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

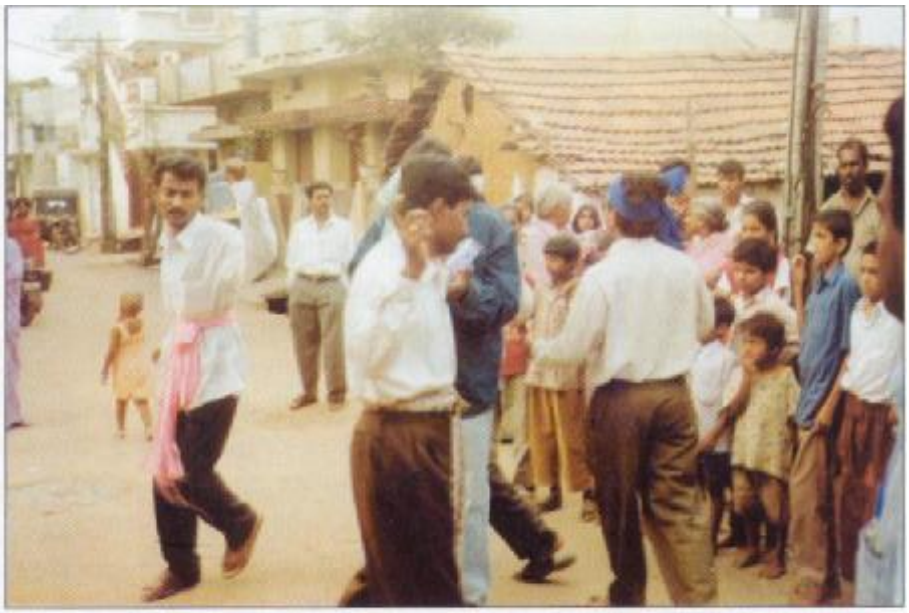
DT: CP

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.

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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

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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

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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