both organizations could ensure reasonably high levels of treatment completion and cure rates under field conditions. While the urban NGO used pre-registration screening and motivation as tools to ensure treatment completion and cure, the rural NGO successfully employed the services of the female anganwadi workers of the Integrated Child Development Services(ICDS) scheme. The reproducibility and wider applicability of some important elements of these approaches are discussed.
KEYWORDS: COMPLIANCE; CASE HOLDING; ADHERENCE; INDIA.

258

AU: Jagota P, Sreenivas TR & Parimala N
TI : Improving treatment compliance by observing differences in treatment irregularity
SO: INDIAN J TB 1996, 43, 75-80.
DT: Per
AB: The retrospective study aims at identifying a "risk group" among patients treated at the DTC & six PHIs in Kolar district of Karnataka state in order to focus on them for motivation and defaulter actions to improve case-holding. Since there were differences in the number of defaults made by the First Timers (who defaulted for the first time during the first month of treatment) and Others (who defaulted during the subsequent months), an in-depth analysis was undertaken to understand the behaviour dynamics of these two groups.

There were 231 First Timers and 141 Others. The analysis revealed that the First Timers had inferior results for all the parameters of case-holding. Mean Defaults Rate was 0.9 for First Timers & 0.7 for Others; Patients Lost to Treatment were 83% & 61%; Treatment Completion Rates were 25% & 59% and Bacteriological Conversion was 58.5% & 76.9% respectively. Inconsistencies observed in the rapidity of defaulter actions taken suggested a possible lapse in taking defaulter actions. Thus, First Timers could become predictors of default: They constitute the important target group for focussing intensive efforts to improve case holding, which is expected to improve to the extent of 30%.
KEY WORDS: COMPLIANCE; DEFAULT; ACTION TAKING; INDIA.

259

AU: Jochem K, Fryatt RJ, Harper I, White A, Luitel H & Dahal R
TI : Tuberculosis control in remote districts of Nepal comparing patient-responsible short-course chemotherapy with long-course treatment
SO: INT J TB & LUNG DIS 1997, 1, 502-08
DT: Per
AB: This study was conducted to evaluate the effectiveness of unsupervised monthly-monitored treatment using an oral short-course regimen in hill and mountain districts of Nepal supported by an international NGO. In this prospective cohort study, outcomes for new cases of smear-positive TB starting treatment over a two year period in four districts in which a 6 month rifampicin containing regimen was introduced as first line treatment (subjects) were compared to outcomes for similarly defined cases in four districts where a 12 month regimen with daily streptomycin injections in the intensive phase continued to be used (controls).

Of 359 subjects started on the 6 month regimen, 85.2% completed an initial course of treatment compared to 62.8% of 304 controls started on the 12 month regimen ($P < 0.001$); 78.8% of subjects and 51.0% of controls were confirmed smear-negative at the end of treatment ($P < 0.001$). The case fatality rate during treatment was 5.0% among subjects and 11.2% among controls ($P=0.003$). Among those whose status was known at two years, 76.9% of subjects were smear negative without retreatment, compared to 60.9% of controls ($P < 0.001$).

In an NGO supported TB control programme in remote districts of Nepal, patient responsible short course therapy supported by rapid tracing of defaulters achieved acceptable outcomes. Where access and health care infrastructure are poor, district-level TB teams responsible for treatment planning, drug delivery and programme monitoring can be an appropriate service model.

KEY WORDS: PATIENT RESPONSIBLE THERAPY; COMPLIANCE; NGO; NEPAL

260

AU: Rajeswari R, Chandrasekaran K, Thiruvalluvan E, Rajaram K, Sudha Ganapathy, Sivasubramanian S, Santha T & Prabhakar R

TI : Study of the feasibility of involving male student volunteers in case holding in an urban tuberculosis programme

SO: INT J TB & LUNG DIS 1997, 1, 573-75

DT: Per

AB: This paper reports the feasibility of involving unpaid National Service Scheme (NSS) male student volunteers in a city-based TB programme in supplying drugs and retrieving non-compliant TB patients. Twenty five students were selected after assessing their attitude and were trained on TB drug delivery, home visits and motivation of non-compliant patients. Twenty-three sputum positive patients identified in a medical camp were started on an 8-month SCC regimen. Students supplied the drugs on a weekly basis and defaulters were visited. The treatment completion rate was 83% and defaulter retrieval was 57%. All patients had sputum smear conversion by 2 months and one relapsed during the 24-month follow-up.

