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Approaches to Treatment of Substance Abuse

WORLD HEALTH ORGANIZATION

ABSTRACT

The aim of this report is to provide an updated description of different methods used around the world to treat health problems associated with substance use.

The scope of treatment approaches currently practised around the world is wide, ranging from traditional healing practices via mutual self-help groups, psychological/behavioural treatment to pharmacological treatment.

Also included is a chapter on the generalist responses to alcohol and other drug problems and a chapter on the concept of harm minimization.

Another aspect is a chapter on specific descriptors, which distinguishes different treatments from one another and provides economic means of describing them. Social and structural extra-treatment factors influencing the treatment process are also a subject described in this report.

CONTENTS

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INTRODUCTION

This report is an attempt to provide an updated description of different methods used around the world to treat health problems associated with substance use. Its structure was developed at two consultation meetings held in 1991 (in Moscow, Russia, and in St Petersinsel, Switzerland) organized by the WHO Programme on Substance Abuse and supported financially by UNDCP.

All the chapters reflect the points of view of their authors and do not represent official WHO policies or recommendations. Whilst every attempt has been made to be as comprehensive as possible, it is obvious that the choice of where to put emphasis is somewhat arbitrary. The chapters have been edited only so as to ensure reasonable consistency of terminology. It is obvious that some chapters and sections thereof or particular techniques or interventions will have greater applicability to certain areas of the world, population groups or culture.

Because of lack of space, many issues could not be discussed in as much depth as they merit. For example, in the chapter on pharmacological treatments, the description of the use of benzodiazepines in the treatment of alcohol withdrawal. Other examples include rather brief discussions of the trend in some countries to merge alcohol and drug dependence treatment services and of the problem of providing suitable treatment for those suffering psychiatric co-morbidity. There are probably many more such examples, but it is hoped that they will not detract from the main thrust of the report, which is to describe in broad terms the range of treatment approaches currently being practised around the world.

A companion report entitled *National Drug and Alcohol Treatment Responses in 23 Countries*, WHO/PSA/93.15, provides another view of this topic by analysing the results of a key informant enquiry undertaken in various countries in the developed and developing world. The two reports should be read in conjunction with one another.

I. DESCRIPTORS OF TREATMENTS

POLONIUS: The actors are come hither, my lord...The best actors in the world, either for tragedy, comedy, historical, pastoral, pastoral-comical, historical-pastoral, tragical-historical, tragical-comical-historical-classical, scene indivisible, or poem unlimited...

Hamlet, Act II, Scene ii

Poor Polonius' bumbling attempt to categorise dramatic presentations runs into difficulty very quickly because of their great variety. Treatments may be viewed as the theatre of the alcohol and drug field, in which the differing actors (here in the generic sense) play out their several roles in accord with a scenario that is predetermined to at least some degree. The classification of treatments, like that of theatrical presentations, becomes problematic in the face of their massive diversity.

Are treatments for alcohol and drug problems truly diverse? The empirical evidence is affirmative. At the WHO Consultation Meeting on mapping the treatment response to alcohol and drug abuse, held in Moscow, 28-31 May 1991, there was a consensus that "treatment responses to alcohol and drug abuse vary considerably around the world" (WHO, 1991). This variability has also been noted within individual countries. A report from the USA (Institute of Medicine, 1990) observed that "there are now many different methods of treatment for alcohol problems". The foregoing material in the present report amply supports these statements.

Polonius' classification dilemma thus extends to the present discussion. No consensus has arisen on the classification of treatments for alcohol and drug problems. A taxonomy of treatments, as the desired classification is sometimes called, has proven elusive. Perhaps the reason is that treatments, being complex, have multiple salient characteristics. A taxonomy requires that a hierarchy be constructed in which certain characteristics are given more weight in the process of classification than others. It has been difficult to achieve agreement on which of the many characteristics of treatments are of greater relevance.

In this chapter, no attempt will be made to create a taxonomy. Rather, a number of critical dimensions on which treatments tend to differ from one another will be discussed. The overall goal will be to arrive at a small set of specific descriptors that can both distinguish different treatments from one another and provide an economic means of describing them. If agreement can be reached subsequently that some descriptors are more important than others, it may prove possible to construct a true taxonomy. Alternatively, however, the dimensions could become elements of a database that would permit the exploration of the properties of treatments in a systematic and interactive manner.

The art of describing treatments in this field is not well developed, and the present chapter should be considered tentative rather than definitive. Discussion and commentary will modify the proposed matrix. For the moment, however, a dozen descriptors of treatment will be discussed. They are listed here for convenience (a more complete listing, with subheadings, may be found in Appendix I) and are further defined in the balance of the chapter. The descriptors to be considered include the following:

- modality
- philosophy
- stage specificity
- setting
- target
- provider
- time frame
- efficacy
- cost
- availability
- utilization
- organizational characteristics.

Before proceeding, a distinction should be made between treatments and treatment programmes. Treatments are specific activities directed at individuals who have alcohol or drug problems or at other interactive units to which they are related (see discussion under "Target" below) in the hope of improving their status. Treatment programmes are the administrative contexts within which these specific activities occur. A given treatment programme often offers only one form of treatment (Glaser, Greenberg & Barrett, 1978). However, some programmes (so-called "multimodality" programmes) offer more than a single treatment. In applying the following descriptors of treatments to a treatment programme, it may be most appropriate initially to determine whether more than one kind of treatment is being offered within the context of the programme, and then to apply the descriptors to each of these treatments in turn.

MODALITY

As the Institute of Medicine report notes, the "specific activities that are used to relieve symptoms or to induce behaviour change are referred to as modalities" (Institute of Medicine, 1990). In the same paragraph the term "modality" is viewed as denoting the content of treatment. This descriptor heads the list because it defines what is being described. It is quite specific; for example, the clinical deployment of a particular drug such as methadone or a particular psychotherapy such as Rogerian client-centred counselling, for instance. Other descriptors, such as philosophy or stage of treatment, are more inclusive, will potentially contain within them many modalities, and are therefore often what is discussed first when varieties of treatment are being described (Institute of Medicine, 1990). But when a treatment is being selected for use, it is commonly the modality that is the operative descriptor.

In addition to identifying the modality by name, this descriptor should probably contain three additional elements: the type of modality, the therapeutic strategy that it employs and the goals that it is attempting to achieve. Each of these elements will be discussed in turn. An attempt will be made to categorise within each element, though this will not always be possible in the current state of knowledge.

Types

Five broad types of modality can be readily identified: **biophysical, pharmacological, psychological, sociocultural and mixed modalities** that combine more than a single type. To give some examples, the passage of an electric current through the brain, extra- or intracranial cooling of portions of the brain, or the insertion of needles into the skin would be considered a biophysical modality. The use of methadone, disulfiram or other drugs would be considered a pharmacological modality, while a therapeutic community would be considered a sociocultural modality.

A problem immediately poses itself regarding the "purity" of the classification scheme. It could be argued, that the use of methadone is best classified as a mixed modality, because elements such as counselling and job training are ordinarily employed at the same time. But it will quickly be seen that, if this approach is used, almost all modalities will be classified as mixed. It may be preferable to try to be as rigorous and as diverse as possible in using the typology suggested, and to consider the counselling that may accompany methadone treatment as an additional modality or as an adjuvant not requiring separate classification.

Another problem is posed by traditional methods of healing. It is tempting to create a special category for them. However, traditional methods are quite diverse and to lump them together in a single category will obscure their diversity. Those that involve primarily the administration of substances derived from plants or animals might best be characterized as pharmacological modalities, while those that primarily employ rituals might be characterized as sociocultural. Others, such as the peyote ceremony of the Native American Church, are perhaps most accurately classified as mixed, the caution entered above against the overuse of this category notwithstanding. The reason is that both the pharmacological effects of the drugs and the careful structuring of the ritual seem equally important contributors to the overall experience (Bergman, 1971).

Strategies

Although with further experience it may become possible to categorize strategies, at the present time they are best explained by narrative description. The strategy utilized in a given modality is the means by which that modality attempts to achieve its goals. In a way, it is an answer to the question, "How does it work?" Perhaps the best known description of a strategy for the treatment of alcohol problems is the 12 steps of Alcoholics Anonymous (AA). The steps outline in a detailed but succinct and sequential manner the way in which an individual AA member should attempt to achieve the goal of sobriety. It is not too much to say that the carefully crafted account of its strategy is one of the principal attractions of AA and it is not surprising that it has been widely imitated by other mutual help organizations.

To provide an example from another type of modality, the strategic approach of disulfiram (antabuse) administration involves creating the fear of a markedly distressing physical response to the ingestion of alcohol through the daily administration of a drug that inhibits alcohol metabolism and causes the accumulation of a highly toxic compound, acetaldehyde. Because of the high probability that alcohol consumption will result in this reaction, consumption is avoided, or so the theory goes. A second strategic element in the use of disulfiram is a consequence of the relatively long duration of its action; once a

sufficient degree of loading has occurred, the drug need be taken only once per day. This can be done at a time of day, usually in the morning, when the desire to drink is characteristically low, and in a sense limits the number of daily decision points around whether to drink to a single one i.e. the decision to take the drug. A further strategy sometimes deployed in disulfiram treatment is the supervised or even enforced taking of the drug, though some feel this procedure raises serious ethical and legal concerns (Marco & Marco, 1980; Schafer, 1981).

Psychoanalytic psychotherapy provides an example of a psychological strategy. Significant conflicts of early development are recreated through the medium of an intense relationship with the therapist (the so-called "transference"). These conflicts can then be worked through to a resolution. This in turn allows the resumption of the arrested developmental process that is viewed as the ultimate cause of the problematic behaviour. Relapse prevention provides another example of a psychological strategy: situations in which there is a high probability of drinking are identified and alternative methods of coping with these situations are developed, rehearsed and implemented. In some instances a short-acting antabuse-like drug, carbamide (Temposil), is used as an early coping alternative (Peachey & Annis, 1985), but the eventual goal is to develop non-pharmacological coping responses. Hence relapse prevention of this kind is best understood as a psychological modality, even though a drug may be used as a temporary measure. Alternatively, as with the counselling component of methadone maintenance treatment (see above), the pharmacological aspect of this kind of relapse prevention could be separately described.

These examples demonstrate that the description of the strategy of a treatment modality is an attempt to capture its distinctive characteristics in a nutshell. For such an attempt to succeed requires thorough familiarity with the modality. It also requires a degree of willingness to endure criticism, since many practitioners will not be sanguine about any attempt to describe what they do. They are correct in thinking it is not an easy task. Hopefully they may at length be recruited into the attempt, the process of consensus development is important in elucidating strategies. With greater experience, a direct and simple means of categorizing strategies may be developed.

Goals

In terms of the possible goals of treatment modalities, the first is to modify alcohol or drug taking directly. While virtually all modalities have an ultimate goal of reducing or eliminating alcohol or drug consumption, few actually target consumption itself. Changes in consumption frequently lie at the end of a chain of modifications of other factors that are produced by various treatments. For example, there are a number of drugs that reduce the reuptake of the neurotransmitter serotonin at synaptic clefts in the central nervous system and this in turn may result, several steps down the line, in reduced alcohol intake. However, treatment approaches that systematically teach elements of drinking behaviour, such as sipping rather than gulping drinks, or that set rules for the number of drinks per occasion or per time unit are examples of treatment approaches that attempt to modify consumption directly.

The goal of other treatments is to modify the antecedents of alcohol or drug taking. Some persons increase their consumption of alcohol when they become depressed or anxious and, in these instances, treatment of their mental state is undertaken both for its own sake and in the hope of reducing the consumption that is felt to be its consequence. A deeply troubling traumatic life event may create continuing distress that

can be associated with excessive use of alcohol or drugs. Effective treatment of this post-traumatic stress disorder is indicated to relieve the alcohol or drug problem.

In some instances, aversive environmental or interpersonal stresses such as a high-pressure job, a chaotic family situation or a chronically pathological marriage may become the antecedents to quite severe alcohol or drug problems, and dealing directly with these stresses may be the treatment approach of choice. A cautionary note, however, should be sounded here. While some instances of alcohol and drug problems can be related to clear-cut antecedents, experience suggests that many such problems have no definable antecedents. Moreover, even where antecedents exist, alcohol and drug problems, especially those of long duration, may become autonomous and perpetuate themselves quite independently of whatever their initiating cause may have been historically. In such an instance, dealing with the antecedent would have no effect on the problem. Hence the goals of treatment, as with treatment itself, must be selected with care and must be tailored to the individual case.

Finally, a modification of the consequences of alcohol or drug consumption may be the goal of treatment. Liver transplantation is one example; the "insobriety pill" that has long been sought is another. To date, no systematic review of the goals of treatment for alcohol and drug problems has been undertaken. Hence it is not clear which of the three goals is most frequently attempted. It is quite difficult, however, to enumerate examples of treatments directed at consumption or at the consequences of consumption. This may suggest one possible use of detailed treatment mapping: assisting in identifying the need for the development of more interventions that have specific characteristics.

PHILOSOPHY

For the purposes of this discussion, the philosophy of a treatment will be taken to mean the view it proposes as to how alcohol or drug problems develop in an individual. That is, philosophy in this particular context represents an accounting of etiology. A considerable amount of work has been done on models of etiology in the alcohol and drug field (Siegler, Osmond & Newell, 1968; Siegler & Osmond, 1968; Brickman et al., 1982; Brower, Blow & Beresford, 1989). Drawing upon this work, a categorization of philosophies can be proposed that includes moral models, spiritual and existential models, biological models, psychological models, sociocultural models and integrative models. The use of the plural is deliberate as multiple variants of each model exist.

Objection has been raised that the categories proposed for philosophies of treatment are very similar to those proposed for modalities and therefore that the two are so closely linked so as not to require separate consideration. While it is true that there is a general parallelism making it likely that, for example, a psychological modality will be underpinned by a psychological model of etiology, this does not always hold. The use of narcotic antagonists such as naltrexone, for instance, is based not on a biological model of etiology, as would be expected from parallelism, but on a psychological model. In this case the drug problem is based on the development of a conditioned response and the antagonist is used to extinguish the response. Aversive conditioning methods, such as those that employ apomorphine or succinyl choline, are operationally psychological in nature but do not necessarily subscribe to a psychological model of etiology.

