Chapter VIII

Treatment, Aftercare and Rehabilitation

R. Ray
Treatment for substance use disorder is an attempt to accomplish cessation of drug-taking by bringing about a change in the subject’s behaviour. Modalities vary and are very diverse. This is due to different conceptual issues related to genesis (etiology) and development of the process of regular drug consumption. As a result, there are many methods of treatment. Classifying these various methods is not easy and will not be attempted here. Common issues, themes and generalities are discussed.

Further, an attempt has been made to present a broad scenario of various treatment methods available in the countries covered in the report. Specific available treatment methods as practiced are also presented in the various box items by individual contributors. These explicit intervention modalities give a broad overview of the variety available in the region. However, some of these are practiced in very selected and small number of centres and do not reflect national programmes and strategies. Finally, administrative issues involving country treatment programmes would not be discussed as these have already been addressed in the chapter on national drug demand reduction (chapter VI).

A large number of persons are involved in providing care to subjects with substance use disorder. They include general physicians, mental health specialists, social workers, nurses, lay volunteers, spiritual and religious leaders, self-help organizations and even recovered patients (ex-addicts). There is considerable difference of opinion among them on ‘models’ of dependence and how best to treat them.

Models

A model is an abstraction or a conceptual form to understand and address a phenomenon.

Moral Model: Drug dependent persons are viewed as amoral individuals and drug-taking is a sinful act. Thus they require punitive measures or spiritual therapy, and treatment would take place in correctional settings or by religious teachers.

Hedonistic Model: Here it is assumed that people take drugs primarily for pleasure. Hence, treatment would mean initiating an alternate pleasurable activity (high) which is not chemically induced.

Learning Model: Drugs have strong reinforcing properties. These compounds induce a state of well being or remove a painful emotional state viz. anxiety and pain. Drug-taking is associated with such orgasmic states which are rewarding, thereby leading to the strengthening of drug-taking behaviour. Thus treatment would mean the process of unlearning and the acquisition of new skills.

Bio-psychosocial Model: It is assumed that drug dependence can be readily understood in the context of a neuro-biological and psychosocial model. The state of prolonged drug consumption manifests itself as an “illness” with a specific set of symptoms. Affected individuals are considered sick. Further, it is viewed as a chronic non-infective disorder. Because of its chronic nature, treatment can only modify and alter the course. “Cure” as understood by the treatment of certain (infective) diseases does not apply here. The “sickness” can be controlled, as is seen with lifestyle diseases like hypertension. Use of long term medicines (viz. methadone, naltrexone) would constitute pharmacological (biological) treatment whereas counselling, residential care facility (viz. therapeutic community) would be socio-cultural (psychosocial) treatment. Such a concept is currently accepted among many experts, notably health specialists. This model is widely used in countries in the region, as is evident from National Master Plans and data on treatment.

Levels of care

There are various levels of care, from the least complex to the most comprehensive modality. However, the more complex levels are available only in tertiary care centres or apex centres and are not necessarily the most desirable. Often brief and simple interventions would suffice and are cost-effective. A large number of subjects would need help in small towns (district hospitals) and rural settings (Primary Health Centres - PHC) where high degrees of expertise would not be available. Thus simple cost-effective programmes need to be developed. Various levels of care may be categorized as level 1—where acute care is provided, level 2—brief interventions are offered, and level 3—long term therapies are available.

Availability of level 1 services for treatment of overdose is exceedingly important. This would mean upgrading of casualty services, emergency rooms, availability of life support systems and narcotic antagonists. Wherever
intravenous drug use or widespread heroin use is seen, overdose, accidental or otherwise, can be expected. Here, saving a life is of utmost importance. Additional life saved can be several times greater than that by preventive services. However, in India most casualty/emergency rooms in public hospitals, including N. E. States, do not have Inj. Naloxone (a life saving drug for opiate overdose), though it is manufactured in India. Camp detoxification would belong to level 1 and has been practised in India and Sri Lanka. (For the camp approach, see Box Items 26 and 27 in the next chapter.) This is popular and has been found to be reasonably successful where no other facilities exist.

<table>
<thead>
<tr>
<th>LEVELS OF CARE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level 1: Management of acute intoxication, overdose and detoxification</td>
</tr>
<tr>
<td>Level 2: Brief therapies - pharmacotherapy, psychosocial intervention</td>
</tr>
<tr>
<td>Level 3: Long term care, complex therapy and monitored follow-up</td>
</tr>
</tbody>
</table>

**Phases of Treatment**

Levels of care and phases of treatment are linked issues. In the initial and middle phases, efforts are on to make the person free of all intoxicants and initiate the process of reintegration. During the late phase, healthy lifestyle, and alternate coping strategies are taught. Thus the duration of treatment would be variable. Treatment is usually multi-modal, i.e. ‘drug’ and ‘non-drug’ therapy. A subject may need extensive intervention in any one of the modalities. In the initial and middle phases mostly medical interventions are carried out. The late phase usually constitutes psychosocial therapy.

**Setting**

A setting is the actual physical site where treatment is offered. In recent times, most countries have favoured specialized treatment centres. This is also evident in the region. However, there has been a conscious attempt in the health sector to integrate these efforts with the general health care system (India, Sri Lanka) or psychiatric hospitals (Bangladesh, Nepal). Most of the NGO’s are dedicated centres. It is also important to remember that many patients report to various general medical or surgical OPDs and to non-specialists with ailments directly attributable to excess drug consumption. These are often not recognized and subjects go undetected. It is thus important to identify them and offer prompt treatment in non-specialized settings as well. Many generalists feel reluctant to deal with persons with drug abuse, as they are unsure about treatment modalities and perceive them as undesirable and anti-social. Such an attitude is anti-therapeutic. Further, linkages between specialized centres are weak. In the event of complications, such lacunae are very glaring. Thus training non-specialist physicians is very necessary. This is elaborated upon in a subsequent chapter (chapter XIV).

There is also the issue of hospitalization. Quite a few professionals are accustomed to thinking that most subjects with drug dependence require to be admitted in an in-patient setting (short/long term stay). In fact, a majority do not require admission. They can be treated very well from OPDs, community clinics and through domiciliary care. Some, of course, need to be admitted and guidelines for both the facilities (OPD or in-patient) can easily be developed by nodal centres.

In-patient treatment is expensive and keeping in mind the financial constraints, out-patient or a less intensive treatment setting is recommended. Treatment from community clinics and exclusive OPD treatment need a fair clinical trial. Experiences from All India Institute of Medical Sciences, New Delhi, and several other projects showed that treatment through routine community clinics and district level centres without in-patient facility is very feasible. Only about 3-5 per cent of these subjects needed in-patient care (Drug Dependence Treatment Centre, 1996a, b; Mohan and Ray, 1997). Other than these traditional settings, treatment can be provided in police stations or prisons (see Box Item-19) as well. Finally, people do report to private sector hospitals, private medical practitioners or private therapists. Generally, people from higher socio-economic sections tend to favour these expensive settings. The choice of a treatment setting is more often a self-selection process by the subjects themselves.

<table>
<thead>
<tr>
<th>TREATMENT SETTINGS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Specialized de-addiction centres</td>
</tr>
<tr>
<td>Community clinics</td>
</tr>
<tr>
<td>Government, non-government centres</td>
</tr>
<tr>
<td>Private sector</td>
</tr>
<tr>
<td>Non-specialized setting - general medical, surgical OPD, dispensary</td>
</tr>
<tr>
<td>Psychiatric hospital</td>
</tr>
<tr>
<td>Camp approach</td>
</tr>
<tr>
<td>Prison</td>
</tr>
<tr>
<td>OPD</td>
</tr>
<tr>
<td>Ward</td>
</tr>
</tbody>
</table>

A national programme must examine the issues of differential costs of treatment in various settings and a
Tihar Jail in New Delhi is today a complex of five prisons. These are characterized by overcrowding — the total population of prisoners is about 9500, against a housing capacity of about 3300. Less than 15 per cent of the prisoners are convicts. There are about 50,000 new admissions to these prisons every year, and 90 per cent of the prison population changes every three months. Approximately fifteen drug dependent prisoners are admitted to Tihar prisons every day. Seventy to a hundred heroin dependents are undergoing medically supervised detoxification in two facilities run by the administration at any given time. Detoxification from alcohol is not a feature of these facilities. The heroin detoxification programme is similar to one found in such a facility outside the prison.

In May, 1993, a dynamic Chief of Prisons started the Prisons Reform Programme. Popularly called the New Delhi Model, the programme focused on (a) introduction of the community (NGOs and individuals) into the prison, (b) creating a community within the prison, and (c) participatory management. Till then, treatment of drug dependents was limited to a detoxification programme under medical supervision and out-patient follow-up. AASRA1 was invited in August, 1993, to set up a post-detoxification (re)habilitation programme for heroin dependent prisoners. We started our work in August, 1993, in Central Jail/Prison No. 4. The present Chief of Prisons has strengthened, multiplied and consolidated the prisons’ efforts in this area.

Since the entire population to be dealt with by AASRA consisted of prisoners under judicial custody and not convicts, with frequent uncontrollable admissions and discharges, available designs of prison rehabilitation programmes could not be used. The new programme designed for the purpose was implemented in four stages. The prisoners had been housed in a facility (ward) consisting of three barracks. The drug dependents were not properly isolated from other prisoners (one barracks held prisoners suffering from tuberculosis and another housed “blood relatives” in prison for any crime). The first step was to segregate the drug dependents from other prisoners.

The “addicts ward” was the darkest area in the prison — inmates used to break all the light bulbs to avoid detection of drug use. Heroin use was a daily occurrence. The inmates were looked down upon as hopeless; frequent quarrels and false accusations were common. The rod was not used sparingly. Most of these prisoners spent their days “hanging around” the ward, and the “have-nots” were virtual slaves to the “haves”.

The initial set-up
After an initial needs assessment, one found that rudimentary groups that existed were of about three to five individuals. To set up a culture conducive to rehabilitation, the prisoners were grouped into “families” consisting of about twenty prisoners. Four to five such groups were assigned to each family. To start with, the existing “pecking order” was maintained. Each rudimentary group leader was called “big brother” and one of the big brothers was called “family head”. This selection was by consensus. A set of cardinal rules was framed with the support of residents to evaluate pro- and anti-social behaviour. New admissions were distributed among the families to minimize disruption of culture.

Felt needs were initially met by AASRA through donations of items of daily use such as toiletry, footwear, and clothes. Indoor and outdoor games were supplied and a television set was provided in each barrack. There was a common concern about the welfare of those prisoners who did not get visitors and others were encouraged to promote the culture of sharing. Over the first eight months, a community feeling of brotherhood had developed. By a process of promotion and demotion based on demonstrated pro-social behaviour, the “big brothers” and “family heads” became islands around whom new residents could be safely housed. The controlled bonding experiment was found successful.

New Delhi model parivar
New Delhi Model Parivar is a mutual self-help, peer-led therapeutic community. (Parivar means family, or a system of families.) This has been replicated over time and now

---

1AASRA: ‘An Association for Scientific Research on Addiction’ is a registered, non-governmental organization, not funded by the government.
there are four of these communities in Tihar Jail. The therapeutic community programmes house about 500 to 550 recovering heroin dependent residents; about 180 in Jail 4 (a four-year old community), about 200 in Jail 3 (a two-year old community), about 65 in Jail 2 (an eight-month old community), and about 75 in Jail 1 (a fifteen-month old community). This comprises over five per cent of the total population of Tihar prisons. It is estimated that about 10 per cent of the prison population merits admission into these communities at any one time.