KEY WORDS: CASE HOLDING; STUDENT VOLUNTEERS; INDIA.

261

AU: Mangura BT, Passannante MR & Reichman LB

TI : An incentive in tuberculosis preventive therapy for an inner city population

SO: INT J TB & LUNG DIS 1997, 1, 576-78

DT: Per

AB: Measures known to improve adherence such as short course chemoprophylaxis and directly observed therapy can be enhanced to a significant extent by the use of incentives. Adherence to TB therapy is influenced by several factors, including the health care system, complexity of therapeutic regimens and patient's characteristics. Individual factors that negatively influence patient's adherence are the most difficult to counter. Preventive TB therapy is doubly challenging because the benefit of treatment is not felt, while toxicity from the

medication, when it occurs, is experienced immediately. Ingenious incentives therefore have to make it worth the patient's while. During a study on preventive regimens, a request for an incentive, Sustacal, was observed to help completion of preventive regimens. Components of individual TB programs may help in patient adherence; it is important for health care staff to identify these aspects and, if they are successful, utilize these as an incentive to complete treatment.
KEY WORDS: COMPLIANCE; INCENTIVE; ADHERENCE; USA.

262

AU: Jindal SK
TI : Anti-tuberculosis treatment failure in clinical practice
SO: INDIAN J TB 1997, 44, 121-24.
DT: Per
AB: This paper briefly highlights the factors responsible for treatment failure in clinical practice. The author has limited his discussion to the factors related to the physicians and drugs. The factors which influence the outcome of anti-TB treatment are classified as "intrinsic" - those related to the patient and "extraneous" - those which are not directly related to the disease or the mycobacteria, but influence the treatment outcome.

Prescription errors and drugs confusion are two important factors responsible for failure of treatment of TB. Both these factors are potentially preventable if greater inputs are made in programmes related to physician's education and drug rationalization.
KEY WORDS: DEFAULT; TREATMENT FAILURE; INDIA.

263

AU: Dick J & Lombard C
TI : Shared vision - a health education project designed to enhance adherence to anti-tuberculosis treatment
SO: INT J TB & LUNG DIS 1997, 1, 181-86
DT: Per
AB: Two adjacent Cape Town Local Authority health clinics in Cape Town, South Africa, were selected. Clinic A was designated the "intervention clinic" and Clinic B the 'control clinic'. To asses whether the combined strategy of a patient-centred interview plus the issuing of a patient education booklet would have the effect of increasing the adherence of notified pulmonary TB patients to prescribed treatment.

A controlled intervention study was implemented using a cohort of the first 60 consecutive patients notified with pulmonary TB at both Clinic A and Clinic B; the patient cohort thus consisted of 120 patients. The risk of patient non-adherence to anti-TB treatment was significantly reduced at the intervention clinic compared to the control clinic.

The results of this study indicate the need for further operational research to assist health providers in developing standardised protocols of health education to enhance adherence to treatment in patients who require protracted treatment regimens.

KEY WORDS: SOCIAL COST; COMPLIANCE; HEALTH EDUCATION; AFRICA.