This sort of etiologic/operational disjunction is common to therapeutics generally. The genetic problem of phenylketonuria or phenylpyruvic oligophrenia, a potential cause of serious mental retardation arising from an inborn error of phenylalanine metabolism, is dealt with through dietary restriction. Familial dysautonomia, or Best-Riley-Day syndrome, the congenital absence of the ability to experience physical pain, is dealt with by training methods based on learning theory. The same is true of early infantile autism. Schizophrenia, which may have a biological basis, is commonly dealt with through psychological and sociocultural means, the drugs that are commonly used are seen as adjunctive rather than curative as well. Thus, because they do not invariably parallel each other, it seems justified to discuss modality and philosophy separately. The proposed categories of etiologic models, or treatment philosophies, will now be briefly discussed.

Moral models

Moral models emphasize sin, weakness and pleasure-seeking as causes for a departure from acceptable behaviour. Insobriety is a manifestation of a moral lapse. Redemption through the reattainment of sobriety is achieved by an act of willpower, ideally accompanied by contrition. Given the nature of the problem as viewed in the context of this model, the appropriate intervention is punishment.

Few current treatment interventions are based principally on the moral model, perhaps because of the dominance of the so-called "disease concept", a biological model of etiology that is explicitly opposed to construing alcohol or drug problems in moral terms. It is of interest, however, that in the USA, where the "disease concept" originated and has been most vigorously advocated, surveys regularly show that a significant proportion of the population continues to view these problems in moral terms (Mulford & Miller, 1961; Haberman & Shenberg, 1969; Rodin, 1981; Caetano, 1987; Moore, 1972). These findings assist in understanding why the principal policy initiative in the USA is the "war on drugs", with its preponderant emphasis upon law enforcement, an approach entirely consistent with the moral model. A committed captain in that war, the head of drug law enforcement in a large midwestern state and a former prosecuting attorney, has written: "...this is a war for the hearts, minds, and souls of our children. There is no place to which we can withdraw. We can run, but we can never hide...The real issue is... essentially a moral one" (Peterson, 1991).

Spiritual and existential models

Spiritual and existential models relate alcohol and drug problems to defects in dealing with ultimate or self-transcending concerns, either theological (spiritual) or non-theological (existential). They tend to view such problems as manifestations of undue self-concern or egoism and offer a broader perspective directed away from the self as a corrective. Spiritual models are likely to be operative in treatments that are either frankly religious or are derived from religious antecedents. An example of the former is the Teen Challenge drug treatment programme of the Pentecostal Church in the USA; another is the temple-based treatment programmes in Thailand. Among the treatment programmes that are derived from religious antecedents is Alcoholics Anonymous (Jones, 1970; Glaser, 1981). Those in AA may at times refer to a somewhat diffuse Higher Power rather than to God specifically, but on the other hand they stress spirituality as the centre of their programme. In the drug-free therapeutic communities that evolved out of AA may be witnessed a transition from the spiritual to the existential. The community itself is the self-

transcendent entity used as a reference point. There are other forms of treatment that may be used for alcohol and drug problems that derives originally from existential rather than from spiritual models, such as the logotherapy of Viktor Frankl (Frankl, 1969).

Biological models

Biological models assume a physiologic or metabolic abnormality, often with a genetic basis, as the central etiologic factor. The originators of methadone maintenance treatment suggested that heroin addiction was the result of a metabolic deficiency that was corrected when methadone was administered (Dole & Nyswander, 1967). Russian narcologists have expressed the conviction that both alcohol and drug problems are the result of errors in dopamine metabolism and have recommended corrective drug treatments. An exclusively genetic basis for alcohol problems has gained widespread support (Petrakis, 1985), though some remain unconvinced that this can be demonstrated by currently available data (Searles, 1988).

The most familiar variant among the biological models is the so-called "disease concept of alcoholism". Its most detailed and scholarly exposition is in the classic work by EM Jellinek (Jellinek, 1960), though the concept was popularized earlier by what has been called "the alcoholism movement" in the USA (Room, 1983). A central tenet of the disease concept has been that individuals develop severe problems with alcohol, or alcoholism, through no fault of their own, as happens with an actual disease, and hence they should not be blamed for their problems. It is felt that blame, and the stigma attached to it, prevents many alcoholics from recognizing their problems and dealing with them. For this reason, proponents of the disease concept often see themselves in opposition to proponents of the moral model, according to which blame and consequent punishment are appropriate.

While the disease concept has some vigorous advocates who insist that all instances of problems related to alcohol consumption, severe or not, are manifestations of the disease of alcoholism, it is worth noting that EM Jellinek was not among them. He delineated a number of subtypes of alcoholism ("species", in his terminology) and asserted that only two could appropriately be viewed as diseases. Although the disease concept is characteristically associated with Alcoholics Anonymous, the AA model is in fact far more complex and includes elements other than the biological (see below).

Psychological models

While psychological models of etiology have an overall consistency in viewing alcohol and drug problems as arising principally from various states of mind, there are at least two major subtypes. In one, the use of alcohol or drugs is viewed as arising from emotional dysfunction or conflict, with the substance of choice often providing symptomatic relief (McLellan, Woody & O'Brien, 1979; Khantzian, 1985; see also Leake, 1965). In the other subtype, such use is thought to derive from maladaptive learning patterns, either on the basis of classical conditioning (Wikler, 1965) or of instrumental learning (Becker, 1953). Related psychotherapies - psychodynamic for the emotional distress subtype and behavioural for the learned response subtype - are often viewed as the appropriate respective modalities for treatment.

Sociocultural models

Sociocultural models "[consider] alcohol [and drug] problems to be the result of a lifelong socialization process in a particular social and cultural milieu" (Institute of Medicine, 1990). When a patient at the United States of America Public Health Service Hospital at Lexington, Kentucky was asked during the course of a routine initial interview why she took heroin, she looked puzzled and, after a pause, replied, "Well, Doctor, when you got to be my age in my neighbourhood, that was what you did" (Chein et al., 1964). A family, like a neighbourhood, can be considered "a particular social and cultural milieu", and there has been much interest in the notion that the use of alcohol or drugs by a particular family member may be the result of an intrafamilial problem. Increasing attention is being paid to the effect upon other family members of the person with alcohol or drug problems (Woititz, 1983; West & Prinz, 1987; Gomberg, 1989; Harburg et al., 1990). This approach is also consistent with a sociocultural model of etiology.

Non-Western societies have different sociocultural models which are further discussed in the chapter on "The Role of Traditional Health in the Management of Substance Abuse".

Integrative models

Finally, there are integrative models of etiology that combine elements from other models. The fourfold response of the committee responsible for the Institute of Medicine report to the question of etiology exemplifies this approach:

1. There is no likelihood that a single cause will be identified for all instances of alcohol [or drug] problems.

2. There is every likelihood that the range of causes that interact to produce alcohol [or drug] problems in the population can be identified.

3. Alcohol [and drug] problems will prove to be the result of different interactions of different etiological factors in different individuals.

4. While effective treatment will be served by a more precise knowledge of etiology, effective treatment is possible in the absence of such knowledge (Institute of Medicine, 1990).

The Institute of Medicine statement on etiology is an example of what has been called the multivariant model. Another variety of integrative model is that of the ubiquitous mutual help organization, Alcoholics Anonymous. AA is frequently viewed as espousing the disease model. Yet while AA members do characteristically refer to "the disease of alcoholism", this is only one strand in a complex fabric of postulates regarding etiology (Brower, Blow, & Beresford, 1989). The spiritual aspects of AA seem in many respects to be more prominent than the biological. There is also a strong sociocultural element in AA, which is a group effort that places high emphasis on the value of "the fellowship" and on the social interactions of members outside the structure of formal meetings. The AA sponsor, a more experienced member who works closely with a neophyte on an individual basis, provides many different kinds of

support. Although AA does tend to view the acquisition of alcohol problems as beyond the responsibility of the individual, it clearly views it as the individual's responsibility to deal with those problems (Brickman et al., 1982). Indeed, like many other integrative models, the AA model can accurately be viewed as combining elements of all of the other models within itself.

STAGE SPECIFICITY

Treatment can conveniently be divided into stages, and various interventions seem to fit more comfortably into one stage than another. Therefore the stage specificity of a particular treatment is an important defining characteristic. The Institute of Medicine report identified three major stages of treatment, each with subdivisions (Institute of Medicine, 1990). Following that lead, this report will discuss the acute treatment stage, the active treatment stage, and the maintenance stage of treatment.

Acute treatment

Three subdivisions comprise the acute treatment stage. Among these is emergency treatment, which tries to effect the immediate resolution of an acute physical, social or psychological emergency that may arise in a given individual around his or her use of alcohol or drugs. Detoxification and withdrawal, though often an emergent need, is sufficiently important to be a separate subdivision. It has been viewed as the first of a series of six levels of cover for alcohol and drug problems in a stepwise scheme for the development of treatment services (Glaser, 1992). It is the gateway through which many individuals enter upon a course of treatment and is, in itself, a significant treatment.

The third subdivision of the acute treatment stage is screening. Large numbers of individuals who enter the human services sector by different routes (e.g. through the health care system, the education system, the social service system, the employee assistance system, the criminal justice and correctional systems) will present difficulties appropriate to these systems but will ultimately prove to have alcohol and drug problems (Institute of Medicine, 1990). A classic example is the individual who comes on multiple occasions to an emergency department with repeated traumatic fractures; eventually it may be learned that these occur when he or she is intoxicated. Unfortunately, alcohol and drug problems go largely unrecognized in these settings. Only a systematic screening of these populations will consistently identify those who have alcohol and drug problems and enable an appropriate plan of assistance to be implemented. The need to do this arises not only from the desirability of providing effective assistance to the individual, but from the necessity of controlling the costs that would otherwise fall upon the community (Institute of Medicine, 1990). In the example above, much time, effort and money would be saved if the alcohol problem underlying the repeated traumatic fractures was recognized and effectively dealt with. Fortunately, promising work is now going forward on efficient methods of screening for alcohol problems (Saunders & Aasland, 1987; Babor et al., 1989). Screening for drug problems is less well developed.

Active treatment

The active treatment stage includes not only the interventions that constitute what is commonly understood by the term "treatment" but other activities that are considered to be an integral part of the treatment process. Of particular importance is assessment, the attempt to obtain a comprehensive and objective understanding of the nature and severity of the problems presented by each individual, and of the strengths and liabilities of the individual herself or himself, with a view to developing a treatment plan by selecting the most appropriate modality or modalities (treatment matching). An important assessment domain is the evaluation of the health status of the individual. Not only do particular treatment interventions require specific levels of physical health as a precondition for their successful negotiation, but the use of alcohol and drugs may in itself create health problems. Of these perhaps the most disturbing at the present time is the acquired immune deficiency syndrome (AIDS), the presence or absence of which must be considered a crucial assessment parameter in all persons with alcohol and drug problems (Selwyn, 1991).

The second subdivision of the active treatment stage is intervention, in which a specific modality of treatment (or a combination or sequence of modalities), selected as a consequence of information obtained at assessment, is deployed. The interventions may be simple or complex and they may be brief or extended in time span. The third subdivision is stabilization, by which an attempt is made to consolidate the gains that have been effected through intervention, often by continuing the intervention at a less frequently, and in a different setting. For example, interventions may be started in an inpatient or residential setting but continued, for stabilization purposes, in a day programme or outpatient setting.

Maintenance

Maintenance is the final stage of treatment and also has three subdivisions: continuing care, relapse prevention and supportive living arrangements. The term "continuing care" is suggested as a replacement for the more commonly used "aftercare". Aftercare is difficult to define and in some respects is a pejorative term since it denotes activities that are less important than those that occur in the active treatment phase. In fact, what happens after the active treatment phase may be of pre-eminent importance in determining the eventual outcome (Cronkite & Moos, 1980). In the present context, continuing care is a generic term that denotes the ongoing provision of some therapeutic input to maintain the gains achieved in the acute treatment stage.

Although relapse prevention could be viewed as a component of continuing care, its increasing prominence is such that it is accorded a separate subdivision in the maintenance stage. Relapse prevention refers to the formal deployment of specific techniques to decrease the probability that a resumption of problematic alcohol or drug use will occur following active treatment (Marlatt & Gordon, 1985; Annis, 1986; Gorski & Miller, 1982). Individual instances of returning to drinking or drug taking ("slips") are viewed as learning opportunities, rather than constituting unmitigated disasters. If properly understood and dealt with, they can help to prevent further difficulties.

The use of the synthetic opiate methadone in the treatment of persons whose problems arise in the context of opiate use is an illustration of a pharmacologic approach to relapse prevention. Sufficiently high doses of methadone reduce the probability of the use of illicit opiates such as heroin, since methadone competes

(successfully, because of the higher dosage) for opiate receptor sites in the brain and the (presumably lower) doses of other opiates then have no effect. While this is felt to be the principal therapeutic effect of methadone, the drug is also active in at least two other stages of treatment. Since methadone in sufficient doses may substitute for other opiates, treatment regimes employing methadone do not require withdrawal from opiates as a precondition of treatment and hence may attract individuals into treatment who would otherwise avoid it. This was the initial rationale for its use (Dole, 1965). In this sense, methadone could be said to be part of the emergency subdivision of the acute stage of treatment as defined above. (Methadone is frequently used to detoxify persons from other opiates, also a component of the acute treatment stage, but its use as a treatment *per se* is quite distinct from this use.) Additionally, by providing methadone on a continuing basis while other modalities are also being provided (e.g. counselling, job training) the need to seek illicit opiates during the active treatment phase, with the disruptions of treatment this usually entails, is diminished. In this sense methadone could be said to be part of the stabilization subdivision of the active treatment phase. Nevertheless, relapse prevention appears to be the major therapeutic function of methadone and in this scheme it is suggested that it be classified under this heading.

Supportive living arrangements, the final subdivision of the maintenance stage of treatment, involve the provision of an ongoing supportive, protective living environment for those so disabled by prior alcohol or drug use or those so likely to relapse that a return to independent community living is not advisable. This category of the maintenance stage covers a spectrum of living arrangements ranging from temporary placement in a halfway house to more permanent arrangements, up to and including domiciliary care. Recent attention to the problem of homelessness, often if not invariably associated with alcohol and drug problems, has underscored the importance of this subcategory of the maintenance phase of treatment. Yet the idea is far from new, the Gheel community in Belgium has from medieval times provided living arrangements with its families for the mentally ill - a striking and admirable example of a supportive living arrangement.

The inclusion here of long-term supportive living arrangements such as domiciliary care reflects the reality of treatment limitations, especially when confronted with severe problems of long-standing alcohol and drug problems. For example, most individuals suffering from Korsakoff's psychosis (Victor & Yakovlev, 1955), a condition involving severe and permanent impairment of recent memory that is now most commonly a consequence of prolonged heavy drinking, will require continuing domiciliary care (Sacks, 1985). While nursing homes and hospitals, mental ones especially, are commonly utilized for this purpose, their appropriateness is open to question and their cost is frequently prohibitive. Hospice care for individuals with AIDS may be viewed as a special instance of a creative and humane innovation in supportive living for some persons who have also had serious drug problems. The provision of low-cost supportive living arrangements of adequate scope and variety is an important agenda item for the future in many medical, legal and social jurisdictions.