About 5000 heroin dependent individuals have been admitted to the therapeutic community programmes in the past four years. These have been all males, over the age of 21 years. About thirty per cent are illiterate and another twenty per cent are educated till class five (primary school). One-third of these are under-trial prisoners for possession/sale of narcotics, one third for thefts, and about one-third for violence or under the Arms Act. Less than one per cent are in for heinous crimes. There are very few injecting drug users. After November, 1995, all drug dependents have entered the community after a three to ten day detoxification treatment. About half of the residents leave the rehabilitation programme in three months when they are discharged from prison by the courts. Less than five per cent of the residents stay for longer than one year.

Seniors, “family heads” and “big brothers”, act as role models to other members of the community. A five member convict team, three permanent warders, a permanent head warder and assistant superintendent are assigned to the community, which is under the direct supervision of the superintendent of the respective prison. In addition, seven senior resident prisoners serve as teachers, team leaders, and supervisors. Staff members from AASRA (a psychiatrist, two psychologists, a social worker, and two experience-trained counsellors for the four communities) serve as trainers, facilitators, and rational authorities.

Components of New Delhi Model Parivar
The three components of the programme are:

I. Philosophy/Culture—Value/Principle Based Lifestyle Change:
Principles used are humaneness (insaniyat), patience (dhiraj), mutual self-help and community building (bhai-chara), responsible concern (zimmeydari bhare sambhand), honesty in word and deed (sacchayee), respect for elders and affection for juniors (darar/pyar), trust (vishwas), responsibility for one’s own actions (zimmeydari), awareness (chetna, ahasas), acceptance (sweekar), and integrity (imandari). The programme caters to the development of these principles. A drug dependent’s personality undergoes change as a result of dependence, and the negative features of this are seen as the focus for change. Sharing one’s recovery, one’s growth and one’s privileges highlight mutual self-help. “What goes around, comes around” sets the culture of the community.

Mutual Self-Help—AASRA Welfare & Recreation Fund:
Contributions by those getting visitors (mulakkats) are matched rupee-for-rupee by AASRA. Items such as footwear, soap, oil and toothbrushes are bought from this money and given free to those with no visitors. Cloth donated by AASRA is used to make clothes for the non-mulakkates. Games and educational material are also bought from this fund. Television sets and wall clocks, sewing machines, candle making equipment and computers were donated by AASRA and by other agencies. The more educated teach the less educated. Focussed peer support is offered to those who have recently entered the community and are getting off drugs.

II. Structure:
(1) Hierarchy (of small brother, big brother and family head)—The families are named according to the principles stated above. It provides a group within which there is a chance for sharing each other’s joys and sorrows. Family members protect each other, and cater to each other’s needs. “I am my brother’s keeper” is each big brother’s basic motto. Selection of a pro-social big brother is central to correction and (re)habilitation in this peer-led model. The family heads and supervisors form the community’s ‘panchayat’ or local governing body. Representatives from this body are sent to the prison panchayat.

(2) The daily activities are scheduled in a way to promote recovery. Counselling is done in groups. Education, meditation, mood making sessions, sharing one’s recovery, concept seminars, family groups, community
meetings, barrack meetings, anger and grief workouts, educational and recreational games are some of the activities that form part of the curriculum. Psychodrama is used effectively. These activities are integral to community building. The work ethic is strengthened. Participation in Vipassana meditation is encouraged. Video feedback, when allowed, is an important tool for recovery.

III. Confrontation and Shaping Behaviour:
Behaviour is shaped by a system of rewards and consequences. Chances for promotion and privileges are based on demonstrated pro-social behaviour and demotions for anti-social behaviour. Pull-up is a verbal reprimand for an objectionable behaviour and this is followed by a demonstration of the expected behaviour. Structured Learning Experience or Contract is used for repeated objectionable behaviour. This experiential learning is designed to correct specific behaviours by highlighting the faulty attitude, e.g., one who is constantly late for meetings is assigned the duty to have everyone assemble for a meeting; a person who frequently leaves a meeting is assigned to be gate-keeper during meetings. Repeated demonstration of a faulty attitude by a resident is corrected in encounter groups set up for specific situations.

Behaviour Chart
Everyone in the ward is listed according to family and hierarchy within the family, on the notice board. Each person is rated for behaviour everyday by a senior — the small brothers by big brothers, big brothers by family heads, and family heads by staff supervisors, staff by AASRA and prison officers. A five colour code is used. Officers on rounds are encouraged to look up this chart and call out the names of those with black and red marks for reprimand and those with green and blue marks for commendation.

Incident / Reception Register
Every event in the community is recorded in this register, from who enters/exits the community and commitments made by new residents, to negative behaviour/incidents and action taken. The main activities of the community are also recorded here.

The Monitoring System
The reception room of the AASRA ward is the monitoring centre for the community. Round-the-clock shifts of two persons from each barrack comprise the Monitoring System. At night, any untoward incidents are reported immediately to the warden for appropriate action. During the day, incidents are reported to the warden, head warden, assistant superintendent, and when necessary to the deputy superintendent and superintendent. The chief monitor is responsible for setting up and supervising learning experiences. This system has prevented suicides, quarrels and drug-taking.

Drug free status is monitored periodically through random urine tests for presence of narcotics. This test is conducted by the AIIMS (All India Institute of Medical Sciences, New Delhi) Drug De-addiction Centre. All samples are screened using TLC and about ten per cent of the samples confirmed by GLC. Over eighty per cent of samples test negative for morphine (heroin).

Indicators of change
The New Delhi Model Parivar is recognized as a significant treatment programme for drug de-addiction by the prison, and a stream of visitors and dignitaries visit the programme. The residents wear a sense of pride and an increased self-esteem among the prison community. They value the positions of big brother and family head.

Where once inmates needed 45 minutes to gather for a meeting, they now assemble in less than 5 minutes — demonstrating increased discipline, a higher sense of responsibility and respect for authority. Silence is observed when requested and excuses to leave meetings are less frequent. Quarrels have decreased — showing better coping with feelings of anger — and the rod is seldom used.

Heroin smuggling and use has drastically reduced, thanks to better detection and control of supply as well as longer abstinence. Fewer inmates are tempted to take heroin even when it does reach the ward (better impulse control). There are longer periods of abstinence as verified by regular urinalysis. The practice of false accusations has decreased (more respect for others). Consequences are taken with less resistance (increased power of the community as well as sense of accountability in residents). Transgressions are owned up to more easily (greater honesty). Recently, the increased and voluntary participation in the project for making the pond, aviary, landscaped garden and waterfall in the prison reflect incorporation of the work ethic (increased sense of community). The quality of sharing has improved, showing improved communication skills and experiential learning.

Major Lacunae
The programme does not select who should enter the community. Weeding out is done when a resident repeatedly breaks the cardinal rules. There is no control over the duration of a resident’s stay in the programme — the duration of stay in prison is decided by the courts. More trained counsellors are needed. There are no resources to set up a contact or follow-up programme after a resident leaves the prison.
A public health approach would favour moderate to low cost intervention programmes. Residential care programmes, i.e. ward and therapeutic community are expensive and governments’ support cannot be expected as is seen in the region.

**Care Givers**

Several people are involved in providing treatment and a multi-disciplinary team is the norm. Commonly, they are: psychiatrist, general medical doctor, nurse, psychologist, and social worker. Their background, training and expertise differ. Thus the role of each team member is distinct. There are, however, some grey areas. Certain services can be offered by more than one category of staff especially after in-service training. To illustrate, a nurse can carry out the following activities besides dispensing medicines:

- obtaining history of drug abuse
- assessment of patient and his relatives
- counselling the patient and his relatives.

These should be reinforced and opportunities should be provided for in-service training so as to encourage broader participation. This is even more evident in a community clinic where strict division of roles should be discouraged.

However, in a traditional hospital setting some amount of clarity of roles and earmarking of responsibilities would avoid identity crises and interpersonal conflicts. The thrust of a country programme may depend upon the absolute number of service providers available from various disciplines.

India has the largest number of physicians per capita among the five countries in this region for which data is available. In the mid-1990s, India had about one doctor per 2439 population, as against 16,667 in Nepal. This is reflected in very high involvement of doctors in providing care (secondary level). Thus treatment is more medicalized. However, the nurse:population ratio is much better in Sri Lanka (about 1:1754) as against India (about 1:3333). Unfortunately nurses have not been very involved in treatment of drug dependent subjects in this region and are underutilized. In Australia, however, nurses are involved in a very big way. Hospital beds per 1000 population in the mid-1990s were around 2.8 in Sri Lanka and 0.7 in India. In the other three countries namely Bangladesh, Nepal and Bhutan, there are insufficient doctors, nurses and hospital beds. Thus it would be easier for Sri Lanka to develop in-patient care (brief to medium/ long term stay) than the other countries in the region. No such data were available for other categories of staff employed in de-addiction centres. It can reasonably be estimated that involvement of non-medical staff would be much more in the other countries and this is actually so, as seen in the Master Plans. In many countries, demand reduction is carried out principally by NGOs who have a large number of voluntary workers. This brings down the cost and the programme is much more cost-effective overall. Data on selected health parameters, expenditure on health as regards percentage of GDP as well as central government’s expenditure of these countries is listed in annexures 5-7.

**Treatment Goals**

It is expected that treatment should result in a state of permanent abstinence. Often, this does not happen and alternate goals need to be pursued. Thus intervention is directed towards decrease of harm posed by continued drug use. Moreover, treatment should also attempt to improve occupational functions, health, social functions and role performance in addition to cessation of drug use. Additional efforts are thus required to achieve better quality of life and improvements in these areas are not always equivalent or parallel. During treatment these also need to be looked into.

**Treatment Goals**

- Abstinence
- Improvement of health, social and occupational functions
- Overall improvement in quality of life
- Harm minimization

**Harm Minimization**

Many subjects cannot achieve permanent abstinence following an episode of treatment. This is most obvious among patients with opioid dependence. In the best of treatment centres, about 60-70 per cent of drug users relapse within three months of treatment in an OPD-drug-free programme. The alternative goal of harm minimization is both pragmatic and achievable.

**Harm Minimization**

- Reduce adverse consequences
- Determine priority
- Decrease transmission of communicable diseases
- Education on drug consumption and performance impairment
- Avoid hazardous drug-taking situations
- Maintenance programme
- Needle exchange programme, use of bleach
- Comprehensive health education

Here, treatment is directed towards reducing the adverse health, social and economic consequences of drug use.
without necessarily eliminating use. The principle of such a strategy acknowledges that the risks due to drug use are hierarchical (less severe to most severe). The most damaging consequences viz. transmission of communicable diseases (the spread of HIV and/or hepatitis through needle sharing) should receive priority. Various measures to achieve this are safe public health policy, determination of priorities, limit setting and use of substitute medicines.

Several of these measures have already been initiated in the region. In Nepal, methadone maintenance and needle exchange have been initiated. See Box Items 20 and 21 for more in this regard. In India, buprenorphine maintenance programmes have been carried out in more than one centre. Further, in Nepal and India, linking drug abuse management with HIV/AIDS control has been attempted and is likely to be pursued actively in the health sector in the near future.

The Ministry of Health and Family Welfare, Government of India, in three recent workshops (June 1996, July 1996 and June 1997) have deliberated upon harm minimization and several practical measures have been proposed. The various steps recommended were:

- Measures to protect the community
- Comprehensive drug demand programme to be pursued jointly by the central health ministry and State health departments
- Decentralized service with provision of buprenorphine maintenance therapy, methods to shift to less harmful route of drug use
- Community participation
- Networking of specialized GO and NGO treatment centres
- Development of an appropriate health educational programme towards minimizing intoxicated behaviour and adverse health consequences
- Provision of other specific strategies like supply of bleach, syringe/needle exchange programme, revival of opium registry in rural India.