264

AU: Pathania V, Almeida & Kochi A

TI : TB patients and private for profit health care providers in India

SO: WHO/TB/97. 233

DT: Per

AB: The paper reviews current understanding of the behaviour and interactions of TB patients and private for-profit providers, as a precursor to devising interventions for field testing to win over the private practitioners and private voluntary organizations to the DOTS strategy. India is a vast and heterogeneous country. The location of the study sites are New Delhi, Agra, Jaipur, Lucknow, Morena, 24 Parganas, West Bengal, Wardha, Bombay, Pune, Tumkur, Madras, Bangalore, North-east which indicate that the available information is representative of the whole country. Even then specific local peculiarity cannot be excluded. The study period ranged from 1976 to 1996, most of them carried out in the 90s. In few instances, the evidence was supplemented by interviews with knowledgeable experts who had first hand information of the issues being discussed. The findings of the review report are as follows: The prevalence of TB is highest among male adults, belonging to low socio-economic strata and tribals. The general public was found to be reasonably aware of the symptoms of TB. Chest symptomatics are being found to be 5-10% of the general population. The process of health seeking behaviour of a TB patient is complex and may well last several years. Most persons in India requiring curative treatment without hospitalization choose private providers. People go to the nearest trusted health care providers who is usually a private for-profit providers. The poor and even in hilly areas choose them. Private practitioners are perceived more sympathetic, more conveniently located, more effective and more trusted for privacy than government run services as having condescending doctors, substandard drugs, inconvenient opening hours and long waiting times. However, once patients had switched from private to government run providers, they become far more appreciative of government-run services, drugs and staff. TB patient's health seeking behaviour is dependent of their symptoms. About half of the TB patients seek help within a month, 50 to 80% from private for-profit providers. Diagnosis of TB is often delayed for weeks after first contact with a private provider. Almost 75% of smear positive patients found in the care of private doctors in mid-seventies were not being treated for TB. About half the patients continue treatment with the private providers who diagnosed the TB.

Most patients knew that they have TB even when the providers try to conceal this stigmatizing diagnosis. They knew that TB requires prolonged regular treatment. They start taking drugs, but loose interest after relief specially the low-income groups due to cost and inconvenience of taking drugs. With the passage of time, work and social commitments increasingly displace the chore of taking regular treatment. Even knowledge about consequence of irregular treatment did not prevent it. As their funds get depleted TB patients switch to government run services. The steady switching from private to government run services is not matched by switching from government-run to private providers. Except where DOTS is practiced, do not achieve consistent cure. With DOTS, 80% cure rate was demonstrated in pilot area while only 35% with standard regimen and 51.3% on SCC completed treatment in NTP. As implied by these events, long-duration patients accumulate in government-run services. Many TB patients believe that

TB carries a social stigma. Ex-TB patients are less likely than average to find marriage partners in West Bengal. Unmarried girls with TB fear that they might never find a spouse, those married fears divorce. Women are typically less well placed than men to ensure their own cure.

Out of pocket costs for diagnosis and successful treatment in India are estimated at between 100 and 150 US Dollars per patient as per 1992-1995 rupees dollar rates. However, individual out of pocket expenditure on TB treatment dwarfs the substantial sums expended by the government on the NTCP. However, private expenditures on private TB treatment, which are estimated to exceed USD 150 million per year, are typically rewarded by palliation rather than cure of TB.

Over-diagnosis and over-prescription among private for-profit providers are predictable. X-ray was found the test of choice to rule out TB, with sputum examination done in only 10 to 20% of suspects. Treatment regimens prescribed were of 4 drugs intensive phase with six months duration and were probably adequate to achieve cure. Most of them prescribed anti-TB drugs and also gave expensive diet supplements and alcohol based tonics.

Private practitioners generally keep no patient records. Half of them admitted that they made no attempt to contact patients who defaulted from follow up visits. Only 5% stated that sputum negative smears were desired to call it a cured case. TB patients do not form an important part of the business; only 1% of patients seeking care at qualified allopathic provider while one-third had no patients. TB Specialists might consider TB as an importantpart of their business. Government services are normally free, but waiting time, wages lost and drug unavailability impose costs and inconveniences. Spot checks revealed that more than 50% of PHCs had one or more TB drugs not available. Only 15% of the patients knew that the treatment is free in government clinics. On the whole, government-run health care services in India have a poor image. The private for-profit health care sector plays a major health care / system in India. In 1989, there were about 2,42,650 qualified allopathic physicians as compared to 88,105 in the government services. The number of recognised hospitals in private sector grew from 2,764 in 1983 to 4488 in 1987. The profile of a typical rural private provider in Uttar Pradesh was a 38 year old male, with about 10-12 years of schooling, practicing a mixture of western and professional medicines. Only 7% were qualified, while 90% learn the skills from family members, or as compounders, pharmacist or as doctor's assistants. Nearly all the rural practitioners sell medicines by margin added to the medications. About half of them were registered with some medical association.