SETTING

Specialized treatment settings

A setting is a location in which treatment for alcohol or drug problems occurs. Such treatment traditionally takes place in specialized treatment settings that may conveniently be categorised as inpatient, residential, intermediate and outpatient settings. Inpatient settings are located in hospitals. Residential settings involve 24-hour habitation but in other than a hospital facility. Outpatient settings host treatments that are provided on an ambulatory basis, with the individual who is being treated coming to the treatment setting on a regular basis, usually for brief periods (e.g. one to three hours per week). Intermediate settings also host individuals who are living elsewhere and come regularly for treatment, but for longer periods of time (e.g. four hours per day or more). The classic day programme is an example of an intermediate setting.

Although seemingly straightforward, settings of treatment have in recent years generated considerable controversy, especially in North America. To begin with, the custom has been to speak of inpatient, residential, outpatient and intermediate treatments rather than settings. In the past, there was some justification for this since the treatment provided in different settings seemed to be substantially the same (Glaser, Greenberg, & Barrett, 1978). Now, however, there are many different treatments (see above) being provided in a variety of settings. Since the appropriate setting for the treatment of a particular individual may be governed by different determinants than the appropriate treatment for that individual, a highly flexible approach in which any modality of treatment can be delivered in any setting might be ideal. In any case, the development of the field has rendered such phrases as "inpatient treatment" and "outpatient treatment" misnomers. Independent descriptors of modalities and settings are clearly required now.

A related aspect of the controversy has been a dispute about whether specific stages of treatment should be inextricably linked to particular settings, such as detoxification to inpatient settings, or the initiation of all treatment for serious problems to residential settings. For purposes of this communication, the fact that actual practice is variable, i.e. not all detoxification occurs in inpatient settings and not all episodes of treatment for those with serious problems are initiated in residential settings, requires that setting be considered separately as a descriptor.

A third aspect of the controversy has been the result of the differential costs of various settings, with treatment in inpatient and residential settings being much more costly than in intermediate or outpatient settings. Due to cost concerns, intense attention has been paid to determining the appropriate setting for treatment (or the appropriate "level of care"). There is evidence that those who provide care, especially for profit, tend to favour more expensive settings (Hansen & Emrick, 1983). Those who reimburse treatment providers tend to favour less expensive settings and have introduced various mechanisms to assure that they are used. Such mechanisms include legally mandated independent assessment prior to treatment (as in the state of Minnesota), the development of elaborate criteria for placement in the appropriate level of care (such as the Cleveland criteria [Hoffmann, Halikas & Mee-Lee, 1987]) and the introduction of intense scrutiny by payers of all treatment decisions, called in this context "managed care"

(Korcok, 1988; Havens, 1991). Once again, the variability of practice both in North America and elsewhere renders cogent the use of setting as a descriptor of treatment.

Other settings

Even in North America, and to a greater extent elsewhere, treatment does not occur only in specialized treatment settings. Rather it occurs in other settings as well. These are highly variable and include health care settings (especially the offices of general medical practitioners), prisons or other criminal justice settings, workplace settings, educational settings, religious settings and so forth. Indeed, treatment in many parts of the world occurs in the home. What occurs in these settings is not merely a variant of normal social intercourse but formal treatment for alcohol and drug problems that is recognised as such by those who provide it and by those who receive it , that is, treatment defined in the sense of the first meeting of this project in Moscow (WHO, 1991). This point is emphasised since it could be argued that what is done in the ordinary course of operations in a religious setting, is treatment in the sense that it is therapeutic. Whether this is the case or not, formal treatment of the usual kind is carried out in these settings and consequently it is reasonable that they be included in the descriptive scheme.

Although it is not the only example, the practices of Alcoholics Anonymous may be instanced in this regard. According to recent estimates there are more than a million AA members meeting in some 76 000 groups in 92 countries (Leach, 1973; Alcoholics Anonymous World Services, 1987). Thus it is perhaps not surprising that AA meetings are held in a great variety of settings though in specialized treatment settings and other settings though more commonly in the latter. While AA demurs at describing itself as a treatment, it meets most definitions of the term (Tobin, 1992) and certainly meets the one that is operative for this document.

TARGET

Treatments for alcohol and drug problems have differing targets. They are not all intended to deal with the same kinds of alcohol or drug problems or with the same kinds or numbers of individuals. Indeed, certain treatments are not directed primarily, or even at all, at the individual with the alcohol or drug problem. Family or marital therapies of varying kinds generally include the individual with the problem but are primarily directed at the social unit of which he or she is a part. Unilateral family therapy (Thomas et al., 1987) targets the spouse of the individual with problems. Increasing attention is being devoted, especially in the USA, to interventions for the children of such an individual (Woititz, 1983; West & Prinz, 1987).

Where the individual with alcohol or drug problems is the primary target of treatment, many treatments are claimed to be appropriate for all such persons, irrespective of their individual characteristics or their drug of choice. Others limit themselves to persons with specific characteristics and/or problems with specific substances. The Institute of Medicine report (Institute of Medicine, 1990) devotes four full chapters to a consideration of treatments that are directed at the unique needs of "special populations", including those that are defined by structural characteristics (e.g. women, adolescents, the elderly,

American Indians, etc.) and those defined by functional characteristics (drinking drivers, so-called "dual diagnosis" psychiatric patients, homeless persons, college students, etc.).

Assertions to the contrary notwithstanding, there is no evidence that any particular treatment is effective for all persons with alcohol or drug problems (Institute of Medicine, 1990). Rather, particular treatments are effective for subsets of the larger population and identifying the salient features of these subsets should be a principal focus of research. The overall goal is to improve the efficacy and efficiency of treatment by matching individuals with specific characteristics to treatments that are highly likely to facilitate satisfactory results for them (Institute of Medicine, 1990).

In order to account for the variations among treatments as to their targets, three subcategories of this descriptor are proposed. One is the specific substance that is being targeted. A second is the intended interactive unit with which the therapist deals, whether that unit is an individual, a couple, a group, a family, a social network, a community, a population or another interactive unit. The third subcategory specifies the particular characteristics of the interactive unit that identify it as the target of the treatment. Thus, for psychoanalytically-oriented individual psychotherapy, the interactive unit is an individual and the particular characteristics might include insightfulness and verbal fluency. For a women's group, the interactive unit is the group and the characteristic that is relevant is the sex of the participants. For these two examples of treatments specific substances are not targeted, but in other treatments they may be. Narcotic antagonist therapy, for example, is targeted specifically at opiates, while drugs such as disulfiram and carbamide are targeted at alcohol.

Treatments that are similar in modality but different in terms of target will need to be separately described. For example, one of the treatment methods investigated in the famous Winter VA Hospital study (Wallerstein, 1956; Wallerstein, 1957) was group hypnotherapy. Hypnotherapy is more frequently conducted with individuals as targets. Hence individual hypnotherapy and group hypnotherapy would need to be described separately. It is likely that variation in target will be accompanied by variation in other descriptors, such as strategy. One of the generic advantages of group therapies over individual therapies comes into play when the therapist(s) and the group members have widely differing backgrounds, a not uncommon occurrence in the treatment of persons using illegal drugs such as heroin. Members of the group will commonly assume a therapeutic stance with respect to one another, lessening to some extent the adverse effect of therapist-group member differences. Such a group would differ from individual therapy not only in terms of target but also in terms of strategy.

PROVIDER

As targets of treatments differ, so do the attributes of those providing it. "There are now many persons with differing backgrounds who are providing treatment" (Institute of Medicine, 1990). Differences between providers may conveniently be described in terms of training and other requirements.

Training

Although not without their importance, degrees and licences that are relevant to practice in the alcohol and drug field are not widely distributed on a global basis. Even in a country with a strong emphasis upon credential like the USA, the bulk of staff who provide treatment - the alcohol and drug counsellors - are at present neither degreed nor licensed. Many of these personnel, however, have received a form of training: their own treatment experience. Some programmes view this experience as a necessary and even a sufficient qualification for success in the role of counsellor. In traditional societies, the shaman, medicine man or other traditional healer receives extensive training, though of another kind. Professional therapists in Western societies tend to be trained in one of several disciplines, in particular medicine, psychology and social work. Thus the training background of the provider, rather than the degrees or licenses that he or she may have earned, would seem to be the relevant descriptive variable.

Special characteristics

Beyond this, however, there may be specific personal characteristics that render a given individual more effective in providing a particular kind of treatment. For example, in a series of studies of psychotherapy, those who achieved accurate empathic understanding of the patient, manifested non-possessive warmth and projected genuineness or authenticity in the therapeutic situation produced significantly better results (Truax & Wargo, 1966; Carkhuff, 1968). A supervisor of individuals providing "primary care", a generalized, long-term supportive activity similar to case management, described some 15 personal characteristics that he felt were critical attributes for such work (Pearlman, 1984). In psychoanalytic treatment, the completion of a personal analysis is felt to render the individual relatively free of intrapsychic conflict and hence to be crucial to the ability to conduct psychoanalysis effectively.

For other treatments, no particular personal characteristics have been felt to be especially relevant. Even in treatments where the relevance of some characteristics is assumed, an empirical demonstration of relevance is often lacking. From a descriptive standpoint the assumption of relevance should be sufficient for the present. Finally, it should be noted that there has been much discussion of the relevance of therapist characteristics to the treatment of particular kinds of individuals (Razin, 1971; McLachlan, 1972; McLachlan, 1974; Glaser, 1980; Institute of Medicine, 1990). While this may prove to be a fruitful avenue of exploration and research and underscores the practical utility of specifying therapist characteristics, it is primarily an issue for treatment matching.

TIME FRAME

Treatments are highly variable in terms of their time requirements. A single session of brief intervention may last only five to 20 minutes, while a single session of marathon group therapy may last 36 hours or more. If one considers the full course of therapy, the range is again from five to 20 minutes for brief intervention, to several years for psychoanalytic therapy and perhaps to a lifetime for "primary care" (Glaser, 1984). Thus usual time per session and usual time per complete course of therapy are useful descriptors of treatment.

EFFICACY

A decision has been taken to include the totality of treatment responses in the mapping process to be undertaken as a result of this exercise, irrespective of their demonstrated efficacy or lack thereof. It is nevertheless quite reasonable to include some information on efficacy as a descriptor. Two elements are proposed. One has to do with the level or levels of evidence of efficacy that have been developed for the treatment being described. The other is an estimate, based on existing evidence, of what can be concluded about its efficacy.

Types of evidence

It is proposed that three levels of evidence of efficacy be used as subcategories. The first is anecdotal evidence. Unless a given treatment has never been implemented, there is likely to be anecdotal evidence regarding its efficacy. The second level of efficacy is evidence from outcome studies. At this level, the treatment has not only been implemented but a systematic study of the outcome of the treatment, at other has been conducted, sometimes at the end of treatment, at other times after. It is generally appreciated that a positive result following the delivery of a treatment, while consistent with treatment efficacy, does not demonstrate it conclusively. Intercurrent but non-treatment factors - a marriage, a divorce, a death, the loss of a job, the maturation or aging of the individual, so-called "spontaneous remission" of the problem (Institute of Medicine, 1990) and so forth - may have produced the result. Nevertheless, a high proportion of positive results following treatment is encouraging, especially if the whole population entering treatment has been studied.

A third level of evidence of efficacy is more conclusive. Two equivalent groups are involved in this sort of efficacy determination, one of which receives treatment while the other does not. If the group that receives treatment does significantly better than the group that does not, important evidence of the efficacy of the treatment has been provided. Since the two groups are best equalized by a process of random assignment and since the purpose of this manoeuvre is to control for variations in outcome that could be due to differences between the groups rather than to the effects of treatment (e.g. one of the groups having a higher incidence than the other of the non-treatment factors cited above, this kind of study is often called a randomized controlled trial (RCT). There are problems in demonstrating efficacy even with RCTs (Institute of Medicine, 1990), but they do constitute a significant increment in validity of proof of efficacy. Thus the third level of the proposed descriptor of efficacy is evidence from randomized controlled trials.

As an illustration of how these subcategories may be useful in describing the efficacy of a treatment, the example of disulfiram (Antabuse) may be cited. The drug has been in clinical use since 1948 and much anecdotal evidence regarding its efficacy exists. A number of outcome studies have been carried out, as well as one large-scale randomized controlled trial (Fuller et al., 1986). Thus, one would conclude that all three levels of evidence are available for disulfiram treatment.

Conclusions from evidence

The second element of this descriptor has to do with what may reasonably be concluded from those tests of efficacy that have been carried out. Subcategories of positive, negative and inconclusive are proposed. This admittedly requires a judgment call since it involves weighing the available evidence. Some guidelines can be proposed, such as giving greater weight to outcome studies than to anecdotal evidence and giving greater weight to randomized controlled trials than to outcome studies. Obviously, though, the level of confidence that can be entrusted to this subcategory is limited. Nevertheless, it is included because of its potential utility. One might, for example, wish to look at the kinds of modalities that are felt to have positive evidence of efficacy.

While much positive anecdotal evidence for the its efficacy of disulfiram (Antabuse) exists, results from outcome studies have been mixed and the results from the single large randomized controlled trial were essentially negative. Employing the weighing scheme proposed above, one might well conclude that, the evidence on the efficacy of disulfiram is negative. Even if valid, such a conclusion would not imply that disulfiram, or any other particular treatment, should be avoided under all circumstances. No single study can presume to be definitive. Ideally, multiple RCTs will be carried out for each modality of treatment to fully test it under differing conditions, with different populations, and so forth. Furthermore, most efficacy studies to date are designed to test whether a given treatment is useful for all persons with alcohol problems. That a treatment is not useful for all persons does not exclude the possibility that it may be useful for some persons. Indeed, this was one of the stronger suggestions that came out of the large controlled trial on disulfiram treatment (Fuller et al., 1986).

Note that the manner in which this descriptor is constructed deliberately limits evidence of efficacy that is not derived from carefully designed, objective testing. That a particular treatment has been in use for a long time, or that many persons prominent in the treatment field (or other fields) have a strong conviction of its usefulness or feel that they themselves have been helped by it, is a kind of endorsement that, is to be viewed with caution. In the final analysis, efficacy is not best judged by popularity. To go beyond testimonials reasonably requires evidence derived from more valid techniques. Moreover, it is clearly the obligation of the proponents of a treatment to assure that such evidence is brought forward. Any treatment should be presumed to be ineffective and potentially hazardous until proven otherwise.