Finally, these workshops stated that a harm minimization programme does not promote legitimization of or advocate drug use.

**THERAPEUTIC APPROACHES**

There are, broadly speaking, two main approaches: (a) pharmacotherapy, and (b) psychosocial therapy. Treatment usually comprises a judicious mix of both the forms. However, depending upon the individual’s need, a person receives extensive treatment of any one modality. Psychosocial therapies are helpful in maintaining sobriety and are practised during the post-detoxification phase. Individual, group and family counselling are offered. These are discussed later in the chapter (passim) and in several box items (19, 22, 23).

**Pharmacotherapy**

Although, various drugs exert differential effects on the body, management principles are common to a large extent. Pharmacotherapy is useful for: (a) reversal of acute effects (intoxication or overdose), (b) amelioration of withdrawal symptoms (detoxification), (c) decline of craving and prevention of relapse, and (d) restoration of normal physiological functions. Specific medicines to treat any of these conditions are not described here. Certain common principles and recent advances are discussed.

Considerable advancements have been made towards the development of specific agents for the above purposes. However, these have been used only sparingly. Many are usually skeptical about the use of any “drug” (medicine) to treat drug abuse. This is more so as the field is crowded with non-medical experts, social activists who discourage the use of a “drug” to treat drug abuse. Even when these medicines are used they are not prescribed rationally; an inadequate dose has been used in many countries. To illustrate, naltrexone, a drug to ensure abstinence was prescribed for only 1-3 per cent of treated patients in USA (Orken et al., 1995). Naltrexone is manufactured and available in India but has not been prescribed by many. Clinicians need to prescribe this medicine and ensure compliance. Efficacy of medicines can be enhanced by simple measures like supervised and contractual pharmacotherapy. These will ensure compliance and minimize drop-out. Inadequate dosage of medicines (viz. very low dose of tablet buprenorphine) have also been used, resulting in inefficacy.

Several novel compounds have been developed. These could help treat opioid dependency. To list a few: long acting methadone (LAAM), NMDA antagonist, rectifying peptide, partial mu-agonist, enkephalin degrading enzyme inhibitors (Rapaka and Sorer, 1995) and another potent narcotic antagonist, nalmefene (Dixon et al., 1986). Even long acting (depot preparations) narcotic antagonists have been developed. These have been developed in the medications development division of NIDA, USA. Quite a few are orally active. Some have undergone clinical trial, while some will soon be similarly tested. However, currently, effective medications exist only for alcohol, opiate and nicotine dependence. Benzodiazepine antagonists have been developed and a cannabis antagonist is undergoing trial. Some of these are available in the region or are likely to be available in the near future.

Continued on page 136
Many subjects with drug dependence cannot achieve abstinence following an episode of treatment and this is most obvious among injecting drug users (IDUs). It has been observed that about 70-80 per cent of IDUs relapse to drug use within three months of treatment. Thus an alternative goal to minimize the harm posed by continued drug use has been considered. Here attempts are made to reduce adverse health, social and economic consequences of drug use without eliminating it. The major focus is to contain the spread of communicable diseases and thus reduce the health hazards associated with drug use. It has been estimated that in Nepal among 40,000-50,000 drug users (total), about 40-50 per cent are IDUs. Needle exchange is a component under the harm reduction programme carried out by the Life-saving and Life giving Society (LALS) in Nepal.

The programme exchange programme has been quite controversial all over the world including Nepal. Many have felt that it may make drug problems worse by being seen to condone and thereby encourage drug use.

In Nepal too, the term “harm reduction” was annoying to the general public and offensive to authorities. In the past, most often IDUs were arrested and put into jail even though there was no legal provision against possessing or trading syringes for any purpose. However, it was seen that most restarted drug use immediately after they came out of the prison. The scene has changed at present. Now, a drug user is arrested only if he/she attempts/commits a crime. Advocacy and initiatives carried out through this programme have resulted in society and the law accepting this programme as a treatment modality, though a minor solution and not the ideal one.

The programme

The needle exchange programme in Nepal began in 1991 with the primary objective of preventing the IDUs and their sexual partners being infected from bloodborne diseases including HIV/AIDS. The mission was to reduce drug related harm among IDUs through education, counselling, health care and distribution of harm reduction materials, i.e. bleach, sterile water and needle exchange. This is the first harm reduction programme with a needle exchange component in this region.

The IDUs are identified through outreach activities and are counselled on drug addiction, HIV/AIDS and health care services. Subsequently, they are provided with bleach, sterile water and exchange of needles — along with education on sterilizing injecting equipment.

Method of dispensing

This is a street based outreach programme. Full-time outreach workers visit the field everyday. Altogether, 64 spots have been identified (46 areas in Kathmandu and 18 in Lalitpur districts). Two-third of the spots are visited on even days (three days) and one-third on odd days (two days) with advance information to the clients. Subjects from adjoining areas also drop-in for the services.

Needles are exchanged on a one-to-one basis. However, the number of needles exchanged are limited up to a certain amount according to average daily use by the user; this is to control misuse.

Staff involved

The programme started with one volunteer. A complete contingent of staff is now available to cover wider areas. The outreach workers work as teams and each team consists of a nurse, ex-user and social worker. The work began with two teams and since 1994, three teams have been functioning. After recruitment all the staff were trained on acquiring knowledge about the activities and developing appropriate attitudes towards drug users. They were told about the need to maintain confidentiality, anonymity about those receiving help, and to be non-judgmental and non-coercive towards them. The outreach workers meet every week where problems and specific plans for the week(s) ahead are discussed. The ex-users in the team help to a) include new drug users, b) gain confidence of the clients, c) understand their feelings, and d) develop a positive attitude towards clients.

Activities

1. Exchange of disposable syringes (1 ml) and needles. Needles are always exchanged with syringes in complete sets.

2. Health education: Clients are educated on HIV/AIDS, STDs and hepatitis B, along with personal health issues.
They are also counselled on seeking early treatment in case of any need.

3. Counselling of drug users.

4. Focus group discussion to induce behaviour changes.

5. Close coordination with authority and police.

6. Training of staff, both from LALS and other agencies from the region.

The exchanged contaminated syringes/needles are put in a tin box and burnt every alternate day.

**Persons Registered**

In the beginning, only Kathmandu district was covered. Subsequently, in 1993, Lalitpur district was also included. The total number of ever contacted persons increased from 450 (1993) to 1025 (1997) in the past 5 years. About 60 per cent of them are in regular contact (at least once in four weeks) and it is estimated that 60 per cent of the total IDUs residing in these two districts are in contact with the programme. Among female IDUs who are in contact with the programme, a large majority are commercial sex workers.

**Evaluation**

The periodic process evaluation of the programme (1991-94) has shown that among 424 individuals only a quarter used this service only as their source for needles. They also availed of other services available like referral to a detoxification centre, health education, knowledge on safe injecting practices and other options for positive living. Prevalence of injecting practices at two points of time showed the following figures:

<table>
<thead>
<tr>
<th></th>
<th>1991 (N = 127)</th>
<th>1994 (N = 200)</th>
</tr>
</thead>
<tbody>
<tr>
<td>STDs</td>
<td>18 (14.2%)</td>
<td>13 (6.5%)</td>
</tr>
<tr>
<td>Hepatitis B</td>
<td>7 (5.5%)</td>
<td>13 (6.5%)</td>
</tr>
<tr>
<td>HIV</td>
<td>2 (1.6%)</td>
<td>2 (1.0%)</td>
</tr>
</tbody>
</table>

Further, it showed that among clients who were in regular contact there was an increase in knowledge of transmission of various communicable diseases, utilization of other treatment services available, use of safe injecting practices and safe sexual practices. There was a decrease of injection related abscesses and high risk behaviours like sharing of injecting equipment, frequency of drug injection and number of sexual partners.

Thus, overall the programme has been successful.

**Problems, Difficulties and Constraints**

It has been seen that the clients generally use multi-drugs and under the effects of drugs, more so under the effects of stimulants (amphetamines), they ask for money and other unnecessary items. The staff are thus sometimes very uncomfortable.

Many staff have felt that working with drug users continuously for a long period is unrewarding for several reasons such as slow change of attitude of the community, drug related deaths and lack of appreciation inspite of field based hard work. This has resulted in staff burnout.

Since harm reduction activities are a comparatively new model of intervention, implemented by intermediate level of staff, the donors show lack of enthusiasm. Further, the programme does not permit the staff to charge the clients. It is thus entirely a donor dependent programme which has its inherent problems.

Drug users are a mobile population. As a result, the delivery of care including counselling is often disrupted. Re-establishing contact takes time.

**Lessons Learnt**

The need for human contact along with needle exchange cannot be over emphasized. A large number of drug users have very inadequate knowledge on drug related harm. They need to be educated on infection control and prevention measures. Many are not aware of various treatment facilities and need to be informed. Hence, needle exchange programmes should not operate in isolation. Such an activity needs to be coupled with other human services including health care.

Recruiting ex-users is extremely beneficial for the success of such a programme. Further, the staff not only need adequate training but also need to be confident of his/her own strengths and various facets of programme implementation.

To conclude, the needle exchange component plays a vital role in harm reduction strategies in changing behaviour and preventing the spread of bloodborne diseases including HIV/AIDS.
**INTRODUCTION AND BACKGROUND**

Methadone hydrochloride was first developed in Germany as an opiate substitute during World War II, and is now used chiefly in detoxification and maintenance therapy for opioid dependence. It is a relatively long-acting synthetic diphenyl heptane-derivative opioid agonist. It is effective when administered orally, parenterally and rectally. The bioavailability after oral intake is about 80 per cent. The initial duration of action is from 4 to 6 hours but is increased to 22-48 hours with repeated administration. It is metabolized in the liver and excreted by the kidneys. The usual oral analgesic dose of methadone for non-tolerant individuals is in the range of 5 to 15 mg. (Jaffe and Martin, 1985). Methadone overdose can cause death mainly by respiratory depression and the lethal dose in non-tolerant individuals varies from 0.8 to 1.5 mg/kg of body weight. Opioid dependent individuals can tolerate a much higher dosage. However, tolerance soon disappears after withdrawal and overdose may occur if methadone is taken at previous levels. Most deaths from methadone overdose, however, have been associated with the simultaneous use of alcohol, benzodiazepines and other central nervous system depressant drugs (Swiss Narcotic Substance Commission, 1996).

Methadone substitution treatment was first introduced in 1963 by pharmacologist Vincent Dole and psychiatrist Mary Nyswander at Rockefeller University in New York. (Dole and Nyswander, 1965). The inclusion criteria for methadone maintenance treatment then were as follows:

- Minimum age of 21
- History of heroin dependence for at least four years
- No history of alcohol dependence
- Heroin addicts who failed in other treatment programmes

Later on, changes were made. The minimum age was lowered and the duration of heroin dependence was reduced to two years.

The use of methadone as a substitution treatment for heroin dependence is based mainly on these findings:

- Opioid dependence is a disease characterized by a permanent metabolic deficiency, which is best managed by exogenous opiates like methadone
- Long term use of methadone would lead to tolerance to methadone and cross-tolerance to all other opiates (viz. heroin), making them less effective to produce euphoria
- Craving for heroin is reduced
- Effects of oral dose last for 24-36 hours
- Once stabilized on methadone no prominent signs of intoxication, withdrawal and behavioural impairment are seen.