Drug retailers in India consistently sell restricted drugs without requiring prescription. The legal and regulatory environment for health care in India is in a state of flux. On paper fairly well regulated but unregulated in practice. Consumer Protection Council (CPC) in India has taken an active role in pursuing cases of malpractice. However, CPC's role has been questioned by the IMA and Supreme Court ruling.

Some important gaps in information persist. There is no reliable estimate of the number, density and distribution of specialist clinics where TB might form a more important part of the case load. Several options for interventions have been identified. Excluding TB drugs from private channels such as in Algeria and Chile. Mandatory referral of TB patients to government-run services such as in Oman. To run high quality and low costs to patients.

Involvement of private providers in the programme by modifying the prescribing behaviour by academic counseling. In any case complete regular treatment and standardized monitoring promise a greater improvement than changes in prescribing alone.
KEY WORDS: COMPLIANCE; PRIVATE PRACTITIONERS; HEALTH CARE; PRIVATE SECTOR; INDIA.

265

Au: Jagota P, Balasangameshwara VH, Jayalakshmi MJ & Islam MM

TI: An alternative method of providing supervised Short Course Chemotherapy in District Tuberculosis Programme

DT: Per

SO: Indian J TB 1997, 44, 73-77

AB: The feasibility of involving 'Dai's' in supervised administration of an oral 6-month SCC regimen in DTP was studied in 2 districts. A concurrent comparison was made between the Dai Method and the present DTP procedure, called the PHI Method, in terms of treatment completion and cure rates at the end of treatment period. A total of 617 patients were observed; 332 in Dai method and 285 in PHI method. About 68% of patients in the Dai method and 33% in the PHI method took more than 75% of treatment in both intensive and continuation phases. The outcome in terms of smear negativity at the end of treatment period was 86.9% and 72.2% respectively. There were 17 (5.72%) deaths in the Dai method and 16 (8.5%) in the PHI method. Treatment completion and cure rates were significantly higher in the Dai method. It is concluded that Dais can be used for supervised drug administration in DTP for increasing the cure rates.
KEYWORDS: ADHERENCE, COMPLIANCE, DAIS; INDIA

Patient Education at Door Steps

266

Au: Jagota P, Sujatha Chandrasekaran & Sumathi G

TI: Follow-up of Pulmonary Tuberculosis patients treated with Short Course Chemotherapy through traditional birth attendants (Dais)
DT: Per
SO: Indian J TB 1998, 45, 89-93.
AB: The feasibility of improving adherence to and outcome of treatment among smear positive pulmonary tuberculosis patients by involving traditional birth attendants (Dais) in administering anti-tuberculosis drugs was earlier studied and 86.9% were reported to be cured, 5.72% had died and 7.38% had remained sputum positive, at the end of 6 months. The present study reports the status of those patients at the end of 2 years. Of the 288 patients eligible for follow up, 283 could be contacted through home visits and interviewed for the presence of symptoms and further treatment taken; if dead, the cause of death was ascertained from relatives. Two sputum specimens were also collected from the contacted patients for microscopy, culture and drug sensitivity tests. At the end of 2 years, 79.6% had remained relapse free 7.42% had relapsed and 3.53% remained sputum positive (chronic cases) while 8.5% had died. Of the 251 patients interviewed, 131 still had chest symptoms, 2 years after treatment, but only 24 of them had bacteriologically positive disease. The remaining 7 sputum positive cases were either having non suggestive symptoms or no symptoms.