COST

The cost of treatment for alcohol and drug problems in monetary terms varies from a negligible cost to a very high cost indeed. In the former category are mutual help groups and some traditional methods of treatment; in the latter category are treatments in hospital settings and in some residential settings. It is probably best to describe both the cost per session of treatment and the cost per course of treatment. A treatment with high sessional costs but a short course might cost less than a treatment with low sessional costs but a prolonged course. For example, it has been argued that initiating treatment with a 28-day hospital stay is defensible in terms of cost because it may result in a significantly shorter course of treatment when compared with treatment that is provided only on an outpatient basis.

The global nature of the mapping attempt in this study may unduly complicate reference to any absolute standard of cost. A categorical approach (negligible cost, minimal cost, moderate cost, high cost) may prove to be more practical. The baseline reference should logically be the local area in which the modality being described exists, since it is in terms of relative price in that area that the cost of treatment is an operative factor in treatment selection. If the same modality of treatment has significantly different costs in different countries or in different locations in the same country, a notation to this effect should be made.

AVAILABILITY

As is the case with the availability of alcohol and drugs themselves, the availability of treatment for alcohol and drug problems is highly variable and is affected by many factors. Among these are the geographical distribution of the treatments, the supply of qualified staff, the proximity of programmes to routes of transportation and the costs of the treatment (high costs effectively excluding persons with limited resources). While it would be possible to categorize the factors that may limit availability, it is perhaps more practical simply to categorize availability itself.

Categories of available but limited, moderately available and widely available are suggested. A category of not available would be logically satisfactory but is superfluous since a modality that is not available should not be described. Once again, the point of reference has to be the local area that is being mapped. However, if the same modality is differentially available in particular areas or countries, a notation should be made to that effect. Research on availability, while limited, has produced some interesting results. For example, in a particular state of the USA it was shown that there was no correlation between the locations of alcohol treatment programmes and the prevalence of alcohol problems (Glaser & Greenberg, 1975). Subsequent examination found a similar relationship for the USA as a whole (Institute of Medicine, 1990).

UTILIZATION

Whether or not a programme is utilized is contingent upon its availability but is also influenced by many other factors. Simply because a programme is available does not ensure that it will be utilized. Nor does the fact that a programme's efficacy has been demonstrated, or that it has not been demonstrated, seem necessarily to be related to utilization. Like other consumer products, treatments may be fashionable or otherwise (Tourney, 1967). In the USA, a deciding factor of fashionability is the endorsement of a treatment by celebrities who have undertaken it. Many of the other factors remain to be still determined.

It is tempting to utilize a point prevalence figure to categorize treatment utilization, i.e. how many individuals are being treated at a particular point in time, but such a figure would fail to take into account the wide fluctuations in treatment programme census that occur over time (Glaser, 1974). The number of persons utilizing a treatment over a more extended period of time would approach somewhat more closely a valid measure of utilization. However, obtaining a non-duplicated count of individuals is technically complicated by the problem of multiple episodes of service that are provided to specific individuals. Since any episode of service represents utilization of a treatment, whether or not an individual has used the service previously in the same time period, the number of episodes of service per year has

been selected as the most reasonable form for this descriptor, with admittedly arbitrary numerical values attached to the several categories (e.g. 20, 50, 100 episodes of service per year, and so forth). With increasing experience in the documentation of availability, these categories will be adjusted in future.

ORGANIZATIONAL CHARACTERISTICS

The characteristics of the group of organizations that provide treatment are not fixed but may vary greatly over time (Yahr, 1988). Because it is important to know how such changes may affect other descriptors of treatment, such as utilization and efficacy, organizational characteristics are included here as a major descriptor. In addition, if governmental policy is to play some role in determining the pattern of service to be provided, it is important to understand the organizational characteristics of the service delivery system. In many countries the flexibility of different kinds of organizations with respect to governmental regulation varies. For example, programmes in the private sector are generally less amenable to such regulation than programmes in the public sector.

Two organizational descriptors are suggested. One has to do with the administrative auspices under which the treatment programme operates, that is, whether it is a free-standing entity, or whether it operates within the framework of another organization such as a mental health agency. The other descriptor has to do with the source of funds, that is, whether the funds are primarily derived from public or private sources, or whether they are a mixture of both.

SUMMARY AND CONCLUSIONS

To assist in the task of mapping the treatment response to alcohol and drug problems, 12 descriptors are proposed. They are modality, philosophy, stage specificity, setting, target, provider, time frame, efficacy, cost, availability, utilization and organizational characteristics. Each descriptor is discussed, subcategories are suggested and examples are provided. An advantage to this approach is that each descriptor can be utilized as an element in an interactive database, permitting the information gathered to be analyzed in a variety of ways. For example, one could look at all low-cost treatments, or at all treatments with evidence of efficacy from controlled trials, or at both simultaneously, or at any combination of the descriptor variables. This could also be done for a given geographic area, or (presuming that consistent descriptors are collected at regular intervals) to map changes in treatment over time. This does not exhaust the multiple possibilities that are raised by carrying out the mapping of treatment in this way.

The recommendations in this chapter should be viewed as preliminary. Modifications are particularly in order in terms of content. The overall strategy of utilizing a limited series of specific descriptors may survive if it proves to be useful. The goal is to arrive at objective, quantitative criteria for each descriptor and subcategory. Time and experience, especially the experience of using this or a modified set of descriptors to map what exists, will help to improve the approach. Then it will be possible to know what exists in terms of treatment, which is a crucial step toward improved treatment for alcohol and drug problems.

For convenience of reference and discussion, the proposed scheme of descriptors is presented in an outline form in the Appendix to this chapter.

APPENDIX

Descriptors of Treatments

- Modality
  - Name
  - Type
    - Biophysical
    - Pharmacological
    - Psychological
    - Sociocultural
    - Mixed
  - Strategy
  - Goals
    - Modify alcohol or drug taking directly
    - Modify antecedents of alcohol or drug taking
    - Modify consequences of alcohol or drug taking

- Philosophy
  - Moral models
  - Spiritual and existential models
  - Biological models
  - Psychological models
  - Sociocultural models
  - Integrative models

- Stage specificity
  - Acute treatment stage
    - Emergency treatment
    - Detoxification/withdrawal
    - Screening
  - Active treatment stage
    - Assessment
    - Intervention
    - Stabilization
  - Maintenance stage of treatment
    - Continuing care
    - Relapse prevention
    - Supportive living arrangements

- Setting
  - Specialized treatment settings
    - Inpatient
    - Residential

- Intermediate
- Outpatient
- Other treatment settings

Target

- Specific drugs
  - Alcohol
  - Opiates
  - Other depressants
  - Cocaine
  - Other stimulants
  - Cannabis
  - Hallucinogens
  - Other substances
  - Combinations of substances
- Interactive unit
  - Composition
    - Individuals
    - Couples
    - Families
    - Groups
    - Networks
    - Communities
    - Populations
    - Other
  - Characteristics
    - Structural (demographic)
      - Age
      - Race
      - Gender
      - Ethnicity
      - Other
    - Functional
      - Drinking drivers
      - Dual diagnosis psychiatric patients
      - Homeless persons
      - College students
      - Children of alcoholics
      - Others

Provider

- Training
- Special characteristics

Time frame

- Usual time per session
- Usual time per course of therapy

Efficacy
- Types of evidence
  - Anecdotal evidence
  - Evidence from outcome studies
  - Evidence from randomized controlled trials
  - Conclusions from evidence
  - Positive
  - Negative
  - Inconclusive

Cost
- Cost per session
  - Negligible cost
  - Lower cost
  - Moderate cost
  - Higher cost
  - Cost per course of therapy
  - Negligible cost
  - Lower cost
  - Moderate cost
  - Higher cost

Availability
- Available but limited
- Moderately available
- Widely available

Utilization
- Up to 20 episodes of service per year
- Up to 50 episodes of service per year
- Up to 100 episodes of service per year
- Up to 1000 episodes of service per year
- Up to 5000 episodes of service per year
- More than 5000 episodes of service per year

Organizational characteristics
- Administrative auspices
- Free-standing
- Part of another organization
  - Health or public health
  - Mental health
  - Social services
  - Other

Financing
- Primarily public
- Primarily private
- Mixed

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II. FACTORS INFLUENCING TREATMENT

A broad range of social and structural extra-treatment factors influences the process, outcome and organization of treatment for drug and alcohol problems. This set of complex and interacting variables has been called the "social ecology of treatment" (Room, 1980; Weisner, 1987). The literature describing this social ecology and the number of countries it represents is growing. However, data are still limited, and not comparable between different countries and are often only anecdotal. In addition, this literature is not applicable for drugs and alcohol. For example, the cross-cultural research on laws regarding treatment is more extensive for the drug field, while research on patterns of use and problems is more comprehensive for alcohol. This review describes the variety of factors influencing treatment, drawing on examples from around the world. Where possible, it indicates the specific ways in which these factors affect treatment. For the most part, however, research that would pinpoint these influences is limited and firm conclusions cannot be drawn.

Alcohol and other drugs are a major concern in countries throughout the world. The World Health Organization reports on these topics produced in the 1980s attest to the rise in importance of this concern and the creation of Programme on Substance Abuse (PSA) in 1990 re-emphasized that fact. The focus on drug and alcohol use has been accompanied by an increase in the response to these problems, including a dramatic expansion of treatment capabilities in many countries. It is not just the tremendous growth in medical and therapeutic knowledge that has influenced treatment; if it were, treatment would be more consistent from country to country. Many different influences have contributed to the growth of treatment and to the forms it takes in different societies.

Factors influencing the treatment of substance abuse are discussed here under five major headings: the social and cultural context of substance abuse in the community; the political and economic context of treatment systems; characteristics of treatment systems; the availability of treatment and means of entry; and the larger context of handling substance abuse problems in the community.

SOCIAL AND CULTURAL CONTEXT OF SUBSTANCE ABUSE IN THE COMMUNITY

An early WHO report emphasizes the importance of the social and cultural context in determining the definition of drug and alcohol problems, as well as the response to those problems. "Of all the factors influencing action, the most powerful is the sheer diversity of sociocultural determinants. The differences between groups of countries and even between countries within the same region cannot be overemphasized. Any plan of action which fails to take account of this diversity cannot hope to meet the real needs of particular populations" (WHO, 1983).

In addition, Shaw et al., (1978) argue that "the nature and extent of the response to a problem is determined by how the problem is perceived and how prevalent it is estimated to be". The social and cultural factors which affect alcohol and drug treatment are reviewed here in terms of the sociodemographic characteristics of the community and related patterns of use and levels of problems, the availability of alcohol and drugs, attitudes to alcohol and drug use, types of problems and populations of concern and the extent of combined alcohol and drug problems in the community.

Sociodemographic characteristics of the community and related patterns of use and levels of problems

Although much remains to be learned, the cross-cultural research on drinking and drug use patterns is expanding and shows very different patterns from society to society. Such differences have numerous implications for treatment. Drug and alcohol use patterns, as well as types of drugs used within and across countries, often affect the targeting of individuals for treatment. These patterns can place treatment in different contexts, for example, making it fundamentally either therapeutic or a method of social control. They can affect the decision of whether to include medical intervention as a large component of treatment. In regard to alcohol, countries such as Italy which have high daily consumption also have high levels of health problems (i.e., cirrhosis) and their system of treatment is largely medically based. Conversely, countries with "binge drinking" patterns, such as Finland and Mexico, have high levels of social problems and less medically-oriented treatment. In regard to other drugs, countries such as Germany and Italy, where heroin use is a primary, increasing problem (European Summary of Drug Abuse [ESDA], 1992), have a different set of factors to consider in developing treatment strategies than countries such as Portugal, Poland and Romania (ESDA, 1992) where inhalants are defined as the growing problem.

Gender, age and ethnicity often affect distribution of substance use within a country. For example, types of drugs used often differ according to age of the users within and across countries. Glue sniffing and the use of inhalants in general often affect younger populations than does use of other drugs (Stewart & Casswell, 1992; ESDA, 1992). In some countries where heroin has been a major problem for many years, the first couple of generations of the particular treatment population are growing older and posing concomitant problems for treatment provision, such as the problems faced by their children (see for example, descriptions of France, Sweden and the Netherlands in ESDA, 1991; and of the United States in Institute of Medicine, 1990a,b). Age is an important predictor of heavy drinking and related problems in most countries, but the distribution of problems by age differs from country to country. Several studies have described the different drinking and drug use patterns of men and women and their variation from country to country. In Mexico and Zambia, for example, women's drinking patterns differ from men's much more than is the case in Scotland (Ritson, 1985; Haworth, Mwanalushi & Todd., 1981; Calderon, Campillo-Serrano & Suarez, 1981). There is some indication that in many European countries, women misuse licit drugs such as sedatives in higher proportions than men do (ESDA, 1992).

Understanding ethnic and racial diversity is also crucial in this context. For example, the Maori and non-Maori populations in New Zealand (Stewart & Casswell in Klingemann et al., 1992), the Native American, Black, Hispanic and White populations in the USA (Caetano, 1993; Herd, 1991), and Muslim and Christian populations in Nigeria (Odejide et al., 1992) have been found to have significant differences in drinking and drug use patterns and distribution of problems. China's many different nationalities also present a wide range of prevalence rates of alcohol abuse (Yani, 1992). The republics of the former Yugoslavia present another example of different population groups with very different use patterns and attitudes (Lang & Sradar, 1992). In countries such as India the proportion of the population drinking at all or drinking large amounts is very small, yet the problem rates of this group may be extremely high.

The distribution of drug patterns by ethnicity has not been studied to the same extent as patterns of alcohol use. However, the recent ESDA study (1992) found higher prevalence of drug abuse in ethnic minority groups (such as gypsy groups in Hungary) and immigrant groups, as well as in groups representing the lower socioeconomic status populations of the countries studied. Stewart & Casswell, 1992 compare the use of

certain drugs in Maori and non-Maori populations in New Zealand. Different ethnic groups within the same country often report problematic alcohol and drug use at different ages (Caetano, 1993; Herd, 1991).

Thus, age, gender and ethnic differences in drug and alcohol use become important factors in mapping the treatment response to those problems. For example, there is a strong belief in the USA that special programmes are needed for women, for Blacks and for Hispanics in order to attract them to treatment and to improve outcome rates. However, this assumption has not been well-evaluated (Institute of Medicine, 1990a) and at the same time, when programmes are targeted at certain disenfranchised groups, they run the risk of serving a social control rather than treatment function. Drug treatment programmes targeting Black populations in the USA and alcohol programmes for Maori populations in New Zealand have been discussed in this light (Weisner & Room, 1984; Stewart and Casswell, 1992).