Many well designed studies have shown that methadone maintenance is very effective for heroin dependence and patients maintained on methadone are less likely to be HIV positive than those not on methadone (Cooper, 1983; Chaisson et al., 1989; Strang, 1990). Only some minor and readily reversible side effects of prolonged methadone use have been reported (Kreek, 1993); there are no convincing reports of teratogenicity (Novick et al., 1993). Methadone maintenance programmes have been evaluated extensively and most studies have found it very useful.

The number of drug users is on the rise in Nepal and a vast majority of them are dependent on heroin and buprenorphine.Injecting drug use (IDU) has gone up sharply in the country since the late 1980s, mainly because of the appearance of buprenorphine on the drug scene (Shrestha, 1997). Relapse within the first three months of detoxification treatment is as high as 90 per cent (Shrestha, 1989).

Considering these facts and the increasing deaths from injecting drug use, His Majesty's Government of Nepal decided to run a Methadone Clinic on a trial basis and this was started in the Mental Hospital on January 23, 1994.

**OBJECTIVES OF METHADONE CLINIC**

- To maintain selected opioid dependents on methadone for a prolonged period in order to prevent relapse and to thus facilitate rehabilitation and social reintegration.
- To reduce the risk of HIV, hepatitis and other infections among drug users and, through them, among the general population.
- Detoxification of opiate users on an out-patient basis.
- To reduce the risk of overdose deaths among drug users.
Inclusion criteria for methadone detoxification
- At least a six-month history of opioid dependence
- Absence of multiple drug dependence
- No dependence on alcohol
- Absence of serious psychopathology
- Willingness to abide by the rules of the clinic

Inclusion criteria for methadone maintenance
- At least two years history of opioid dependence
- Failure in other treatment programmes on at least on two occasions
- No history of multiple drug dependence
- No history of alcohol dependence
- No serious psychopathology
- Willingness to abide by the rules of the clinic

Registration of the case
Each new case is assessed by a psychiatrist and the decision made regarding the suitability of methadone treatment, as per the inclusion criteria mentioned above. After this initial assessment, the client is assessed periodically and whenever needed on the basis of feedback received from the staff. Each person has a separate case sheet with recent passport size photo affixed. Medical records are maintained in strict confidence.

Dose of methadone
It was very difficult to decide the initial dose of methadone because of uncertainty of the contents and purity of street heroin. Drug users often demanded a higher dose of methadone. Thus, the first two clients were given 20 mg and were observed for one hour for any signs of intoxication. They came back the next day with signs of withdrawal; the dose of methadone was increased to 30 mg and they were observed again. The next day the dose was increased to 40 mg. Currently the dose requirement is decided upon current (last one week) consumption pattern, severity of withdrawal symptoms, duration of dependence and physical examination. The dose is increased or decreased depending upon signs of intoxication/withdrawal. It has been our experience that for stabilization:
- 70 per cent needed 40 mg/day,
- 20 per cent needed 60 mg/day,
- 8 per cent needed 50 mg/day,
- and 2 per cent needed 80 mg/day.

Operation of the clinic
The clinic functions every day including weekends and government holidays. The staff is overseen by a psychiatrist and consists of a trained nurse and a medical doctor. The subjects have to swallow the prescribed dose in front of the nurse. No “take home” dose is allowed barring exceptional situations. The methadone tablets, 40 mg each, are imported from Switzerland with permission to import from the Ministry of Home Affairs. Thus lower dose dispensing means crushing the tablets and dividing them into strengths of 10 or 20 mg each. A register kept in the clinic logs the dose consumed, withdrawal symptoms, side effects, clinical suspicion of illicit drug and alcohol use and any misbehaviour in the clinic. Each subject pays Nepalese rupees 0.50 per mg of methadone per day (US $ 1 = Nepalese rupees 63). The money is utilized to import these tablets.

Custody of methadone
The methadone tablets are kept in a cupboard which is double locked. The nurse is supplied with only 1000 tablets of methadone at a time. Fresh stock is supplied only after careful verification of utilization. As methadone is a controlled drug, the annual report of consumption of methadone is sent to the Division of Narcotics Control, Ministry of Home Affairs.

Results
Table A
<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total subjects registered as on 31.1.97</td>
<td>120</td>
</tr>
<tr>
<td>Total subjects on maintenance at present</td>
<td>60</td>
</tr>
<tr>
<td>Subjects on methadone for detoxification only</td>
<td>20</td>
</tr>
<tr>
<td>Subjects dropped out</td>
<td>30</td>
</tr>
<tr>
<td>Died</td>
<td>3</td>
</tr>
<tr>
<td>Foreign nationals</td>
<td>7</td>
</tr>
</tbody>
</table>

Among the three subjects who died, two died due to overdose of alcohol, benzodiazepines and methadone, and one due to a drug related physical illness. Out of the 60 subjects who are on maintenance, it was seen that substantial improvement in physical and mental health was reported by 96-98 per cent of the subjects, and all (100 per cent) reported improvement in social and occupational functioning and self-image. The improvements reported were verified by their family members.

Problems, difficulties and constraints
- Use of additional psychotropic drugs and alcohol by the clients
- Drop-out without giving notice
- Bargaining for higher dose of methadone
- Asking for “take home” provision
- Difficulty in getting suitable alternative staff to work in the clinic
- Threats to the staff (on rare occasions)

However, the only major problem perceived in the clinic is the use of additional psychotropic drugs and alcohol.
CONCLUSIONS AND RECOMMENDATIONS

- A retention rate of 75 per cent and the substantial improvements seen in various parameters indicate a significant positive impact of the programme.

- Psychosocial interventions may further help to increase the retention rate.

- This programme shows that clinical assessment by an experienced psychiatrist is sufficient for the diagnosis of opioid dependence and to judge the suitability for the methadone maintenance programme.

- Though urine analysis may help to diagnose opioid dependence and to confirm our suspicion about illicit drug use, this facility is not a must in every clinic. However, this provision should be available for rare occasions.

- At least two staff should be trained to work in the clinic.

- Age per se should not be a limiting factor for entry into the programme.

- It has already been recommended to the Government of Nepal to expand this programme in the country in a phased manner.

REFERENCES:


Thus clinicians must update their knowledge, be aware of effective dosage and prescribe rationally. It is not our intention to suggest a simple pharmacological answer for treatment of drug dependence. These medicines must be combined with psychosocial therapies. Eclecticism rather than integration is easy to achieve and should be attempted.

**INDIGENOUS SYSTEMS**

Several countries in this region have long established alternate approaches to treat disease. These include the ayurvedic system, yoga, unani, etc. Please see Box Item-24 for details.

**OUTCOME**

It is expected that subjects must improve following treatment. This needs to be documented in a formal way and such evidence can be of four kinds:

1. Evidence that treatment is better than no treatment
2. Systematic studies documenting outcome on several parameters following treatment
3. Superiority of one treatment modality over another
4. Anecdotal/hearsay evidence of recovery following treatment

It is now universally accepted that abstinence is not the sole criteria of successful outcome. The improvement must be reflected in the subject’s total functioning. This includes improvement of physical health, psychological adjustment, social and occupational functions and quality of life. Reduction or cessation of drug-taking is just one aspect and often recovery may not be evident simultaneously in all the areas. Thus these broad areas should be assessed independently and appropriate intervention should be initiated. These are the tasks during aftercare and rehabilitation. There are a number of tools and assessment instruments available which could be very easily adopted, or a norm for a particular culture (country) can be developed. Indian versions of a number of these instruments are available viz. Addiction Severity Index (ASI) (McLellan et al., 1985; Hindi adaptation - Tripathi et al., 1993), Subjective Well Being Inventory (SUBI) (Sell and Nagpal, 1992).

Not all subjects require the same intensity of treatment. Several researchers have proposed that the intensity of treatment should be determined by the subject’s characteristics. In other words, there should be some matching between intensity, duration and treatment modality with the person’s pre-treatment variables (patient-treatment matching). A well designed study has been carried out by the National Institute of Alcoholism and Alcohol Abuse (NIAAA), USA. A clinical research guide, guidelines for clinical management and three interim manuals have been developed from this multisite trial of Project MATCH (USDHHS, 1992). The manuals cover (a) twelve step facilitation therapy, (b) motivation enhancement therapy, and (c) cognitive behavioural coping skills therapy. Even though these are for management of alcohol abuse, the concepts can be easily applied to drug abuse treatment programmes as well. Some of the institutes in India have carried out these therapies and preliminary observations are available. These manuals are not meant as exclusive research tools and are very much applicable in day-to-day clinical practice. Individual institutions in the region need to try patient-treatment matching and share their experiences with others.

**OUTCOME**

<table>
<thead>
<tr>
<th>Treatment vs. no treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Measurement of outcome against multiple parameters</td>
</tr>
<tr>
<td>Superiority of one treatment modality over another</td>
</tr>
<tr>
<td>Treatment efficacy</td>
</tr>
<tr>
<td>Subject-treatment matching</td>
</tr>
</tbody>
</table>

Two outcome studies have been carried out in India recently, one with funding from the Indian Council of Medical Research (study period 1989-91), and another by WHO, SEARO (study period 1993-94). In the first study (Mohan et al., 1993) carried out in three cities, 183 opiate users received a standard treatment package comprising four weeks’ hospital stay where they were detoxified, attended six sessions of group counselling and were then on an out-patients drug free follow-up programme. Outcome was assessed at 1 year and 2 years post treatment. Of the original cohort there was considerable attrition, 39 per cent at 1 year and 60 per cent at 2 years. Among those who could be assessed, it was seen that 37 per cent and 53 per cent were markedly improved and did not use any opiate for 21 days or longer, in the previous one month at the end of 1 year and 2 years respectively. About 34 per cent (at 1 year) and 45 per cent (at 2 years) had symptoms suggestive of opiate dependence (regular drug use). This study had a high drop-out rate and the subjects were not on any maintenance medication. The other study (Mohan and Ray, 1997) was community based; out of the original cohort of 108 heroin dependent subjects, 65 qualified for 11 months’ follow-up and 93 per cent could be interviewed (drop-out 7 per cent). In this project the subjects were on tablet buprenorphine maintenance (1.2-1.8 mg/day). Further, they received intensive group, family and vocational counselling and repeated domiciliary contact by the field staff. The results showed that (a) in the previous...
month, 62 per cent had not used any heroin, (b) an additional 8 per cent had used only sporadically between 1-7 days, and (c) 75 per cent had not used any other substitute opiates or alcohol. Overall, there was improvement in several other spheres also as evident from ASI and SU BI scores and other assessment procedures. Feeling of positive well being (SU BI) increased significantly and was within the normative range. Thus a large number of subjects were helped with tablet buprenorphine and psychosocial intervention. This, inspite of the fact that the intensity of treatment was moderate, none needed extensive care and the subjects improved. It is proposed to expand these efforts.

**Relapse**

Successful treatment of withdrawal status does not prevent continued use of addictive substances. Relapse is a frequent occurrence in the course of substance use disorders and about 60-70 per cent of cases relapse at least once during a year following treatment. Thus, it is important to understand relapse for effective treatment. Some authors have distinguished between 'lapse' which is the initial use and 'relapse' which connotes continued drug use. Various medical therapies (antagonist, agonist) and psychosocial interventions (cognitive - behavioural, improved coping skills) are needed. Thus the treating staff need to be sensitized to and trained on these aspects. Relapse prevention and management methods need to be undertaken according to available professional expertise and acceptability by patients. Other than professional help, self-help groups and informal help are also useful. In a recent SAARC workshop, “Relapse Prevention and Management”, held in New Delhi, India (September, 1997), various issues related to relapse and its management were discussed. Countries represented were: India, Maldives, Nepal, Pakistan and Sri Lanka. Following the presentation of country profiles, technical papers and the discussion, several agreements were reached. To minimize relapse, the group suggested that:

- Demand reduction programmes should be linked with appropriate preventive education activities
- Long term medication and appropriate psychosocial intervention should be initiated.
- Harm minimization strategies should receive higher priority.