In view of the above findings, it is considered that DOTS delivered through Dais is feasible.
KEYWORDS: ADHERENCE, COMPLIANCE, DAIS; INDIA

267

AU: Ngodup
TI : Patient-provider interaction in the community based case management of tuberculosis in the urban district of Bangalore city, south India
SO: A thesis submitted by Dr Ngodup, Postgraduate student, as a part of his PG course on "Community health and health management in developing countries" of the University of Heidelberg, Germany (1998)
DT: M
AB: Non-adherence to treatment is an obstacle to the control of TB. Among many reasons mentioned for non-adherence, providers' attitude, behaviour and knowledge and skill in dealing with TB patients has been cited as an important factor. Few studies also indicate that communication between patient and provider during interaction also plays an important role in the therapeutic process. Hence, this present study on patient-provider interaction was designed to describe some of the factors affecting adherence to TB treatment at LWTDTC, at urban district of Bangalore and its catchment area. The main objectives of the study were to find out the rate of adherence, application of present national control programme, patient perception of DOTS, retrospective elucidation of patient provider interaction and its influence on adherence to treatment. Treatment cards of a total of 602 smear positive patients treated with SCC regimen during Jan to Sept 1997 were analysed. From among them, 11 completed patients and 13 non-adherent patients were selected by systematic random sampling for subsequent interviewing. Further, 10 patients out of 153 patients who were under treatment from April to May 1998 and 15 patients receiving DOTS from 4 Treatment Units were selected by purposive

sampling for the interviews. In addition, 23 health care providers (physicians, nurses, health visitors, laboratory technicians and health workers) were interviewed.

Most of the patients interviewed have sought the help of private health services prior to their diagnosis with the belief that their illness is not severe and attributed to cold, fever and viral infections. A majority of the patients were diagnosed within four weeks at the place of treatment. Only some had delay of more than 4 weeks. They were either referred by the initial provider (majority) or by self-motivation. Of the 602 patients, 449 (74.5%) did not complete the treatment. The non-adherence was more significant in the age group of 21-40 years. Defaulting was higher among males than females. The defaulting was early, as 64.3% defaulted within three months. None of the non-adherent patients reported having received a letter or being personally contacted by the staff. The patients put on DOTS had a separate box of anti-TB drugs for him/her and were given drugs in the intensive phase three times a week under direct observation and once a week in the continuation phase and two doses for self-administration. The results were that 74.2% of the patients put on DOTS were cured at the end of treatment. The providers have strong belief that DOTS is the answer to the problem of low adherence.

The most common reasons given for non-adherence by patients, providers and key informants, were lack of family support, providers behaviour, drug side effect, disappearance of symptoms, alcohol and smoking. Adherent patients attributed family support, self-motivation and providers' assurance as motivating factors for completion of the treatment.
KEY WORDS:; COMPLIANCE; HEALTH PROVIDER; PRIVATE SECTOR; SOCIAL ASPECTS; DOTS; INDIA.

Traditional Birth Attendents (DAIS) as DOT providers

268

AU: Weis SE, Foresman B, Matty KJ, Brown A, Blais FX, Burgess G, King B, Cook PE & Slocum PC

TI : Treatment costs of directly observed therapy and traditional therapy for mycobacterium tuberculosis : a comparative analysis

SO: INT J TB & LUNG DIS 1999, 3, 976-984

DT: Per

AB : Pulmonary TB is curable when presently available regimens are given to adherent patients under study conditions. Studies show that DOT i.e., a programme in which health care personnel witness patients taking all prescribed TB treatment to be more effective than traditional therapy in which prescribed medications are self-administered by the patients. It reduces the prevalence of chronic bacillary cases, relapse rates, incidence of primary, acquired and Multi Drug Resistant TB. Treatment completion and compliance rates are higher with DOT. This study compares the cost of TB treatment in DOT (it is not widely used; it is perceived to be too expensive) to the traditional therapy. The objective of the study was to directly measure the cost of TB treatment under actual programme conditions. The cost of staff salary, laboratory, outreach, medication and hospitalization were included in the measurement.