Availability of drugs and alcohol within communities

The availability of drugs and alcohol may be associated with the level of treatment need and types of services. Availability of a substance is determined by all the interacting factors that make it easily accessible to consumers, including price and proximity. In addition, the degree of availability is not directly related to legal status. While use of many types of drugs is not legal in most countries, availability of various drugs fluctuates over time. For example, drug epidemics in the USA have been attributed to availability (Institute of Medicine, 1990b). For alcohol, the relationship between availability and illegal production has been discussed in relation to the former USSR (Ivanets et al., 1992) and other countries. Researchers in Hungary, Nigeria and Mexico have suggested that increased availability also indicates treatment need (Elekes, 1992; Ritson, 1985). Studies in Alaska and of Native American drinking in the USA as a whole have demonstrated lower problem levels and corresponding need for treatment when availability is reduced. That philosophy constitutes the theoretical underpinning of anti-drug policy in the USA in recent years with at least as strong a focus on interdiction as on treatment. Reports from India and Zimbabwe suggest that the existence of high consumption levels of liquor from unregulated breweries and home brew may lead to acceleration of the negative health effects of drinking. This would affect the type of treatment required, indicating the need for a larger focus on medical intervention in the content of treatment.

Community attitudes to drug and alcohol use and problems

Attitudes to drug and alcohol use vary among cultures as much as do use patterns. A 1962 WHO survey of drug legislation found that "in some countries severe penalties for addiction were considered appropriate whereas in others a 'habit' was considered 'normal'" (in Porter, Arif & Curran, 1986). Many cultures have different expectations about use for men and women (see discussion of Mexico and Zambia in Ritson, 1985) and this affects treatment provision as well. The type of substance most popularly used may also affect attitudes. Regionalism, with different areas of a country being relatively "wet" or "dry" or having higher or lower rates of illicit drug use may also be a factor. This typically reflects both use patterns and other aspects of local culture (Hilton, 1991).

The degree of tolerance of high levels of alcohol consumption and drug use also varies from one society to another. As use patterns vary by population group, the variation is more dramatic where illicit drugs and high levels of alcohol consumption are concerned. Drug use and drunkenness, for example, are tolerated for men much more than for women in some cultures. This is likely to affect which persons are noticed for treatment

as well as the stage of problem at which they are targeted. When examining treatment systems, it is important to take into consideration overall public cultural attitudes toward use patterns, as well as diversity within cultures. In the USA, for example, there has been criticism of treatment systems and strategies that do not reflect this diversity. Some researchers have found insensitivity to diversity to be a reason for low treatment outcome rates for minority groups in the population.

A complicating factor is that attitudes often differ about use of alcohol as opposed to use of other drugs. In many countries, although drug use is illegal, alcohol use is legal and widely advertised and alcohol production is a major industry. This is sometimes a reflection of the attitudes of the populace, but it also influences these attitudes. The often huge differences in social acceptance of alcohol and other drugs make it a complex matter to treat both types of substance problems within the same agency or to treat individuals with both types of problems.

Community attitudes to drug and alcohol use directly affect when, why and which individuals go to treatment. Communities do or do not support social policy that targets problems for treatment depending on their degree of concern about alcohol and/or drugs. These community attitudes also affect the context of the problem for clients within which therapists and other personnel must work. When attitudes to drug and alcohol use are not mainstream in a culture or not consistent across the different groups within a society, treatment strategies are required to operate in a more heterogeneous context. Attitudes to drug and alcohol use are also related to attitudes to treatment. For example, treatment programmes within a community that accepts treatment as a resolution of its alcohol related problems have a different set of tasks than do treatment programmes in communities that support a social control/criminal justice solution to those problems.

Types of problems of concern to the community

The extent and type of drug and alcohol problems also vary across societies and the range of behaviours defined as such in turn affects the extent and type of services. As described above, drug "epidemics" and the type of drug of concern affect the treatment capacity and type of treatment. AIDS is an example of a problem that has shifted concern to drugs associated with the use of needles. The study of Davies and Walsh (1983) showed that different levels of different types of problems affected the treatment response across countries. A WHO Alcohol and Media study (1983) pointed out that "in countries with a long history of alcohol problems the medical consequences of heavy drinking may be an important message for treatment agencies to disseminate but in developing countries more immediate concerns such as the link between alcohol and job loss may have greater impact."

At the same time, when similar problems exist across societies, they are not always considered of equal importance. The types of problems that concern communities vary greatly and affect the characteristics of treatment. In fact, it has been community-based social movements that have motivated changes in social policy either directly or indirectly. The issue of driving under the influence of alcohol or drugs provides an illustration. In the space of a few years, drunk (and more recently "drugged") driving went from being a problem that was largely ignored or handled within the criminal justice system to one that has overwhelmed the treatment system with large number of clients (Walsh, 1982; Weisner, 1987). This growing concern resulted in the development of diversion programmes and the referral to both drug and alcohol treatment of many individuals who otherwise would not have gone for treatment.

AIDS is a very dramatic example of a problem which, over time and to different extent in different societies, has become associated with drug and alcohol use. As this problem has emerged and its relationship with substance use has been understood, it has affected treatment systems directly, both by heightening awareness of the "problem" of substance use and by increasing the population looking to these treatment programmes for help and resources. The connection between substance abuse and AIDS has affected both the designation of populations targeted for treatment and the process of treatment. This has been the case in such countries as the USA, Uganda and Brazil (9th Brazilian conference, 1991; Gossop & Grant (1991) found in their study of methadone programmes (in the Netherlands, Thailand, France, Australia, Canada and Britain) that methadone programmes and methadone use as a treatment strategy were increasing in most countries studied as concern over AIDS grew and as a philosophy of harm reduction developed.

The place of drug and alcohol problems in the hierarchy of social and health problems in a community also affects treatment. There is some evidence that more resources for treatment are forthcoming when alcohol and drugs are considered more important than other social problems (e.g. the infusion of treatment funds in the USA during the recent "drug war"). Nowhere is the rank of drug and alcohol problems static in relation to other problems. At various points in the history of various countries, problems related to homelessness, crime, education and poverty, have had more or less political and cultural importance than alcohol or drugs. Alcohol and drug problems themselves shift over time in relation to each other, thus affecting the resources and monitoring of treatment as Glaser (1978) has described.

Populations of concern to the community

The diversity of populations defined as having drug or alcohol problems affects the extent and type of services as well as the characteristics of treatment. Often one population group is found to have, or is thought to have, a higher prevalence of these problems. Sometimes this status endures and sometimes the designation of problem groups changes over time. It has been argued for example, that the problem of public drunkenness is really a focus on the status of specific population groups in many countries. Walsh (1982) found that public drunkenness is determined as much by "a person's social, ethnic and economic background as on the amount of alcohol that he has consumed". In some countries, this population was often the dominant treatment group in the past. The Maori in New Zealand have been considered by government policy makers as being at high risk for alcohol and drug abuse (Stewart & Casswell, 1992). More specifically related to drugs, children living in slum conditions in Brazil who use inhalants (9th Brazilian conference, 1991) are a newly targeted group. Pregnant women using drugs such as cocaine are a new focus in the USA. These designations of populations with problems affect the organization, characteristics and strategies of treatment. The lack of expandable resources may often have an overall impact on the treatment system by requiring reallocation of limited resources for the provision of specifically tailored services. Depending on attitudes toward these populations, different types of services may be developed, such as the Employee Assistance Programmes and programmes for pregnant drug users in the USA and programmes designed for the Maori in New Zealand.

When target populations shift over time, the treatment response often changes as well. As concern over drug use related to AIDS and concern over the broadening range of populations using cocaine and related drugs has increased in many countries, drug services have been transformed. And as the target population has changed in many countries from one of public inebriates to one of hidden alcoholics, and problem drinkers

to problem drinkers, alcohol services have changed as well. A more therapeutic constellation of services has evolved, replacing the "practical needs" approach of public inebriate services.

Level of combined alcohol and drug problems

The prevalence of high levels of drug and alcohol use in a society and the balance between the two affects treatment programmes and strategies as well as designation of the treatment population. Drug and alcohol treatment populations have traditionally come from different population groups. A change in the proportion of alcohol abuse clients to drug abuse clients in treatment thus can have the effect of changing the characteristics of the treatment population. Changes in the balance of problems between drugs and alcohol occur over time in a community. In fact, significant changes have occurred worldwide in this balance during the past decade. A current widely adopted concept is one of overlapping alcohol and drug problems. Epidemiologic data point to a high prevalence of combined drug and alcohol use and problems in individuals (Hubbard, 1990; Norton & Noble, 1987; Clayton, 1986), although data are limited across countries.

These changes in the prevalence of use of alcohol compared with use of other drugs or changes in levels of combined use have potentially dramatic effects on the structure and content of treatment (Glaser, 1978). Because of the high prevalence of combined alcohol and drug use and abuse, treatment systems and individual programmes that historically were separate have been merging (see country reports in Klingemann, Takala & Hunt, 1992). The two treatment systems have very different histories, target populations, treatment ideologies and treatment strategies. Although this merging is occurring without benefit of evaluated treatment strategies for those who abuse both alcohol and other drugs, programmes are accommodating the new treatment populations. The treatment field faces the necessity of developing new treatment approaches and methods (Hubbard, 1990; Weisner, 1990).

THE POLITICAL AND ECONOMIC CONTEXT OF ALCOHOL AND DRUG TREATMENT

Little attention has been paid by clinicians to the larger political and economic context in which treatment systems exist. This context includes the source of financing of services, laws regarding drug and alcohol use and treatment, the status of public health within a society, the overall wealth and resources of a country and its stage of development. It also includes the role of drug and alcohol production and industries in a society, such as the importance of viticulture and wine production to the economy.

Financing of treatment

Provision of treatment is largely dependent upon available financial resources. The overall development and wealth of a country affect specific treatments as well as the range of treatment available. Regarding, for example, drug detoxification, the survey of countries by Porter, Arif & Curran, (1986) found: "The type of withdrawal method used depends both on overall country policies and available pharmaceuticals. In some countries, it may not be possible for treatment to go beyond detoxification." However, because of the differing costs of treatments, the precise relationship between the amount of resources and extent of services is not as clear as might be expected (Institute of Medicine, 1990 a,b). Inpatient clinical services are expensive and serve fewer patients than non-medical residential programmes and non-hospital-based outpatient

programmes. The utilization/cost ratios for social model programmes in the USA contrast dramatically with those for regular clinical services. There is some evidence that outcome rates of non-medical programmes might not vary significantly from those of clinical services, yet since their cost is much less they can provide services to much larger numbers of individuals.

In addition to overall financing levels, the modes of financing have important effects both on access to and on the substance of drug and alcohol treatment. Public rather than private funding often increases the likelihood of a planned and monitored system of services. A tremendous variety of sources of and approaches to treatment financing exists across countries (Klingemann, Takala & Hunt, 1992). In a few countries, services are primarily private and available for those who can pay. In many others, the majority of services are publicly funded and are not based on ability to pay (e.g. Canada, Britain, the former USSR). In others, such as Brazil and the USA, there is a mixture of public and private services. A mixed public/private system, such as that found in the USA, can produce unevenness in the types of programme available to public and private clientele (Yahr, 1983). In addition, in spite of the extensive and specialized treatment establishment in the USA, the urban/rural distribution of services is uneven, as is the distribution of services by state in regard to statistics on per capita consumption and rates of cirrhosis (Institute of Medicine, 1990 a,b; Weisner and Morgan, 1992). The same pattern may be found for the distribution of drug services as well (Institute of Medicine, 1990b). A 1973 WHO study found this dilemma not as extreme in smaller countries (Ozarin, 1973), but this has not been well examined across a range of countries in recent years.

The extent to which services are centrally planned rather than a product of market forces often affects their stability, continuity and comprehensiveness. State financing and planning increases the probability that services will be based on a public health model that targets and plans interventions for the range of populations with alcohol and drug problems. The basis of financing also affects the degree to which the individual provider takes a public health-oriented or an individual-oriented approach (WHO London Family Health Meeting, 1984).

Laws regarding drug and alcohol use

A society's laws regarding use of drugs and alcohol (including age restrictions), the extent of other types of laws related to alcohol and drugs (e.g. the extent of legal control and interdiction, regulations on availability, the extent and nature of "drug wars") and specific laws relating to drug or alcohol behaviours (e.g. driving under the influence, selling drugs, public drunkenness) also affect treatment.

Countries differ greatly in terms of legal permissiveness about the use of alcohol and drugs both in general and for specific populations. Even within countries the severity of laws differs. In the case of alcohol, for example, according to Odejide et al., 1992, any use of alcohol by a Muslim in northern Nigeria except for medicinal purposes results in severe penalties. On the other hand, southern Nigeria has no penal legislation against drinking. In regard to its effect on treatment, all Nigeria's substance abuse treatment programmes are found in the south. Laws in countries affected by colonialism (e.g. New Zealand, as discussed by Stewart & Casswell, 1992) may be in transition and reflect differing attitudes to alcohol use by indigenous populations as these countries become more autonomous. Many countries have laws governing age of legal use and situations where drinking may take place (see Mäkelä et al., 1981 and country reports in Klingemann, Takala & Hunt, 1992). On the whole, laws regarding illicit drug use are much more comprehensive and stringent than those relating to alcohol use. Some countries have laws regarding "addicts" (Porter, Arif &

Curran., 1986) and the range and severity of these laws differ. This can affect the treatment system in ways not yet well understood.

Across countries, these laws change greatly over time in their focus, comprehensiveness and stringency. An examination of the modern drug treatment system in the USA reveals several generations of programmes, varying in focus and approach, each of which came into existence during one or several drug epidemics in the present century (Institute of Medicine, 1990b; Weisner, 1990). At the current time, "wars" on drugs are found in several countries and impact greatly the amount of overall resources for treatment as well as its environment and focus.

The existence and severity of laws regarding drinking and drug use clearly affect the structure, environment and process of treatment. Criminalization of specific drinking or drug related behaviours and the establishment of referral procedures from the criminal justice system affect treatment. When other criminal behaviours such as wife beating, child abuse or robbery become associated with drug or alcohol use, other involuntary treatment populations may be created. The level of interdiction toward drug and alcohol problems is important and the degree to which these problems are medicalized affects the characteristics of treatment programmes.

Status of public health services in a society

The overall status of public health services, the regard in which they are held by government and the respect they have from the populace affect the content and the characteristics of treatment. In addition, public and official perceptions of the populations that utilize these services and the value of such services to the state or society as a whole affect the treatment programmes offered. Many of the changes which treatment in Poland has undergone over time have been related to the status of public health under different government systems (Morawski, 1992). Examples from Hungary (Elekes, 1992) demonstrate how the regard for public health in a country also often affects the amount of resources and the types of programmes available.