Several other initiatives to strengthen demand reduction activities in the SAARC region were also suggested.

**Aftercare and Rehabilitation**

It has been stated earlier that treatment is often a combination of medicines and psychosocial interventions. Various psychosocial interventions include brief, extended counselling (single or group), attending self-help group meetings (Narcotics Anonymous - NA, Box Item-22), and psychological therapies to prevent relapse (cognitive-behavioural). A practical guide on carrying out group psychosocial interventions, based on experiences from a treatment centre in India is available (Drug Dependence Treatment Centre, 1996c).

However, quitting drug-taking is not enough as many subjects would need special effort and supervised support to start a drug free life. Recovery is a process and new adjustments are needed. Issues important in such a process are: a) management of craving, b) appropriate response to a drug offer situation, c) preventing relapse, d) leading a productive life style, and e) improved quality of life. Thus through follow-up visits and appropriate aftercare service the person is rehabilitated.

In realistic terms rehabilitation involves a) listing of handicaps, and b) listing of assets. Fortunately, most subjects do not lose any skills due to drug addiction, unlike the case with certain medical or psychiatric illnesses. However, the social stigma can make them unemployable. Potential or previous employers are extremely apprehensive about giving an (other) opportunity to a recovering addict. Thus aftercare workers need to sensitize employers to these issues. In India, intervention at the work site has been initiated in a collaborative project (ILO-UNDCP-Ministry of Welfare — Box Item-29).

Efforts towards rehabilitation would involve improved social functioning and better coping skills. In this region, organizations for formal help towards rehabilitation are far too few. Often the responsibility lies with the family. Hence, resource mobilization means enlisting support from the family; alternatively, medium to long term stay in a non-hospital residential care (TC - therapeutic community, see Box Item-23) is of help. However, TC programmes are expensive and the non-completion rate is generally high.

Mostly, NGOs in the region have been involved in providing specialized rehabilitation services. The recovering subjects attend individual, group and family therapy sessions. In some centres harm reduction strategies involving methadone maintenance, buprenorphine maintenance, needle exchange programmes have also been initiated to facilitate rehabilitation. Experiences in this regard from the region are discussed in another chapter (X). Social networking and acquisition of new habits are crucial towards successful rehabilitation.

Rehabilitation has also been successfully implemented through community based activities as is seen in the next chapter (IX), and box items on open community approach (Box Item-27) and community based organization (Box Item-28).
Narcotics Anonymous is a non-profit fellowship or society of men and women for whom drugs had become a major problem. We are recovering addicts who meet regularly to help each other stay clean. It was started in Los Angeles, California, USA, in July 1953, with several other addicts and some members of Alcoholics Anonymous, who had faith in us and the programme. This a programme of complete abstinence from all drugs. There is only one requirement for membership, the desire to stop using drugs. Our programme is a set of principles written so simply that we can follow them in our daily lives. The most important thing about them is that they work.

The name of our programme does seem incongruous with our philosophy and with the varied nature of our membership, given the connotation of the word “narcotics” today. In fact, when our fellowship first broke away from Alcoholics Anonymous, we called ourselves “Addicts Anonymous”. Two separate fellowships, both calling themselves “AA” was not such a clean break though. So our founders chose the name Narcotics Anonymous. At the time, “narcotics” referred to all drug categories, and so “Narcotics Anonymous” was a reasonable choice as the name of our fellowship. The original title, then, did reflect our philosophy of not being focussed on a specific drug or drugs. Unfortunately, the word “narcotics” later become associated with a particular drug category.

If we were to broaden our focus beyond drug addiction to include other types of addiction, we believe we would seriously damage the atmosphere of identification in our meetings. Yet, we must keep our focus specific enough to provide clear identification for our new members. The balance we strive for is a delicate one.

There are no strings attached to Narcotics Anonymous. We are not affiliated with any other organizations, we have no initiation fees or dues, no pledges to sign, no promises to make to anyone. We are not connected with any political, religious or law enforcement groups, and are under no surveillance at any time. Anyone may join us, regardless of age, race, sexual identity, creed, religion or lack of religion. We are not interested in what or how much any addict uses, what they have done in the past, how much or how little they have but only in what they want to do about their drug problem and how we can help. We have learnt from our group’s experience that those who keep coming back to our meetings regularly stay clean.

We feel that our approach to the disease of addiction is completely realistic for the therapeutic value of one addict helping another is without parallel. We feel that our way is practical, for one addict can best understand and help another addict, given the empathy between the two. We believe that the sooner we face our problems within our society, in everyday living, the sooner we become acceptable, responsible and productive members of that society.

The only way to keep from returning to active addiction is not to take that first dose of drug. We believe that one dose of any drug is too many and thousand doses not enough. We put great emphasis on this, for we know from our experience that when we use drugs in any form or substitute one for another, we release our addiction all over again. Thinking of alcohol as different from other drugs has caused a great many addict’s to relapse. Before we came to Narcotics Anonymous many of us viewed alcohol separately. But we cannot afford to be confused about this. Alcohol is a drug. We are people with the disease of addiction who must abstain from all drugs in order to recover.

In NA we believe that addiction is a physical, mental and spiritual disease that affects every area of our lives. The physical aspect of our disease is the compulsive use of drugs, the inability to stop using once we have started. The mental aspect is the obsession, or overpowering desire to use, even when we are destroying our lives. And the spiritual part is our total self-centredness. We felt that we could stop whenever we wanted to, despite all evidence to the contrary. Denial, rationalization, guilt, embarrassment, dereliction, degradation, isolation and loss of control are only some of the results of our disease. This disease is progressive, incurable and fatal, if allowed to continue unabated. We believe that our disease can be arrested one day at a time. Like a diabetic needs regular doses of insulin to arrest diabetes, our disease can be arrested by not having that first dose of any drug, and coming to a meeting.
How we got this disease is of no immediate importance to us. We are concerned with recovery. In Narcotics Anonymous, our disease of addiction gives us a common standing and here we are introduced to the Twelve Steps, which become the solution to our disease, by their application in our daily lives. They are:

1. We admit that we are powerless over our addiction, that our lives have become unmanageable.
2. We believe that a Power greater than ourselves can restore us to sanity.
3. We make a decision to turn our will and our lives to the care of God, as we understand him.
4. We make a searching and fearless moral inventory.
5. We admit to God, to ourselves and to another human being the exact nature of our wrongs.
6. We are entirely ready to have God remove all these defects of character.
7. We humbly ask Him to remove our shortcomings.
8. We make a list of all persons we have harmed, and become willing to make amends to them all.
9. We make direct amends to such people wherever possible, except when to do so would injure them or others.
10. We continue to take personal inventory and when we are wrong promptly admit it.
11. We seek through prayer and meditation to improve our conscious contact with God as we understand Him, praying only for knowledge of His will for us and the power to carry that out.
12. Having had a spiritual awakening as a result of these steps we try to carry this message to addicts, and to practise these principles in all our affairs.

There is a special feeling for addicts when they discover that there are other people who share their difficulties, past and present. At meetings we share with other addicts, ask questions and learn more about our disease. We learn new ways to live. Whenever we reach out for help, we receive it.

NA meets regularly, at a specified place and time, and recovery is based on the Twelve Steps and Twelve Traditions of Narcotics Anonymous as enumerated above. There are two basic types of meetings: those open to the general public and those closed to the public (for addicts only). Meeting formats vary widely from groups to group. Whatever the type or format a group uses for its meetings, carrying the message of recovery to the addict who is still suffering is the primary purpose of our meetings. For this, we strive to provide a suitable and reliable environment of recovery.

At first we can do little more than attend meetings. Meetings keep us in touch with where we have been, but importantly with where we could go in our recovery. We become acquainted with the fellowship and its principles and begin to put them into action. Our friends in the fellowship help us. Clean, we face the world together.

To ensure that the atmosphere of recovery is maintained consistently in our meetings, we in Narcotics Anonymous base the functioning of the group on our Twelve Traditions. These protect the groups from any digression from our primary purpose. They are:

1. Our common welfare should come first; personal recovery depends on NA unity.
2. For our group purpose, there is but one ultimate authority — a loving God as He may express Himself in our group conscience. Our leaders are but trusted servants, they do not govern.
3. The only requirement for membership is a desire to stop using.
4. Each group should be autonomous, except in matters affecting other groups or NA as a whole.
5. Each group has but one primary purpose — to carry the message to the addict who still suffers.
6. NA groups ought never endorse, finance or lend the NA name to any related facility or outside enterprise, lest problems of money, property or prestige divert us from our primary purpose.
7. Every NA group ought to be self-supporting, declining outside contributions.
8. Narcotics Anonymous should remain forever non-professional, but our service centres may employ special workers.
9. NA, as such, ought never be organized but we may create service boards or committees directly responsible to those they serve.
10. Narcotics Anonymous has no opinion on outside issues; so the NA name ought never be drawn into public controversy.

11. Our public relations policy is based on attraction rather than promotion; we need always maintain personal anonymity at the level of press, radio and films.

12. Anonymity is the spiritual foundation of all our Traditions, ever reminding us to place principle before personalities.

Our service structure is solely geared towards fulfillment of our primary purpose. Our message is that an addict, any addict, can stop using drugs, lose the desire to use, and find a new way to live. Our service structure is depicted by the following diagram:

```
Individual member
  | Group
  | Area Service Committee
  | Regional Service Committee
  | World Service Committee
```

In this structure, power is derived from the individual member, whereby he/she is involved in all the decision making processes. All subsequent levels of service have been created as a means to fulfill the needs of each individual member of Narcotics Anonymous. That is why those of us involved in service consider ourselves “trusted servants” of NA.

Narcotics Anonymous started in India in Mumbai in the early eighties and then spread to other cities, namely Bangalore, Calcutta, Chennai, Imphal and Pune.

About 1200 persons are members of NA in these cities.

Besides these cities, NA groups also exist in Chandigarh, Jalandhar, Hyderabad, Bhutaneshwar, Guahati, Shillong, and Aizwal. We also know of the existence of NA in Nepal, Bangladesh and Pakistan. For further information about Narcotics Anonymous in this region, the following address can be contacted:

World Service Office
P.O. Box # 9999
Van Nuys, CA 91409
United States

Narcotics Anonymous practices cooperation but does not affiliate itself with other treatment facilities. Our sixth tradition is self-explanatory: “An NA group ought never endorse, finance or lend the NA name to any related facility or outside enterprise lest problems of money, property or prestige divert us from our primary purpose.” The Public Information Sub-committees carry the NA message to doctors, clergy, law, law enforcement agencies, media etc., who are likely to come into contact with the still suffering addict.

As will be noticed, one of the constantly recurring concepts in our literature is that of a Higher power or God of our understanding. This God could well be different for each individual member. For many of us God may simply be whatever force keeps us clean. Ours is a spiritual programme and not a religious one. Our concept of God comes not from dogma but from what we believe and from what works for each of us. Each member is free to develop his own understanding of a power greater than himself.

In this article, we have tried our best to share the philosophy of Narcotics Anonymous and to communicate a basic structure of the fellowship and how it functions. Narcotics Anonymous is all this and much more. We, as members, are grateful that we have a chance today to live a social, useful and productive life.
The idea of Therapeutic Community (TC) was originally conceived by T.F. Main and later popularized by Maxwell Jones (1953) in England who summed up the objective, the underlying basic philosophy thus: “the cultural pressure of the (Therapeutic) Community is directed towards the patient’s acceptance of a more useful social role, which may then appear desirable because of his growing identification with the group”.