The study was a retrospective economic evaluation of all cases reported to the Tarrant County Texas Health Department, USA. The health department serves about 1 million people of greater Fort Worth metropolitan area. The patients who were culture positive, had no history of previous treatment and patients actually managed by traditional or observed therapy were eligible for intake; legally quarantined, lost to therapy, dying from other diseases, were not included for the cost analysis. Eligible patients presenting between Jan 1980 and Dec 1985 were included in the traditional group. Patient treatment costs were followed through 31st Dec 1987, while in the DOT group patients between Jan 1987 and 31st Dec 1992 were included and treatment costs were followed through 31st Dec 1994. Nearly all the patients in either group received their prescribed therapy. Cost estimates were characterized by a cost parameter and a unit rate with cost being determined from the products of the two. Cost parameters describe different elements of treatment i.e., number of X-rays, days hospitalized, physician care time, etc., and are independent of cost which provides a base for comparing the relative costs of each program. Unit rates reflect 1995 pricing for labour, services and materials and representative of costs in Tarrant County Texas. In-patient cost was determined as $600 per day for days hospitalized for TB, out-patient cost parameters included personnel service and travel time, travel mileage, number of laboratory tests, number of X-rays done and medication prescribed.

The Physicians treating TB have three out-patient management options, traditional therapy and universal or selective DOT. The selective DOT suffers from the same flaws as traditional therapy specially the inability to predict, identify and measure non-adherence.

The authors feel that out-patient management with universal DOT should be the standard public health treatment protocol, because it is both more effective and less expensive. A total of 659 patients were studied which included 257 traditional group and 402 in DOT group. The data shows that the treatment cost for traditional therapy is significantly higher ($27630 v/s $11260, $P < 0.001$). Out patient cost was significantly higher for patients treated with traditional therapy ($2920 v/s $2220) although personnel cost was greater for DOT group. Hospital costs were higher for patients treated with traditional group ($24710 v/s $9040, $P < 0.001$). The average cost of treatment failures was $94520 in the traditional group and $54350

in the observed group. Relapse or acquired resistance occurred in 10.9% of patients and accounted for 35.7% of the cost with traditional therapy as compared to 1.2% of patient and 6.0% of cost with observed therapy.
KEY WORDS: DOTS; COMPLIANCE; HEALH ECONOMICS; TRADITIONAL THERAPY; USA.

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AU: Gosh CS

TI : Improving compliance to chemotherapy

SO: PULMON 2000, 2, 27-31

DT: Per

AB: Drug default is the major hurdle in the management of TB and also the cause for relapse and treatment failure due to drug resistance. Non-compliant patient remains infectious for a longer period and is more likely to develop drug resistance. Non-compliance is usually associated with complex treatment regimens involving multiple drugs, prolonged duration of administration, confusing dosage schedule and unacceptable route of administration. Knowledge about disease and treatment can influence patient decision and is essential for treatment compliance.
This study evaluates the role of better patient communication and motivation by the provider in improving the compliance to chemotherapy in pulmonary TB.

A randomized control trial was conducted with newly diagnosed pulmonary TB cases in the age group 15 to 70 years attending the chest clinic of Medical College and STC, Thiruvananthapuram, Kerala. The study population of 530 patients was randomly allotted to intervention (267) and control groups (263). The intervention group was provided with daily chemotherapy, innovative communication and motivation strategy, whereas the control group received daily chemotherapy with usual motivation by Social Worker/Treatment Organizer. Information provided to the patient was understandable, unbiased, and indicated both risks & benefits. Baseline characteristics like mean age, disease severity, and pre diagnostic cost were similar in both the groups. Most of the default occurred in the initial months of chemotherapy; 76% in the control and 50% in the intervention groups occurring during the second and third months of chemotherapy. Treatment completion rate was significantly lower in the control group (63%) compared to intervention group (85%). Mortality rate was 7% and 2% for control and intervention groups respectively ($p = 0.0004$).

In the multivariate analysis of the study population, age, co-morbidity, income and severity of disease did not emerge as significant predictors of compliance. Significantly higher treatment completion rate among the intervention group compared to the control group indicates that to get better results, curing should be combined with caring mode in the management of TB. The study highlights the need for improved communication with patients to help them successfully complete treatment without default.
KEY WORDS: COMPLIANCE; INDIA.

No. of Records: 35