Role of alcohol and drug production and industries

Evidence abounds of the critical role played by the industries associated with the production and sale of alcohol and drugs, both legal and illicit, in a society (Mäkelä et al., 1981). Lang (Lang & Sradar, 1992) reports that in the republics of the former Yugoslavia, where vine growing and wine production have been an important and integral part of the economy from at least 1288 to the present, "... though there is no reliable historical evidence, it seems that excessive drinking and alcoholism were less common and widespread before the industrial production of alcoholic beverages than they are today." Especially in developing countries, the choices to be made regarding revenue from such industries and public health needs are often difficult ones. Ozarin's report of a study of nine European countries (1973) argued that societies have not often faced up to the dilemma that this issue raises. This factor has not been researched as much in regard to drugs as in the case of alcohol since drugs are most often illegal and their industries are also. As such, the role played by illegal industries is unclear.

This extra treatment factor is important since, to the extent that both alcohol and drug production industries have direct or indirect political influence, it can affect the balance between treatment and social control institutions for the handling of problems, the issues of legality and their influence on defining treatment

populations. One international study (Mäkelä et al., 1981) interpreted the expansion of alcohol treatment systems in some countries a kind of societal alibi for dismantling controls over alcohol industries.

CHARACTERISTICS OF TREATMENT SYSTEMS

A series of factors intrinsic to the system itself bear upon the description of drug and alcohol treatment. They include historical, organizational and ideological characteristics.

Background of treatment

Both the timing of the beginning of treatment systems and the institutions from which they evolved influence the characteristics of treatment today. Treatment has developed at different times in different countries. In many countries drug treatment systems came later than those for alcohol (Klingemann, Takala & Hunt, 1992; Institute of Medicine, 1990b). Partly because of that, in those particular countries, drug treatment has sometimes been combined with alcohol treatment services.

As early as 1919 alcohol treatment policy was specified and developed at a level of importance equal to that of tuberculosis treatment policy in the former USSR. Norway organized alcohol treatment (specialized and independent from health services) soon after the beginning of this century. Drug treatment has been included as part of the overall system as drug problems have become of concern. China's programme began in 1949. In Hungary, the first welfare centres providing treatment for alcoholism began only in the mid-1960s and alcohol policy has existed only since the mid-1970s. Again, drug treatment has been incorporated in such policy but with heavier criminal justice involvement (see country reports in Klingemann, Takala & Hunt, 1992). While many voluntary organizations have provided alcohol treatment in the USA since the 1940s, an official treatment system began only in 1970. The drug treatment system in the USA had more formal beginnings, in conjunction with criminal justice interventions, and a national-level, free-standing system began shortly after one for alcohol.

The remarkable diversity in the origins of treatment systems has also affected the characteristics of treatment across countries. Treatment developed in connection with psychiatry in Austria (Eisenbach-Stangl, 1992) and out of welfare organizations in Sweden (Rosenqvist & Kurube, 1992) and Finland (Takala & Lehto, 1992). In some countries, such as Switzerland and Finland the development of both alcohol and drug treatment was greatly influenced by temperance movements (Klingemann, Takala & Hunt, 1992) while in other countries that influence was absent. These differences in origin often influence drug and alcohol treatment today. Some systems are part of welfare or health care. Poland's treatment system is located within the mental health system. In Hungary, Mexico, Brazil, Canada and Britain, alcohol and drug treatment is organized within the health care system. In the USA the public drug and alcohol treatment systems are free standing. Norway's system is also specialized. Some systems appear to be well-integrated and others are fragmented with part in public health, part in criminal justice and part in psychiatric services. A complicating factor is whether drug and alcohol treatment is combined. The fact that the two systems often have separate historical origins affects the nature of the combined system. Within the USA, for example, the different development of alcohol and drug treatment (alcohol treatment influenced by mental health and Alcoholics Anonymous and drug treatment influenced by criminal justice concerns) has influenced the types of programmes, ideology of treatment, referral of clients and characteristics of clients today.

Placement and organization of services

This section discusses the influences of the placement of treatment services (whether they are part of mental health, public health, welfare, or are a free-standing system), the integration or separation of drug and alcohol treatment services and the level of organization of services (whether they part of a centrally organized, federal or local-level organization of service). These structural factors potentially influence the fragmentation, heterogeneity and comprehensiveness of treatment.

Treatment systems today, influenced by their historical roots as well as by present forces, look very different from country to country. In regard to organizational location, some are placed within the mental health psychiatric services system, some are within general health care services, some are within welfare services and some are a free-standing system of services. There is also tremendous disparity across countries in regard to the level of government at which they are organized. As the country reports show in Klingemann, Takala & Hunt, 1992, China's system has a three-tier network of services at state, collective and individual levels (Klingemann, Takala & Hunt, 1992). Switzerland, Canada and the USA are among the countries with federal systems. While Switzerland's systems seems to be consistent in its different regions, the USA and Canada report striking differences in structure and programming from region to region or state to state. Poland, Brazil and the former USSR are examples of countries with centralized systems. These variables help determine the feasibility of central registry systems used to identify cases and coordinate or manage care for individuals. Drug or alcohol registries are found, for example, in some of the Scandinavian centrally organized services and are impossible to imagine in a decentralized system, such as in the USA.

Treatment ideology

Previous WHO efforts have played a large part in providing international and often broad-based agreement on definitions of major concepts such as definitions of alcoholism and alcohol and drug dependence syndromes (e.g. Edwards et al., 1977). For alcohol, the prevailing images found across countries include alcoholism, alcohol dependence syndrome and alcohol problems. In the area of drugs, drug addiction and drug abuse are predominantly listed as the problems being treated. Increasingly, "substance abuse" is used as a problem label, encompassing abuse of both alcohol and other drug abuse. While "substance abuse" has status as a diagnostic term in DSM-III-R, it is not used in ICD-10. Instead, ICD-10 uses the term "harmful use" for patterns of use causing physical or mental problems and excludes patterns causing social problems as being outside the scope of medical diagnosis. What is meant by "substance abuse" in treatment is likely to vary dramatically both throughout the world and within countries as well. The acceptance of the disease concept by professional circles in the vast majority of countries has not led to uniformity in philosophy. An early WHO report (1973) of drug programmes in four countries illustrates how the different concepts upon which treatment is based affect treatment.

Some countries have one dominant "governing image" (Room, 1978) of alcohol problems that shapes the overall constellation of services. In the USA, adherence to the disease concept of alcoholism and the influence of Alcoholics Anonymous are so strong that programme strategies throughout the country are limited to those focusing on abstinence, although a range of treatment modalities exist. In the republics of the former USSR, adherence to the disease concept through medical models is pervasive and programmes based on behavioural and aversive conditioning represent the vast bulk of services (Ivanets et al., 1992). When there is but one pervasive image, it has a very powerful effect on treatment. In contrast, in countries

such as Canada, Britain and Finland, competing definitions are entertained and treatment methods include controlled drinking strategies as well as abstinence strategies.

ACCESS TO TREATMENT AND TREATMENT ENTRY

The opportunities for access and patterns of entering treatment largely determine the sociodemographic characteristics of treatment and these characteristics influence the content of treatment. This section discusses these issues within the framework of availability of treatment and how cases enter treatment. Both voluntary and involuntary treatment entries are discussed.

Availability of treatment

There is large variation in availability of treatment across countries. The concept of availability is more complex than the per capita rate of services in a country. The relevant dimensions include the overall set of services in terms of size and comprehensiveness, as well as the distribution of those services geographically, by ability to pay and for all segments of the population in need. Thus, where people live and, for some countries, if they have access to health insurance will greatly affect whether they enter treatment and what kind of services they will receive.

Countries differ in terms of the extensiveness of their systems. Although the USA has a very large system of services and its overall per capita ratio of services is high in several respects at the same time treatment is not as available as in many other countries. Because of the financing patterns described above, the same comprehensive set of services is not available for public and private clients, for rural and urban areas, and for all regions of the country. The geographical placement of services also does not correlate highly with various indices of problem levels, such as cirrhosis mortality or per capita consumption rates. Many have argued that services appropriate for those with special needs, such as ethnic populations and women, are limited (Institute of Medicine, 1990a). Treatment in Canada appears to be more evenly available to the population in terms of the variables above. The former USSR has a large treatment system, but the types of services are limited and not much is known about geographical availability or availability for special populations. China's system is not as extensive as those listed above, but it is comprehensively distributed over the population (Yanyi in Klingemann, Takala & Hunt, 1992). Data are not available to evaluate the impact of these differences on treatment. We can surmise that availability is associated with the ability to match client characteristics with treatment programmes. It also has an effect on health policy, on how individuals get referred across health and social service agencies, and it may be related to clients' readiness for treatment.

How cases come to treatment

While there is little cross-national information on referral sources for treatment and the individual and social factors affecting treatment entry, it is clear that countries differ greatly in regard to how clients enter treatment. For example, they differ in the weight placed on voluntary and involuntary referrals. Most countries have mechanisms for voluntary self-referral but the actual statistics on and description of the process are not well documented. Porter, Arif & Curran, (1986) surveyed the legislation and found self-referred voluntary treatment to be one type of treatment, as is found in many African countries (e.g. Kenya,

Madagascar, Mauritius, Nigeria, Senegal and Zambia). The legislation on compulsory treatment for drugs dependence is part of mental health legislation in some countries (e.g. Bangladesh, Japan, Somalia, Trinidad, Togago and the USA), and in others is specifically alcohol-related, drug-related, or drug and alcohol combined.

Almost all countries have some arrangements for compulsory treatment and most have their voluntary and legal commitment services separated. The former USSR, for example, operated separate systems (Grant & Ritson in Institute of Medicine, 1990a). Services tend to be included within the overall treatment systems in other countries, such as the USA (Weisner, 1990). In many countries other types and levels of coercion operate along with formal commitment legislation. Some countries, including the USA, Brazil, and Mexico, include large numbers of clients from such sources in their alcohol and drug treatment systems. One of the major changes in the USA over the past 10 years is that such referrals have come to be the majority.

The extent and type of entryway to compulsory treatment vary across countries. The types include civil commitment laws, specific laws regarding drinking or drugs (e.g. selling drugs, public drunkenness), laws regarding substance related offenses (e.g. drunk driving), laws regarding drinking in the offence (e.g. child abuse, burglary), and workplace coercion (e.g. employee assistance programmes and worksite identification, such as described by Yani, 1992).
A wide range of definitions of drug dependence is found in the legislation related to treatment in different countries. Definitions vary in terms of the required debilitation of the target population. The following are some examples:

Mexico - "other than for therapeutic purposes, voluntarily uses, or experiences the need to use, any narcotic or psychotropic substance."

Colombia - "the personal state brought about by periodic or continuous ingestion of drugs in any way."

Thailand - "consumes, ingests, or applies by any means the psychotropic substance and shows the symptom of addiction to the psychotropic substance."

United Kingdom - "if, and only if, he has as a result of repeated administration become so dependent upon the drug that he has an overpowering desire for the administration of it to be continued." (Porter, Arif & Curran, 1986).

Definitions of treatment also vary, including terms such as "resocialization", "reintegration" and "rehabilitation" (Porter, Arif & Curran, 1986). In addition, length of stay varies from eight hours to two years (e.g. Sweden with eight hours, Australia with 14 days, Japan with 30 days, Switzerland and Hungary with two years, Italy with an indeterminate length). The differences in length by country are not necessarily related to seriousness of reason for commitment.

Twenty-two of the 51 countries surveyed by Porter, Arif & Curran, (1986) had provisions for diversion from the criminal justice system to treatment. In general, this "involves taking them out of the criminal justice system and placing them in a treatment setting, sometimes suspending punishment, or providing treatment while they are in confinement".

The pathways by which clients enter the system are likely to affect the characteristics of treatment populations and the course of treatment. When referrals come from the health care system where medical problems are the focus, they may require more attention to health problems than if other referral mechanisms had been responsible. When referrals come from psychiatric services, clients may be more debilitated and have dual drug or alcohol and psychiatric diagnoses. When referrals come from the criminal justice system, the influences and targeted problems will be social problems and often require different treatment approaches. Furthermore, referring institutions may differ in their expectations of the environment and controls of treatment. Criminal justice agencies referring clients may expect more monitoring in treatment and be more concerned about the avoidance of illegal activities as outcome objectives than is the case with health care agencies.

Clients from different referral sources, both voluntary and mandated, often represent different population groups with different sociodemographic characteristics. These different groups often have different problems, perceptions about problems, attitudes to alcohol and drugs, and financial and social resources. Such differences often require careful consideration in treatment planning. The level of client readiness for treatment and motivation will also vary by type of referral. This greatly affects treatment strategies such as the length of time required to engage the client in treatment and the methods for doing so. There is also some evidence that clients who are motivated perform better in treatment (Institute of Medicine, 1990a). The treatment outcome literature in regard to compulsory treatment is not extensive. Compulsion appears to heighten treatment compliance. However, there is no consensus in this literature about whether outcome rates for compulsory treatment are significantly higher or lower than for voluntary treatment (see for example, Institute of Medicine, 1990; Chopra, Preston & Gerson, 1979; Dunham & Mauss, 1982; Hser, Anglin & Powers, 1990).

Because of the overall illicit status of drugs in relation to alcohol in most countries, there is reason to anticipate that as drug and alcohol treatment are merged the overall effect on treatment will be to put it in a more coercive frame (Weisner & Morgan, 1992). Furthermore, it is likely that the degree to which coercive referrals are represented in the system will have a large impact on the overall structure, programming, and course of treatment. The ESDA report (1992) found significant legislative changes in regard to drug treatment in 20 countries. Most "provide for more flexibility in the prosecution of personal drug abuse, including involuntary commitments". In several countries, questions have begun to be raised in regard to the civil rights of these clients in terms of case-finding procedures, processing and treatment provisions. In some cases these treatment clients had fewer due process rights than they would if they were processed by the criminal justice system (Weisner, 1990). The ESDA report (1992) indicated that some of these measures posed questions in regard to civil rights since they related to such procedures such as searches without warrants and random urine tests in several countries.

A LARGER VIEW OF HANDLING PROBLEMS IN THE COMMUNITY

Other health and social service institutions in a community and their relationships affect the treatment of drug and alcohol problems as well. This includes the prevalence of organizations providing alternative resources to the treatment system, the interaction and referral processes between different community systems, the availability of different types of health care and the influence of substance abuse programmes relative to other institutional systems.