The aim is to provide a social setting in which patients are able to enhance their self-esteem by assuming greater responsibility, and to make greater use of the therapeutic potential of the whole staff.

In the words of A. Wilmer: ‘It seeks continually to solve its problems in terms of interpersonal relations by helping the patient to identify himself with a social group and through identification modify his social attitude and behavior because of his growing awareness of his role in relationship to other people’.

It emphasizes the importance of socio-environmental and inter-personal influences on the therapy, management, resocialization and rehabilitation of the long term patient.

After detoxification the subject needs to be nurtured by an in-house programme with its goal of enabling him to re-enter the larger community as a successfully functioning drug free individual through the reorientation of his lifestyle.

Entry into a therapeutic community calls for considerable initiative on the part of a prospective resident. Not only must he be successful in the intake interview but he must be deeply motivated to join the programme. Thus, those with insufficient motivation would fail to benefit from a therapeutic community as strong motivation provides an explicit and self-designed reason for a successful applicant to avail of treatment. Although the social status of a new resident is typically low, the neophyte is restricted as to personal possessions, personal visitors and telephone calls. He is assigned household tasks and is expected to perform them well, show concern for fellow residents and to obey the basic rules (no physical violence, substance abuse, etc.). Adherence to the foregoing will evoke increasing degrees of freedom.

The ideal programme is holistic and termed “whole person recovery” going beyond the three modules of primary, secondary and tertiary, with the treatment matrix varying for each patient and the duration ranging from three months to one year depending largely on the motivation of the person.

Generally, it entails a strict daily routine in a protected environment, of time management of meals, sleep, therapeutic duty assignment, relaxation, yoga and meditation with group and individual psychotherapy. Strict observance leads to inculcation of strong inner discipline. The patient and the counsellor work together to identify personal problems and set goals leading to a better life.

Briefly, by living in a TC the subject learns to develop, strengthen and maintain relationships with self, God and others around him. Honesty, trust, gratitude, acceptance and faith are sought to be made part of the recovering person’s psyche.

Thus re-entry into the larger community is accomplished in steps, from being a regular resident to living outside the TC while attending regular group meetings, within the community. As time progresses the patient is discharged from the TC and then considered rehabilitated.

Facilities in the region
The Kripa Foundation has a total of eleven such facilities in India. These are at Calcutta, Darjeeling, Delhi, Goa, Imphal, Kohima, Mangalore, Mumbai, Shillong and Vasai. In all, there are ten counselling centres, six de-addiction centres and ten treatment and rehabilitation centres covering seven States and one union territory.

Organizations like Support, specializing in reaching out to the street child avail of the Kripa Foundation’s treatment facility for aftercare of these children. The ILO project of community based rehabilitation (CBR) has brought organizations working in the slums of “Dharavi” in Mumbai to offer facilities of Kripa to rehabilitate addicts in their own environment. The Sion Hospital Urban Health Centre has been responsible in making the project successful.
There is a continuous flow of referrals from numerous companies and organizations with Employees Assistance Programmes (EAP) for aftercare of these affected individuals.

**PERSONAL CLINICAL EXPERIENCE FROM ONE SUCH FACILITY**

**Structure**
In this piece, we shall confine ourselves to the TC at Andheri (W), Mumbai, also known as DAC. This facility is on the third floor of the Municipal Hospital, Bhardawadi, Andheri (W), occupying an area of 6700 sq feet, one-third of which is allocated for the male facility, one-eighth for the female facility and the remaining area for counselling rooms, counsellor rooms, hall and library, office, pantry, etc.

**Description of Affected Persons**
Thirty males and seven females from various strata of society usually undergo treatment at any point of time. A majority are dependent on alcohol, a few on multiple drugs and are referred by the medical fraternity, the legal, religious and mental health fields, AA, EAP programmes of companies and ILO’s CBR project at Dharavi. The programme is suitably adapted to individual needs. Common tasks for subjects are assignments to elevate their self-esteem, self-image, and a sense of responsibility.

**Staff**
The Project-in-Charge, in this case a senior counsellor himself a recovered addict, is resident on the premises. He is assisted by a psychologist and three experimental peer counsellors with ancillary staff. The medical team comprises a senior psychiatrist, an allopathic physician and a homeopathic doctor with support staff like nurses, ward-boys, yoga instructors, group therapists, occupational and recreational therapists, etc.

**Roles**
The role of the psychiatrist and the physician are marginal in the Kripa model. The psychiatrist assists in dual diagnosis and plays a support role while the physicians’, nurses’ and ward-boys’ role is confined largely to assisting the addict in detoxification and thereafter in a supportive role. Nurses assist in record-keeping and relevant documentation while the ward-boys, themselves recovering addicts, assist in the day-to-day running of the TC.

Any shortfall in manpower is made up by recovered addicts who volunteer their services from the rehab component of the facility.

**Nature of Activity and Interventions**
The Kripa Foundation utilizes minimal medication. The core treatment package is multi-disciplinary in nature, consisting of a modified Minnesota model; yoga, zen, vippasana and even tai-chi. The treatment itself is an absorbing, intensive experience covering group therapy, recreational therapy and combining the twelve step way of life as advocated by Alcoholics Anonymous and Narcotics Anonymous. This twelve step way of life has proved to be most beneficial in bringing about a spiritual revolution within the addict. Yoga therapy is interwoven into the Kripa model.

Kripa conducts its programme in three phases; 5 to 10 days are required for detoxification, following which coping strategies are suggested and the individuals are helped to understand their addiction. The third phase, i.e. rehabilitation, involves returning to normal life while taking into account the self-acknowledged problems of addiction.

The highly structured daily schedule begins at 5.30 am with a wake-up call and ends with lights out at 10.30 pm. Each day begins with a half-hour meditation session, followed by work therapy, group sessions on reading, writing, reflection, sharing feelings, afternoon yoga sessions, and a short meditation period before bedtime.

Every week the medical, para-medical and counselling staff hold clinical meetings to review the progress of each patient and to devise, or rather revise, the existing programme based on his motivation and patient specific needs.

**Duration/Length of Stay**
The length of stay of the patients at Kripa varies from patient to patient. The recommended period of stay from detoxification through de-addiction and rehabilitation is 144 days by which time the patient is able to reintegrate himself into normal life. The reintegration is possible only if the patient is willing to undergo changes in his lifestyle. During his stay at Kripa, the patient is expected to strictly adhere to the schedule in the facility which helps in structuring time and bringing about orderliness in life.

**Outcome**
Between January and September, 1997, a total of 1248 patients were admitted to the various treatment centres (N=11) of the Kripa Foundation. Six per cent were discharged after successful completion of treatment and about 20% were still undergoing treatment. About 17% left treatment prematurely.

After discharge, some patients are transferred to other centres for further rehabilitation. In order to sustain the recovery process, following their discharge patients are also required to report periodically for AA meetings, group and peer discussions, adopt a sponsor, etc.
**Finances**
The Kripa Foundation receives funding from both public and private sources; the Ministry of Welfare, Government of India supports part of the activities and the Municipal Corporation gives concessions in rates for water and other utilities. In case of Employees Assistance Programmes the cost of treatment is reimbursed by the companies. Sometimes private donations are also available.

**Constraints/Difficulties**
The space available is limited so we have to restrict admissions. Often, there are long delays in getting funds from the Ministry of Welfare. Due to paucity of funds, at this time we have no income generation activities, which are an essential component of the rehabilitation programme.

**Other Issues**
At Kripa we have come to realize that “whole person recovery” requires four key steps: (1) practical guidance, (2) encouragement, (3) successful role models who can share their own experiences, and (4) a peer learning group, who share goals of lifestyle change. A learning group often provides each of the four factors in some measure. Above all, it can generate social learning conditions and a culture of change and growth for each member. Thus, Therapeutic Community living instills in a member the strength and confidence to give up the drug habit and reorient his lifestyle.

It is precisely this embrace which is epitomized as under: “For my brother who was dead has come to life again, was lost and is found”. It is through this message of hope, grace and a chemical free existence that the Kripa Foundation is bringing about a healthy lifestyle and belief in human relationships both in individuals and in society.
ROLE OF FAMILY
In this region close family ties are a strong point. Thus, any efficient programme should attempt to involve the family in treatment. While the family is expected to provide help for the subject undergoing treatment, it must not be forgotten that the family also needs help. Often due to the subject's drug-taking the family is distressed and family members' worries and apprehensions should be lessened. During follow-up and in the later part of the treatment phase (rehabilitation) family members' involvement should be more intense. Several remedial measures can be initiated by them, viz. the family can ensure better compliance for treatment, ensure medication and bring the subject early for treatment in the event of a relapse. Simple commonsense advice would often suffice. Detailed principles and methods of family therapy have been avoided here. Interested readers would find them on any standard textbook on substance use disorder management.

OTHER ISSUES
Several other factors influence treatment and outcome. These are availability of and access to treatment facilities, utilization by the persons who need them most, organization, management of treatment centres, motivation of treating staff and finally economic cost and financing of treatment programmes. Information on most of these issues is very scanty from countries in the sub-region. In a large study in USA (Epidemiological Catchment Area Programme), it was reported that, overall, persons with substance use disorder utilized various ambulatory addiction services and admission facilities. About 83 per cent of treated persons were seen in at least one professional setting and 36 per cent utilized voluntary support networks - VSN (e.g., Narcotics Anonymous). The professional sector accounted for 55 per cent of these visits and support networks for 45 per cent of these visits. The visit rate to the professional sector (psychiatric centre, alcohol/drug unit, general hospital, health system) was 10.8 visits per person per year, and 20.6 visits per person per year in the VSN sector. About 14 per cent of total subjects with substance use disorder were admitted to a ward (in-patient) at least once. It was also seen that a large number of persons were seen in non-speciality settings as well (Narrow et al., 1993).

Thus it can be seen that the overall utilization of services was high and a majority were treated from OPD, i.e. they were not admitted to any in-patient facility and treatment by all professionals and non-specialists was carried out. Data from a government treatment centre in India, (published and unpublished) shows that between 30-40 per cent of patients discontinue treatment (drop-out) soon after initiation in a routine treatment facility. Among those who visited more than once, the average visit per person over a 6-month period was 8 (close to findings by Narrow et al., 1993). In a district based community treatment centre in India, about 25 per cent visited more than six times in a year (between March 1996 and February 1997), and about 30 per cent dropped out (unpublished data, Drug Dependence Treatment Centre, AIIMS). However, in the research study on treatment and outcome (buprenorphine maintenance) it was seen that 43 per cent of the subjects made 20 or more visits in 11 months (study period 1993-94) (Mohanan and Ray, 1997). In another study it was seen that those who dropped out from treatment were under-prepared or poorly motivated. In psychological terms, they were in the “pre-contemplation phase” rather than in the “contemplation” or “action” stage. Thus many subjects, even though they have reported to treatment centres, would need additional help to enhance motivation to participate in treatment and increase their commitment to change (Samanta Ray et al., 1997).

About 3.9 - 6.5 per cent of total patients were admitted to the in-patient facility in a year over a six year period (1989-94) in an apex centre in India (Drug Dependence Treatment Centre AIIMS, 1996a). In Sri Lanka, between 81 - 98 per cent of all admissions took place in the government facility between 1991-95 (NDDCB, 1996).

COMPARATIVE STUDY, 1994
A study of organization and management of substance abuse treatment centres in Delhi was carried out (Rizvi, 1994). This study was sponsored by WHO, SEARO. Altogether 15 centres were studied; GO - 5, NGO - 7 and private sector - 3. Information on the organization, management and performance of these centres was collected through questionnaires and interview schedules from 109 professionals at these centres, 72 patients and 35 family members of patients.