Alternative resources

Treatment for drug and alcohol problems which is carried out in other health and social services is generally not documented. Not to examine such resources, however, is to ignore services in many countries. (For examples of Zambia and Mexico, see Calderon, Capillo-Serrano & Suarez, 1981; Ritson, 1985; Rootman & Mosher, 1984). Some countries which do not have specialized treatment for substance abuse may have a system of health services or welfare services that provides treatment for these problems, however defined. The extent to which the public sees these agencies as appropriate ones for this care will likely affect participation and attitudes toward specialized treatment. In addition to public institutions, in many countries such as Poland, Bulgaria, Britain and France, voluntary organizations play an important role in treatment (Ozarin, 1973). In some cases, these agencies are subsidized.

The interaction between other health and social service agencies and substance abuse treatment systems varies greatly from country to country. Some have official policies which set forth lines of referral and definitions of cases for referral between these institutions and alcohol treatment. To a great extent this is influenced by the organization of health care services in the country (i.e. whether they are centralized or fragmented, whether there is a large demarcation between public and private services, and the amount of resources). This may have an important effect on treatment to the extent that treatment programmes can predict their population and set up guidelines with other institutions regarding what problems and individuals are appropriate for services.

Types of health care in a community

Traditional methods of healing are an important part of health care throughout the world. In India and Nigeria, for instance, a substantial part of the total health care is carried out by traditional services (Odejide et al., 1992). While the extent to which substance abuse problems are handled through these care-givers is undocumented, indications are that it is large. When belief systems of the populace fit with ideologies of traditional healing, drug and alcohol treatment programmes and methods will be affected in order to effectively attract clients to treatment and keep them there.

Influence of the treatment system in relation to other community institutions

The power relationships among different institutional systems in a community are important to consider when examining extra-treatment influences on drug and alcohol treatment. The status of treatment in relation to mental health, criminal justice, welfare and other relevant institutions varies across communities. Even within communities these power relationships often shift over time. This affects both the amount of resources and how they are allocated. This has not been documented comparatively across countries; however in the USA in recent years the focus on the "drug war" and drunk driving has made the influence of the criminal justice system on government policy far stronger than that of the public health/treatment system. Many treatment providers claim that the criminal justice system sets policy in regard to who enters their public programmes as well as the requirements of treatment. Thus the treatment population and the resources for treatment have shifted to focus on those convicted of drug related crimes, alcohol related crimes and most recently "pregnant addicts". The modern history of alcohol treatment in Poland also reflects these power relationships (Morawski, 1992).

CONCLUSION

Three current trends in many countries can be noted as illustrative of the social and economic forces influencing treatment systems and strategies. The integration of drug and alcohol programmes, the use of coercive tactics to establish entry to treatment and the new urgency which the AIDS epidemic has brought to treatment issues are all clearly extra-treatment factors which have profound impacts on alcohol and drug treatment systems and ideologies. These three examples serve to emphasize the complexity of the treatment response to drug and alcohol problems.

The merging of drug and alcohol treatment programmes is significantly changing treatment in many places today. While there is a growing belief that the etiology and epidemiology of drug and alcohol problems are related, there are many differences in the traditional ideologies and methods of the two treatment institutions and in public conceptions of the problems. Dramatic effects on the environment of programmes, the process of treatment and the outcome of treatment are to be expected when these programmes are combined.

The AIDS epidemic has directly affected treatment in many countries. First, it has brought substance abuse treatment to the attention of policy-makers, sometimes resulting in the provision of new resources for treatment or the reallocation of existing services. In addition, it has forced a reconsideration of long-standing treatment ideologies and strategies, especially in regard to abstinence versus harm reduction, and it has brought about changes in treatment methods and the overall content of treatment.

The effects of the high prevalence of coercion and the intermingling of criminal justice systems and substance abuse treatment in most countries are not well understood. Little is known about the relationship of client readiness and motivation to outcome, or about treatment outcome in coerced populations. Since coercion of various extremes is a prominent characteristic of treatment in most countries, its effect on treatment bears examining in a cross-cultural context.

Although there is increasing international agreement on fundamental definitions of drug and alcohol dependence, treatment for these problems still varies dramatically from country to country. It seems clear that many extra-treatment factors, both structural and individual, are responsible for these differences. This paper has been an attempt to organize and document them. Unfortunately, information on many of these issues is limited for many countries and for sub-populations within countries. There is more information about how extra-treatment factors affect the organization and structure of treatment and the sociodemographic characteristics of the treatment population than about how they affect the outcome of treatment. However, the process and outcome of treatment is greatly determined by the sociodemographic characteristics of treatment populations. These are important issues for mapping treatment and planning successful programmes in different cultural, legal and economic contexts.

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III. GENERALIST RESPONSES TO ALCOHOL AND OTHER DRUG PROBLEMS

INTRODUCTION

The greater part of the response to alcohol and other drug problems is delivered through persons other than those working in specialized treatment facilities. When treatment responses to alcohol and other drug problems are being mapped, these "generalist" efforts run a high risk of being underestimated or even forgotten completely. "Generalist" here refers to all those responses, formal and informal, that are made by agencies other than those considered specialized centres for alcohol and other drug problems

Generalist agencies, though not seen specifically as dealing with alcohol and other drug problems, often help persons deal with the consequences of substance use and sometimes even directly intervene in assisting them to change their substance-using behaviour. Individuals' substance use may also change, without ever even being recorded, purely as an incidental accompaniment of changes in their lives resulting from unrelated generalist interventions.

Specialist services have usually been considered the pinnacle of possible responses. Services delivered by all others, the so-called generalists, are viewed as probably inferior because they are seen as necessarily compromised in their effort to make the service available to a wider range of consumers. Services delivered in most non-specialist facilities are often modifications of, or derived from, specialist approaches.

There are major implications of this viewpoint for the way in which services are conceived. Where any significant specialist treatment service exists, this very existence strongly influences the nature of generalist responses. Non-specialist services then subtly become considered as a lower rung in the hierarchy of services. They are seen as centres where not-so-highly-specialized services are delivered, in the knowledge that those for whom this less sophisticated intervention is inadequate can always be referred on for more specialized management. Appropriate activities for the generalist setting, in this view, are primarily screening, early detection and elementary intervention followed by referral as required. This view may well persist with regard to primary health care services in general, not only services for alcohol and other drug problems.

Generalist services can also be considered as one element in a range of interventions required to match the range of problems clients have (Glaser, 1991). This view is not necessarily derived from "specialist thinking" and is not hierarchical. It does, however, see the generalist setting as appropriate only for individuals in earlier stages of problems. This may be appropriate for developed countries, but for much of the world's population the generalist setting is all that is available for all substance abuse problems and levels of dependence.

Whether for persons with dependence problems, or hazardous consumption, probably the most important feature about generalist settings is that they are enormously more accessible than the specialized centres. This feature is clearly of the greatest consequence from the standpoint of the consumer, although perhaps not given sufficient attention by service providers

Recent trends

The limitations of the traditional concept of specialist approaches have begun to be recognized, particularly in the last 15 years or so. This trend has been furthered by the discussion of what exactly constitutes treatment (Edwards et al., 1977; Edwards and Orford 1977). It is also recognized that interventions - delivered through non-specialist settings can produce significant improvements (Kristenson et al., 1983; Chick et al., 1984; Elvy et al., 1988; Wallace et al., 1988; WHO 1991), with at least one study providing evidence of comparability of results from specialist and generalist interventions (Drummond et al., 1990).

The importance of the generalist setting is also recognized in light of increasing information about the proportion of persons with problems with whom specialist services deal. In North America, for example, the estimates are that fewer than one in five persons with severe alcohol problems has contact with alcoholism treatment services (Baekeland & Lundwall, 1977; Smart et al., 1980; Hingson et al., 1982). In other parts of the world too, the majority of persons with severe problems do not seem to present themselves readily for treatment (Grant & Ritson, 1990).

The more important issue, however, is that persons with mild to moderate problems far outnumber those with severe problems (Cahalan, 1970; Hilton, 1987; Institute of Medicine, 1990). Due to the much larger numbers of those with less severe problems, this group is beginning to be recognized as the more appropriate focus for intervention (Moore & Gerstein, 1981; Kreitman, 1986; Institute of Medicine, 1990).

As locations that provide opportunity for earlier intervention with promising results, the non-specialist medical facilities are increasingly more on the map. Authoritative bodies and commissioned reviews in several countries make recommendations that a greater role be assigned to primary health care professionals in response to substance abuse problems (Royal College of General Practitioners, 1986; Institute of Medicine, 1990; Heather et al., 1990).

The focus of treatment also appears to be changing. No longer is interest focused primarily on drug dependence or alcoholism as such, but on drug-related problems as well. Mild problems are seen more and more as appropriate for intervention (Institute of Medicine, 1990; Kreitman, 1986). The notion of "hazardous alcohol consumption" draws the line even earlier (Edwards et al., 1981; Saunders & Aasland, 1987). There are cautious suggestions that it may be appropriate to target alcohol consumption itself (Institute of Medicine, 1990, p227; Babor et al., 1987), including the suggestion that the notion of "safe limits" may be dropped (Kreitman, 1986). These ideas do not appear to have been strongly taken up.

Much of the literature on generalist responses deals with working at the level of the individual via predominantly medical services. The range of services beyond the merely medical needs to be given attention, as many people with alcohol and other drug problems are dealt with by services such as law enforcement, social assistance, and education. This may be even more true in those countries where medical services are poorly developed.

Attention so far has not focused on utilizing the generalist settings, or for that matter the specialist ones, in a broad effort to reduce alcohol and other drug use at community level. Instead, attention is interventions directed at the level of the individual or the family, not at the level of consumption by the community as a whole.

There are some differences in the considerations that apply to different classes of substance. Fear or distaste in which illicit drug users are sometimes held may cause reluctance on the part of generalists in dealing with them. Another major difference is that in the case of illicit drugs, any form of use is much more likely to be considered as requiring intervention.

PRESENTATIONS IN GENERALIST SETTINGS

Subjects with alcohol and other drug problems come to attention mostly as a result of the harmful consequences of their substance use. In many instances attention may be directed only at the consequence, or substance related problem, instead of focusing on the underlying substance use. There are also other instances where individuals with alcohol and other drug problems attend services for incidental issues. These instances too may present opportunities for screening for substance problems if certain of these settings draw a significant number of problem users.

The number of service sectors which would draw proportionately large numbers of problem substance users are many. The following is a sampling of the most important of such non-specialist settings.

Health care settings

The most readily recognized settings are the different facilities of the health care delivery system itself. Included here are primary care or general practitioner facilities, emergency services and all ambulatory and inpatient care facilities including "specialties" other than drug treatment services - orthopaedics, for example.

It is recognized that there is a far higher proportion of persons with alcohol or other drug-related problems among those who present at these services than in the general population (Holt et al., 1980; McIntosh, 1982; Davis, 1984; Cyr & Wartman, 1988; Moore et al., 1989). The Institute of Medicine (1990, p. 230) in its comprehensive review makes this unequivocal recommendation:

> "The committee therefore believes that all persons coming for care to medical settings should be screened for alcohol problems. If mild or moderate problems are present, a brief intervention should be provided in situation and observed for its effect; if substantial or severe problems are present, a referral to specialized treatment should be effected. Absence of this kind of approach, alcohol consumption that incurs a risk to the health of the individual or to the health of others, or that incurs a risk of alcohol problems, is likely to go unnoticed or unaddressed. Some persons, in particular those with mild or moderate problems, will not perceive these problems as requiring specialized attention and will not accept a referral to a specialist treatment apparatus. Others who may be willing to grant that alcohol consumption is a problem for them also will not accept referral, for a variety of reasons. For these people the delivery of brief intervention in the medical setting may offer the only opportunity for effective assistance; as noted above, there is considerable evidence that brief interventions can be effective."

Health care personnel

The personnel in the generalist medical settings who currently deliver these services are mainly doctors and nurses in developed countries but include a variety of other levels of primary health care staff in the less developed countries. The need to include adequate education about alcohol problems as part of the general undergraduate or basic training is coming to be recognized (Holden, 1985; Lewis et al., 1987). The case for including problems related to drugs other than alcohol is not being pushed as vigorously.

In the case of nurses, the existing responses have included using them in various trials on service delivery (Kristensen et al., 1983; Chick et al 1984), where their suitability for the task has been well demonstrated. Training in the recognition of and appropriate interventions for alcohol and other drug problems is reportedly not yet included as part of basic nurse training. A case is made in the Institute of Medicine (1990) report for the inclusion of this element as part of basic nurse training just as it is included in undergraduate training in at least some medical schools.

Law enforcement settings

The agencies involved here include the police, the courts, prisons and probation services. Among the persons dealt with by these agencies, it is recognized that there is a far greater representation of people with alcohol and other drug problems than in the general population. The case for including non-specialist screening and intervention programmes through the law enforcement system would not be difficult to make. Most subjects recruited through this system would have an element of enforced compliance, which has both negative and positive effects on the treatment process and outcome.

Existing responses appear more directed towards referral to specialist treatment facilities whenever overt alcohol and drug problems are detected. This mode of disposal by the criminal justice system may be determined more by existing trends or fashions than by the real level of the recipient's need. In the USA, for example, the specialist treatment sector is reportedly flooded in some areas with "driving while intoxicated" offences (State of Connecticut, 1988).

Special treatment services for medical needs exist within most prison services in many countries. These are not special units for alcohol and drug problems so the considerations that apply to generalist medical settings discussed in the preceding section would apply to these medical settings. They are likely to draw an even higher proportion of those who require interventions for alcohol and drug problems than general medical settings elsewhere. It is a feature of prison life in several countries that alcohol, tobacco and other drugs are illicitly available for those serving prison terms.

In some countries substance use is considered as requiring a response that is more penal than therapeutic. Imprisonment constitutes the primary response to drug problems in several countries and there are often more drug abusers in prison than in treatment. This raises questions not only as to which responses are more practical, effective, or in the public health interest, but also as to the human rights of the drug user, including his or her right to health care services.

Law enforcement personnel

Personnel that may be appropriately involved include staff in clinics and other medical facilities as well as regular custodial staff in penal and correctional institutions. Probation officers, or their equivalent, would perhaps be the most important professional group within this system since they have a rather special relationship with clients still living in the community. Police officers at present have hardly any introduction to the significant impact on drug using behaviour they may have as an incidental part of their ordinary duties. The impact of drug problems on the staff itself is of particular importance in the law enforcement sector.