GO VS. NGO VS. PRIVATE SECTOR
- Employee strength was higher in GOs than NGOs
- In most GOs and private centres, care of psychiatric patients was a higher priority, substance abuse treatment was a secondary responsibility
- Hierarchy was significant in GO and not so in NGO/private sector
- Role clarity and responsibility of an individual was less clear in NGOs
- NGOs had higher bed strength and higher patient load
- Infrastructure was grossly inadequate in all three sectors, more so in NGOs.

PROFESSIONALS INVOLVED IN TREATMENT
- In general they were young: between 30-40 years of age
- Most professionals in GOs and the private sector had academic qualifications relevant to their present job
• About 56 per cent in NGO s displayed a mismatch between their academic qualifications and job roles.

**Work Load / Job Satisfaction**

• Patient load as per individual professional in GOs and private centres was lower than in NGO s
• Majority of the professionals had high level of work motivation but moderate level of job satisfaction
• Professionals in NGO s and private centres had low level of motivation.

**Treatment Programme**

• On an average these patients visited seven times before their admission to the GO and NGO centers
• Treatment was free in GO centres, very expensive in private centres and moderate (Indian rupees up to 1000 per person, about US $26) in NGO centres for in-patient treatment for 15 days
• Most often, patients were admitted for 11-15 days; in some cases for 21-30 days
• Treatment modality was flexible and no centres had made any effort towards patient-treatment matching
• Drop-out rates were high
• Family members were not adequately involved in the treatment process
• Many in-patient facilities were not totally drug-free, i.e. illicit substances made their entry in the ward
• The rehabilitation programme in most of these centres was grossly inadequate. (Rizvi, 1994)

The author offered several suggestions for improvement. These included specialized training for centre professionals, enhanced treatment duration, provision for well co-ordinated rehabilitation programmes and upgrading of infrastructure and other facilities.

**ECONOMIC ASPECTS**

Some authors have examined the area of hospital economics and financing of health care in developing countries. Most have felt that there are several inadequacies. These include technical inefficiency, little provision of incentives for improved performance and most hospitals (in-patient facility) have relied almost exclusively on government financing (Newbrander et al., 1992). In a large country like India, where delivery of health care is largely the responsibility of State governments, central government’s contributions to state health spending are based on matching grants. Thus States that are already spending more are rewarded. This reinforces inter-State differences in health spending. It is difficult to get cost estimates from government hospitals. However, it appeared that for general health care the lowest income group spends much more (about 24 per cent of annual income), as against the higher income group (about 4 per cent of annual income) on private medical expenditure. Care in a private centre is very expensive. Further, it has been seen that in this region, India spends much more money on secondary/tertiary care hospitals and medical training/research. This has been achieved at the expense of basic health care. Another group of experts felt that the total volume of resources was not a major constraint in India (Deolalikar and Vashishta, 1996). India spends considerably more on health (per cent of GDP) than most other countries in Asia (Annexure 6). The above discussion is not specifically addressed to the drug de-addiction programme in the government sector. However, this is the general milieu of the health system in which the treatment of drug dependent individuals operates in government hospitals.

As important as assessing the outcome and efficacy of a programme, is estimating cost of a treatment method and then analyzing its cost-effectiveness. Such an exercise attempts to determine which course of action should be pursued, given scarce resources. A well designed outcome study (follow-up) is quite expensive. Rarely can the subjects be randomly assigned to a given treatment modality in drug abuse research. Ethical dilemmas do not permit a group to receive ‘no treatment’ for the purpose of comparison. Thus there are severe limitations in quantifying the efficacy of a given treatment modality in monetary terms. Some others have attempted to address the issue of a cost-benefit analysis. Basically, an economist’s view of expenditure towards treatment is used. Estimating the cost of a drug abuse treatment programme is not very difficult. However, calculating benefits is much more complicated. Societal/individual benefit/loss due to drug abuse is even more difficult to compute. Assessing the value of less tangible benefits or future long term benefits in family interaction in arithmetic and financial terms is very difficult. Still, many have attempted to do this. NIDA, USA, has developed guidelines to examine these issues. It has been suggested that such studies should look into (a) individual programme profile, (b) treatment modality, and (c) summary report. Actual post-treatment outcome data are frequently not available during such an exercise. The data is thus imprecise. However, such studies set in motion the process of improving basic data gathering systems towards more exhaustive evaluation (Des Jarlais et al., 1981; Cartwright and Kaple, 1991). As yet, not much effort has been made, nor much interest shown in the sub-region with regard to calculating the economic cost of drug abuse, cost-effectiveness and financing of treatment programmes. Soon the countries in the region will require such exercises to improve delivery of drug abuse treatment. Economists and profession-
als engaged in treatment would have to work together. It is obvious from the above description that planning a cost-effectiveness study is very tedious.

An alternative project/modality evaluation would be to look for standards of good clinical practice, scientific soundness, treatment effectiveness, and credibility of outcome parameters. In a quasi-experimental fashion, a process evaluation can be carried out and has been recommended by WHO. A treatment modality can be categorized as low intervention (only pharmacotherapy) or high intervention (high dose pharmacotherapy and other psychosocial therapy). Additionally, treatment compliance, treatment retention and subject’s satisfaction should be looked into to decide on the soundness of a programme.

**COUNTRY PROFILES**

Development of treatment services in this region has already been discussed in the chapter on national drug demand reduction programmes (chapter VI). Hence these are summarized here. Various focused descriptions on a number of intervention strategies are presented as box items in this chapter by several authors. Community based treatment is discussed in the next chapter.

**Bangladesh**

The first exclusive treatment centre for drug dependence was established by the government in early 1988 with a bed strength of 25, subsequently upgraded to 40. Three more centres in three cities have subsequently been set up, each with 5 beds. Currently, there are ten other treatment centres in the NGO sector and their bed strength varies between 6 and 75 beds (a total of 190 beds are available).

Two very distinct treatment models have been developed. The “Medical Model” is practised mostly in the government treatment centres staffed by medical professionals. The other, the “Ashram Model”, is run by non-medical social activists in the NGO sector. Most of the centres have both residential and out-patient facilities with varying degrees of emphasis on rehabilitation. Detoxification is still the primary emphasis. There is one exclusive treatment centre for women though it is mostly underutilized. There are plans to develop a community based camp approach and include the existing general health care facilities (PHCs - tertiary care hospitals) in future. The activities are monitored by the Department of Narcotics Control (DNC).

**India**

In India, treatment centres have been established both in government hospitals supported by the Ministry of Health and by NGOs supported by the Ministry of Welfare. So far, in the health sector, 72 centres in various States have been established. Seven of these are located in premier teaching hospitals of the country, and 64 in various State medical colleges, district hospitals, and civil hospitals; one centre in a prison is supported by the health ministry. They receive financial grants for infrastructure development and some for recurring expenditure as well. The strengthening of these centres has been proposed. The Project Management Cell, Government of India, monitors the activities, delivery of care, service load, etc. periodically (Country Profile, India).

Till March 1997, the Ministry of Welfare had established 218 counselling centres and 123 de-addiction centres (all NGOs). In 1996-97, a total of 3,05,098 persons were registered and 1,14,831 were detoxified. About 3500 beds are available between these centres. Besides providing short term treatment, these centres also carry out various community awareness activities, rehabilitation and aftercare services. The activities are monitored by the central Ministry of Welfare (Country Profile, India). A large number of NGOs are active. These include services in prisons and community based organizations. Other facilities include self-help groups like NA (see Box Item-22), indigenous systems of medicine (see Box Item-24) and private practitioners.

**Maldives**

The Ministry of Health has already initiated certain measures. The government has established one residential rehabilitation centre (temporary); the permanent one has been constructed and will be operational very soon. Counselling services are available in one government hospital. One NGO is complementing the various efforts initiated by the government.

**Nepal**

At present most of the activities are carried out by NGOs. There is, however, one government treatment centre with 12 beds. There are five active NGOs, and between them they have 102 beds. There is one therapeutic community centre functional in a prison. From January, 1994, Nepal had an established centre for methadone maintenance through a government mental hospital (see Box Item-21), and another for various harm minimization activities including a needle and syringe exchange programme, since 1997 (see Box Item-20). Ministry of Home, Narcotic Control Division and DADRPO are the nodal agencies for implementation (Country Profile, Nepal).

**Sri Lanka**

There are four de-addiction centres with a total of 143 beds in the government sector. Several NGOs (about 22) are active under the organization FONGOADA. Between them, they have 30 beds. Rehabilitation and aftercare
services are carried out with social and community support. Low cost intervention strategies including the camp approach, domiciliary care and open community approach have been clinically tested and popularized. Treatment services are also available in one prison. Between 1991 and 1995 a total of 6344 admissions took place and most were males (99 per cent). NDDCB is the nodal agency for all drug abuse control programmes including treatment and aftercare services (NDDCB, 1996; Country Profile, Sri Lanka).

Several NGOs have been very active in this region. A subsequent chapter (X), with Box Items (30-35), outlines these activities.

To conclude, it can be seen that there are various components of a treatment programme of variable intensity and duration. Not every centre needs to do everything. What is important is that subjects should have a choice and a wide array of treatment services should be available. In an area (town/city) where prevalence of drug use is high, particularly injectible opiate use, measures must be taken to upgrade hospital casualty service. Lives can be saved through emergency medical interventions and use of opiate antagonists. It should be the responsibility of the government to upgrade casualty and make naloxone available. This is the most cost-effective measure.

Treatment of drug dependence disorder receives low priority in a developing country where there are many other competing priorities. However, some measures have been initiated in the region and some centres are functioning well. There are still several systemic inefficiencies. These need to be looked into, evaluated and modified. Appropriate tools and methodologies have been developed elsewhere, and these can be easily applied in this region too. Of course, nothing can be planned and no progress can take place without a good data base. Thus, a system must be developed for collection and dissemination of information, with a nodal agency. After some progress is made, quantitative as well as qualitative data on organizational structure, treatment efficacy, outcome and economic aspects of delivery of care should be examined. Even with limited financial outlay quite a few of the above are possible and the delivery of care can improve. This would mean money well spent. Resources from formal funding institutions for rehabilitation will be limited, and this will thus be the responsibility of families. However, there is no cause for despair as family ties are quite strong in the region. Thus with the family’s involvement adequate rehabilitation will be possible. For some individuals, who do not have adequate social support, the government will need to step in.


5. Drug Dependence Treatment Centre (1996a): ‘Drug Dependence Treatment Centre — A Brief Sketch’. All India Institute of Medical Sciences, New Delhi.

6. Drug Dependence Treatment Centre (1996b): ‘Community Treatment for Substance Use Disorder’. All India Institute of Medical Sciences, New Delhi.


The increasing sophistication of modern medicine, rising administrative costs and the parallel expansion in training and specialization has led to the skyrocketing of health care costs all over the world. This has led to a situation where even people in developed countries have inadequate health coverage, though people in this region (South Asia) are probably the worst affected.

According to WHO, traditional medicines are the primary sources of health care for 80 per cent of the world’s population. Fortunately, India and many other countries in the region have well developed and effective Indigenous Systems of Medicine (ISM) — Ayurveda, Siddha, Unani, Tibbi, Yoga and Naturopathy. These systems have been in vogue in the Indian subcontinent for centuries and continue to provide medical relief to the majority of the people of this region. Now fresh efforts are being made to develop these systems so that they can make an even more significant contribution to the health care systems of this country.

These systems come from an established tradition and are based on their own fundamental principles. However, traditional medicine usually elicits one of four attitudes.

**Monopolistic** : Modern medical doctors have the sole right to practice medicine.

**Tolerant** : Ayurvedic practitioners or those of other indigenous systems of medicine are not officially recognized, but are free to practice on the condition that they do not claim to be registered medical doctors.

**Parallel** : Practitioners of both modern and Ayurvedic systems are officially recognized. They serve their patients and offer their services through separate mechanisms.

**Integrated** : Modern and traditional systems of medicine are jointly practiced. This has been discouraged in India but is prevalent in China and Vietnam.

**INSTITUTIONAL STATUS OF ISM IN INDIA AND OTHER SOUTH EAST ASIAN COUNTRIES**

**India**

There are at present more than 0.5 million listed practitioners of Ayurveda, Unani and Siddha, excluding Yoga and Naturopathy. Broadly, every alternate village in India has one practitioner of ISM. The Central Council of Indian Medicine was established in 1970 to regulate education and standardize professional practice. Three separate research councils for the disciplines of Ayurveda and Siddha, Unani, Yoga and Naturopathy under the Societies Registration Act were set up from March 1978 onwards to conduct research on fundamental and applied aspects. These are fully financed by the Department of Indian Systems of Medicine, Government of India. The Drug and Cosmetic Act was modified in 1970 to regulate proprietary and classical preparations of Ayurveda, Siddha and Unani. The pharmacopoeia laboratory at Ghaziabad, U P, working under the Pharmacopoeia Committee of the Government of India, supervises quality control measures. Recently, a pharmaceutical corporation for ISM has become functional at Haldwani, U P.

Currently, India has about 14,000 dispensaries, 2300 hospitals and 8000 pharmacies of ISM. The majority of these (90 per cent) practice Ayurveda. Altogether, 180 institutes impart training — 30 are postgraduate institutes, two are national institutes.

ISM’s offer diverse services and are to be found largely in rural rather than urban areas. They are operated by both the public and private sector.

Apart from India, other countries like Bangladesh, Myanmar, Nepal, Sri Lanka, and Thailand have a large number of ISM practitioners and training institutions of traditional medicine, especially Ayurveda.

**Sri Lanka**

There is a separate Ministry of Indigenous Medicine with a Department of Ayurveda and the Sri Lanka Drugs Corporation. The Department of Ayurveda includes the Ayurvedic Medical Council, Ayurvedic Research...
Committee, Ayurvedic Education and Hospital Board and Ayurvedic Drugs Formulatory Committee. There are six herb gardens and 42 Ayurvedic hospitals at the district level in rural areas. The Bandarnaika Memorial Ayurvedic Research Institute at Colombo undertakes higher education and training. A department of Siddha Medicine has been established in the University of Jaffna.

Bhutan

Most traditional Bhutanese physicians practice the Tibetan system of medicine. At the Tibetan School of Medicine established at Dzhamshala in Himachal Pradesh in India, 30 students are given four years training in Tibetan medicine. There is a small dispensary at Thimphu where medicines are prepared from raw drugs available in Bhutan, and dispensed. The indigenous system of medicine in Bhutan is a modification of the indigenous system of medicine in India. Many Lamas study Ayurvedic literature in Tibetan monasteries; their physicians are called Tonsa.

Methods of treating Drug Dependent Disorders: Ayurveda, Yoga, Unani, and Naturopathy

It has been seen that various treatment centres apply the techniques of Yoga and Naturopathy successfully, as part of allopathic treatment and relaxation therapy. Simultaneously other ISMs especially Ayurveda, Siddha and Unani can also provide beneficial effects in the prevention and cure of drug addicts. Their use in the treatment of drug addicts is easily accessible to all, and cheap as well. Unlike allopathic treatment, alternative systems of medicine have few side effects. However, no systematic approach to the problem has been worked out and most of these systems have been used in conjunction with each other.

Ayurveda

The problem of addiction was recognized by Ayurvedic practitioners very long ago. Characterized as Madatayaya (Panatyaya), this was sub-classified into four stages — Panatyaya, Parmada, Panajeerna and Panavibhrama. The approach from the Vedic period onwards has been to treat addiction through ‘Sattavavajaya’ (psychotherapy) and Panchakarma therapy (five purificatory measures), along with selected drug preparations.

The system of Ayurveda outlines the problem of drug abuse under the Tridoshas (3 humours) and Srotodusti (micro- as well as macro-channels). It has been argued that the ultimate manifestations of the Sapta-Dhatus (Rasa, Rakta, Man, Moda, Asthi, Majja and Shukra) contain less ojas. Different schools of Ayurveda have variations in their treatment of drug abuse. Some others prescribe Sadvritpalan (personal hygiene), dietic regimen, precautions for seasonal variations, and seasonal alternatives to provide overall solutions.

The above contentions can be summarized as part of Satvavajay (socio-psychotherapy) and Yuktiyupapashraya chikitsa (medical measures clubbed with single and compound preparations specifically designed for this purpose).

Select treatment suggestions: Mentions of treatment for specific abuses in the classics are scattered and individualized. Certain studies have been made and these should be disseminated among addicts. The treatment can be rendered both through OPD (out-patient departments) and through a resident scheme. Here are a few examples of treatment:

- Kairala tail, Madhuyast, Anutail
- Shirodhara (Dharkalpa) Takra Dhara, Amalki, Kashyaya, Yastimadhu tail, Brahmi tail
- Pizhinchil (Karaliya method)
- Aswagandha Skiripaka
- Basti
- Drugs:
  a. Panak, e.g. Imali, Anardana, Kakam, Falsa
  b. Amla Takra, e.g. Amla Tandra, Panir ka Pani (Phate doodh ka whey) Khajoor, Munakka
  c. Nimbo and Nimboo preparations
  d. Hepato-protective drugs of Ayurveda (Kutaki, Kakamanchi, Rohitak, Kasani, Amrita, Bringraj)
  e. Medya Rasayana Ashwagandha, M andukparni, Vachha, Shankhpushpi, Brahmi
  f. Virechan (according to requirements of the patient)
  g. Single drugs [Ashwagandha, Shankhpushpi, Katamansi, Yastinadhu, Brahmi, Shatavari Vishmusti, Parasik Yavani, Hingu, Rai, Souf (seeds), Sua (seeds), Vachha, Tulsi Mangari, Kapi Kacchhu, Sarpagandha, Shivpriya, Dasuheradra]
  h. Compound drugs (Saraswat Churna, Brahmi Ghrita, Brahma Rasayan, Kalayan Ghrita)
  i. Aahaar (Dieb) [Ojovridhi aahaar, e.g. milk, M ung, Parushak (Falsa) Kapitha, Dadim, Khajur, Amala, Munakka, etc.]

Unani and Tibbi

The Unani system of medicine has been prevalent in India for centuries. The system advocates a simple and balanced way of life and the medicines used for treatment of drug abuse are mostly from natural sources. The Unani system recognizes the influence of surroundings and ecological conditions on the state of people’s health, and lays great stress on keeping water, food and air free from pollution. Certain selected measures for treatment of narcotic addiction are discussed below.
Domiciliary Treatment:
Majoon, Hilteet, Abhal, Junds Bedastar, Fil Fii Siyah, and sugar. 3 parts of the total weight; 6 gm two times a day with Joshanda of Darchini 6 gm, water 180 ml. Hub-e-Zahar Mohra, two pills two times a day. Afiun and Raswath Hub-e-jidwar 2 pills with Kameera-e-Gauzan Jidwar Ood-e-Saleeb wala 6 gm. Rogan-e-Badam — massage on cervical and dorsal vertebrae. Aab Zan, with hot salt water (external hot water bath), Saboos-e-Ispaghul, 6 gm at bed time.

Yoga
Yoga can very successfully act as a complement to any system of medicine and has been used to treat drug addicts in many cases. It helps to strengthen the individual’s will power and self-esteem, and lends them a sense of discipline.

Cleansing processes such as Jalneti, Vastra-Dhauti, Kujjal, Sutra Neti, Shankh Prakshalan, etc., are generally prescribed to all drug addicts. The purpose is to keep the system internally clean, and the yogic cleaning process helps to eliminate toxins produced within the system. The entire alimentary canal from the mouth to the rectum is thoroughly cleaned, and this can also reduce the severity of withdrawal symptoms experienced by the addict.

Selected asanas are advised, depending on the addict’s age and physical condition. Some 84 asanas are found to be effective, including Tarasan, Padmasan, Sidhasan, Bhujangasan, Dhanurasan, Pawan Muktasan, Gomukhasan, Gorud Asan, Sankatasan, Vajrasan, Kagasan, Dhruw wasan, Padangusthasan, Urdha Sarvargasan, and Shalabhasan. These help to tone up the nervous system, and exercise all the joints and muscles of the body and the movement of the spine in all the four directions—forward, backward, right and left.

Pranayama, i.e. regulation and control of breath is a very useful technique. Sitali, Sitkari, Ujjai and Lom Vilam are some of the Pranayams advised to addicts, but must be performed under expert guidance.

Meditation is another very effective means of keeping oneself quiet and peaceful. If taught under expert guidance it may lessen the severity of withdrawal symptoms and help the addict in dealing with psychological and psychosomatic problems.

Nature cure
Nature cure treatments are hospital based and last from about four to six weeks. The hospital should have a natural and encouraging environment, which helps the patient to recover faster. Patients are under the direct care and supervision of Naturopathy physicians. Group meetings with family members and friends are arranged to educate them during the treatment and follow-up periods. Further progress is monitored through OPD follow-up.

Nature cure camps for 30 days can also be conducted at various places. The principle of treatment for all types of drug addiction is the same but may vary from patient to patient, depending on the withdrawal symptoms. There are three stages:
- Detoxification stage—mild and extensive cleansing
- Soothing stage
- Constructive stage.

General line of treatment: The general nature cure procedures adopted in treatment of drug addicts are as follows:
- Colon cleansing — Mud packs and colon irrigations. (Hot, cold, luke-warm, or hot and cold alternate, as may be required)
- Hip Baths
- Sitz Baths — Hot or cold or alternate, they produce wide-ranging effects depending upon duration and water temperature.

These measures stimulate the elimination processes and also tone up the nervous system. Several types of hydrotherapy measures are also employed to induce different physiological and therapeutic effects.

Other
Chromotherapy can also be used to treat drug addicts. Blue, green and brown (yellowish red) colours are employed according to the patients’ condition; charged water, sugars and oils are also used. Blue is used for nervous conditions and for cooling effects; green for sedative effects and brown (yellowish red) for stimulating effects and as a pain killer. Glasses, lamps and clothing of different colours may also be employed. For body aches, pains, cramps, depression, fatigue and many other conditions, hand, belt and vibrator massage can be employed to considerable effect.

Deep breathing procedures are very useful for drug addicts. This helps not just the respiratory system, but can alter the mental condition of the addict in beneficial ways. Jogging, walking, jumping, running and physical exercise is also advised.

General body building and hygienic measures, psychotherapy, spinal manipulations, reflexo-therapy, sun baths, mud baths etc. are employed according to

152 VIII : Treatment, Aftercare and Rehabilitation
requirements. In about 30-40 days, addicts who have undergone this line of treatment tend to adapt themselves to the natural way of life. Many find it easier to regulate their day-to-day activities on a normal and natural basis.

**ISM’s Future Role**

While discussing the acceptance of the role of ISM and its practitioners in the treatment of dependence disorders the following guidelines are suggested:

- ISM systems may be accepted as they stand.
- Popular practices from ISM may be assessed and then accepted.
- The specific areas which have gained prominence in ISM may be allowed to constitute the specialized component of the medical care of such patients.
- The specialities of ISM systems of medicine should be practised where modern medicine is unable to make any headway.

**References:**