Another important role for law enforcement and judicial services may be in implementing changes at community or the wider social level. The activities of communal justice agencies undoubtedly already have an impact in different ways on community attitudes and practices, as well as on the availability of alcohol and other drugs in different parts of the world. These activities include the restriction of the availability of drugs, including alcohol, as well as control of intoxicated behaviour in public. The impact of the policy underlying the manner in which these sorts of activities are pursued has a major bearing on individual alcohol and drug consumption. How these existing responses are governed and how they may be even more effectively harnessed has not been reported on in depth.

Persons working in law enforcement settings are much more likely than those in health care settings to see licit and illicit drug problems as requiring entirely different responses since their responsibilities towards these problems differ markedly in law. This distinction in the manner in which different classes of substances are perceived by law enforcers will have a powerful influence on the help they can provide to different groups of substance users.

Social assistance and social welfare settings

Included here are all social assistance programmes, social services, housing assistance programmes and all forms of public welfare agencies. As with the two settings described above, social service settings include a high proportion of persons with drug problems (Murray, 1977; Spiegelman & Smith, 1985). Family service agencies frequently deal with individuals who manifest alcohol and other drug problems, as well as with families in difficulty because of the substance use of one member. Agencies working with the homeless are similarly recorded as dealing with persons having problems relating to alcohol and drug use (Institute of Medicine, 1990).

Agencies in developed countries - especially those including a component of "social work" - probably already address these problems to some extent. The nature of such intervention, however, is not clearly documented. There are recommendations for the inclusion of training for identification and intervention by these agencies (Ehline & Tighe, 1977; Deakins, 1983).

It is just as likely that the corresponding agencies in developing countries are faced with a situation similar to that which is seen in the developed countries. Again, there is no documentation of responses delivered through these agencies and it is likely that individual workers in these settings deal with substance use problems as they think fit, if they deal with them at all.

Social assistance personnel

The most relevant personnel through whom service delivery in these agencies can be channelled are social workers. The basic training of social workers already includes attention to alcohol and other drug problems. Comprehensive and systematic training on the generalist interventions they could deliver needs to be included both in basic social work training as well as in-service training for already qualified social workers.

Occupational settings

Where assistance programmes are available for employees, these too are likely to draw a sizable number of persons with alcohol and other drug problems. Formal employee assistance programmes are more a feature of the developed societies. The trend in such programmes at present appears to refer these problems elsewhere when they are encountered (Institute of Medicine, 1990). There are no reports of specific non-specialist interventions being carried out at present through any of these agencies.

Personnel in employment settings

Employer attention to substance abuse problems, especially those related to alcohol, is becoming evident. Appropriate training for delivery of interventions needs to be considered within the employment setting. Delivery of interventions through the occupational setting may carry an element of coercion that is not as immediately apparent as that of the criminal justice system. The merits and demerits of this must be carefully weighed.

Educational settings

Schools, universities and other educational settings undoubtedly have their share of persons with substance use problems. Drug and alcohol use is probably more likely to lead to problems when begun at a younger age. Interventions may therefore have greater impact when directed at those beginning to experiment at an early age. It is not clear, however, whether those in educational settings constitute a special "risk group" as such. Those who have dropped out of school, for instance, are more likely than their peers in school to be experimenting with or regularly using psychoactive substances.

Educational personnel

The appropriate personnel for delivery of services within schools would be school counsellors, where they exist, or selected teachers who could be trained to deliver such interventions within the school system itself. Students may tend to take more heed of interventions coming from their peers, but a large effort is needed to maintain this kind of service on an ongoing basis.

Nongovernmental Organizations (NGOs) and Voluntary Agencies

The role played by these agencies differs considerably throughout the world. In less developed countries these agencies sometimes become the principal source of delivery for certain kinds of services. Various assistance programmes for individuals and families in distress, such as health interventions, emergency and other relief and service provisions are all areas in which the NGO sector may significantly contribute to the

formal sector - or may even supplant it - as the main agency involved in delivery. Much of what is discussed under "Social Assistance" may readily apply to the NGO sector in some developing countries.

NGO personnel

NGOs that are specifically engaged in helping individuals through counselling and other support would already have training for the personnel involved. This may not include specific instruction in appropriate responses for those with substance abuse problems. In looking at the range of people through whom generalist responses could be delivered, those in the NGO sector constitute an important resource in many countries of the world.

Counselling services, help-lines and crisis intervention services

As with most other helping agencies, these services draw a fair share of people with substance abuse problems. The considerations that apply to primary health care settings generally apply here as well.

Helping agency personnel

Personnel in these facilities already have some experience in dealing with these problems, but may be a useful group to train for more systematic delivery of non-specialist interventions.

EXISTING RESPONSES

In both developed and developing countries, generalist services offer an important avenue of intervention. They come across a much larger proportion of substance abuse problems than the specialist services and have been found to be effective in bringing about significant changes, although through relatively modest interventions. They also have the advantage of allowing access to a large group of people who would not be appropriate for specialist management and who for various reasons are not willing to use the specialist service even if it were appropriate for them. It is also likely that individuals in earlier stages of substance abuse problems would respond better to intervention, and in this regard generalist settings can offer an opportunity for more effective intervention than the specialist settings.

Attempts at utilizing the potential that these services offer include efforts to improve the recognition or identification of persons with existing or potential problems related to their substance use. Such measures include the use of screening questionnaires, clinical scales and laboratory investigations. Appropriate interventions for delivery by non-specialist staff are being experimentally evaluated for their effectiveness. Most of these approaches are directed primarily at alcohol rather than at other substances of abuse.

There are striking differences in the responses by these various agencies in different countries. The scope of the interventions made through the agencies discussed in the previous section can vary from being non-existent to highly specialized. A very broad distinction can be drawn between the most developed countries and the least developed.

The nature of interventions in the more developed parts of the world appears to have been derived from services undertaken by the specialist centres. As in most other specialties, undergraduate medical training

in abuse of alcohol and other drugs is conducted by the specialists who deal with substance abuse problems. Lower rungs in the medical hierarchy were initially expected to detect and refer those with problems to the special agencies that deal with them. Even as generalists were encouraged to undertake elementary interventions, they could count on the backing of the more specialist agency for referral in cases of difficulty.

Services to be delivered by the less specialized agencies are formulated and tested by the specialists (e.g., Edwards et al., 1977; Babor et al., 1986). The structure of a hierarchy of services through which clients or patients move to the appropriate level remains the model, in keeping with that of all other medical specialties. The importance of the role to be played by generalist settings is being acknowledged by specialists who are now moving to develop interventions appropriate for generalist settings. There is, however, hardly any documentation on what is actually delivered by the generalists in their responses. A matter of equal interest would be the study of their referral patterns.

Many generalists still probably feel reluctant to deal with individuals with substance abuse problems. Reluctance stems not only from the generalists' uncertainty about their own ability to handle the problems involved. The common perception that persons with dependence are undesirable or troublesome may contribute to this reaction. There are also the limitations of the setting, which may not be equipped to handle the problems that dependent persons present. Among the limitations are the lack of facilities and expertise needed to handle the various crises and demands that a some of the users may present.

In poorer countries, generalist services rarely have access to a specialist substance abuse treatment facility. Instead of being encouraged to identify alcohol and other drug related problems, these non-specialist agencies are faced with a different kind of difficulty - that of providing a service for those with obvious and severe alcohol and drug problems when no other help is available. Referral facilities, psychological or psychiatric ones, are not often an option as they would be for medical problems.

The responses in these countries are quite different from those in more developed countries. As they are not always informed or backed by specialist approaches and have often come about on an ad hoc basis, approaches which have evolved as a result of agencies being forced to deal with alcohol and other drug problems may be quite idiosyncratic. They are certainly not well researched or documented and therefore are hardly ever regarded as valid.

However, innovations and approaches used in the less developed parts of the world need to be taken seriously. They may well be no less effective than methods used in better-known settings. It is likely that methods used represent the most suitable compromise between the demands made upon these services and the resources available. Deliberate attention to and evaluation of the methods used in such under-resourced areas may serve as a useful source of new ideas.

Examples from developing countries

The foregoing discussion on generalist responses to alcohol and other drug problems is heavily biased towards approaches that have been reported in scientific journals. There is also a heavy leaning towards those approaches that are delivered through agencies in the health care sector, as compared to other sectors that also deal with substance abuse problems, although not specifically designated. We need to look in

addition at unpublished material and to seek information from persons who may be aware of developments that are worth pursuing even though not reported.

Work in developing countries is rarely reported. There is not very much pressure on professionals in these countries to publish, even as a means to personal advancement. A professional in a developing country has great difficulty in meeting the specifications of established journals because of poor access to information and to others professionals working in their field. Yet it is in these countries that the vast majority of substance abuse problems are encountered. Below is a brief sketch of the situation in less developed countries, with examples of some generalist interventions that have taken place.

In developing countries, services are not readily available to large segments of the population. Most services are concentrated in the largest cities, where a wide range is often available. In rural areas, however, there is a dearth of even basic generalist medical practitioners. Essential medical services are delivered through paramedical staff, such as public health midwives, and in some settings by volunteer village health workers who have received only the briefest of training.

Responses to substance abuse problems, like responses to all other medical needs - including diarrhoeal diseases, malaria and snakebite, to name a few - have to be delivered via these basic generic medical auxiliaries. Quite often it is whether a health worker can be spared from other pressing demands, as opposed to the needs substance abusers have, which establishes the criterion of service delivery.

Interventions in this kind of milieu are much more generalist than is conceived by the affluent world, in that they quite often include responses that are initiated and carried out by the community itself, as opposed to those that are delivered through a particular service sector. In other words, the lack of an initiative by the community means that the problem never receives attention. Thus substance abuse problems increase to very high levels of severity with no conscious response whatsoever. Mechanisms by which responses come to be initiated are unclear, and their initiation is not necessarily related directly to the impact of the problem.

Drug abuse problems in developing countries often tend to involve the wider community. For example, treatment responses to cocaine abuse in Bolivia and Peru are often linked to an extended community effort rather than directed at individual families. Similarly, programmes to assist inhalant using youth in Mexico or drug-using street children in Bolivia also use resources within the community to assist the user in coming off drugs.

An example of a community response to drug problems is provided by community detoxification camps begun in places in India. In the "camp" approach, a community with a high prevalence of heroin abuse works, as a community, to deal with the treatment needs of the affected group. A suitable location is found where the heroin users are housed for approximately two weeks, during which members of the community provide security and cater for the needs of the persons being detoxified. Medication is provided as recommended by a consultant, who is usually someone from the nearest drug treatment facility. Help with reintegration into the community commences at the camp and continued supervision becomes a matter of concern for the wider community, not just for the individual's family.

Detoxification camps in areas with high prevalence of heroin abuse are often initiated as outreach efforts of drug treatment facilities, but these camps in turn initiate more community-based efforts in adjacent

localities. An important feature of their initiation is the community's collective consciousness that some response needs to be made to the problems relating to substance abuse.

The resulting response is truly communal. It not only addresses the needs of the drug-using population, but also extends to the community's need to reduce the risk to unaffected youth, i.e. preventing the ready availability of heroin. The response then includes attempts either to drive away or to confront heroin dealers and street pushers. This form of extension from a primarily therapeutic response to a preventive effort is possible because the response is totally unspecialized and need is felt within the community, rather than as a service extended from outside.

Sri Lanka has had a different experience, deriving from what were initially drug preventive activities involving youth groups and entire communities, sometimes centred around Buddhist temples. A feature of these efforts is that they often lead to a change in community attitudes towards drug use and public behaviour while intoxicated. With changes in community perception of drug use, current users sometimes approach those involved in these preventive activities to seek help in modifying their drug and alcohol habits. Therapeutic responses occurring from a result of these requests are truly generalist.

Responses to substance abuse problems in such instances have taken the form of detoxification and rehabilitation efforts via the Buddhist temple, which is an undoubtedly generalist setting. Other responses include group efforts as a means to giving up smoking. These are examples of movement from purely preventive activities to those that are more therapeutic, i.e., the example cited from India, where a primarily therapeutic effort expanded to include a preventive component, as opposed to the example from Sri Lanka, which is a demonstration of flexibility in the other direction.

Non-specialist treatments are both more flexible and more open to integration with preventive efforts than are specialist approaches. This integration is more likely in those countries where a significant proportion of treatment occurs in generalist settings. At least some of the efforts used in less developed countries appear to provide a synthesis between treatment and preventive efforts. This is hardly surprising since those engaged in drug prevention activities in deprived areas are approached, they need to respond to treatment needs because there is simply no other option.

Although both preventive and curative interventions are delivered by the same agency as a matter of necessity, it may perhaps be useful to consider this as a deliberate option to be followed elsewhere. The option of pursuing policies that affect whole communities rather than only individuals (Moskowitz 1989), has already been proposed as a choice for developed countries' use (Moore & Gerstein, 1981).

In poorer countries the responses delivered at generalist settings are mainly directed towards individuals who are more severely or obviously affected than those in similar settings in the more developed countries. The settings in developing countries, although responding in some way to the obviously affected individual, do not detect the less obviously affected ones or attempt to intervene with them. Methods for early identification of problem and hazardous drinking are just as relevant for these countries as for developed ones. In this regard, screening instruments specifically found to be useful in detecting earlier stages of problem use would be particularly useful.

Screening instruments

Screening procedures have evolved from those designed to detect alcoholism to those designed to detect alcohol problems. The most widely used of the earlier genre is perhaps the Michigan Alcoholism Screening Test or MAST (Selzer 1971), of which various modified versions were developed (Pokorny et al., 1972; Selzer et al., 1975). Similarly, the simple instrument referred to as the CAGE questionnaire (Cutdown on drinking, Annoyance with criticisms about drinking, Guilt about drinking and using alcohol as an Eye-opener) was found suitable for detecting alcoholism (Mayfield et al., 1974; Ewing, 1984), but was not liable to detect less severe problems (Saunders & Kershaw, 1980). The Munich Alcoholism Test (Feuerlein et al., 1986) and the McAndrew Alcoholism Scale (McAndrew, 1965; Gottesman et al., 1989) are similarly not applicable to the group with less severe problems.

Clinical examination which looks for abnormal physical findings has been used for screening (Le Go Grid), sometimes complemented with items from the clinical history (Skinner et al., 1986), while the search for biochemical markers continues (Beresford et al., 1982; Allen et al., 1988). A convenient and rapid biochemical method involves the use of a "dipstick", a method which has been found to give reasonably accurate results (Peachey and Kapur, 1986).

Despite these developments, laboratory examinations are considered less useful than questionnaires in identifying new cases (Institute of Medicine, 1990). One problem with laboratory examinations is that they have a relatively lower level of sensitivity and generally cost more than questionnaire methods. A further difficulty with laboratory methods, especially for developing countries, is that they are unsuitable for widespread use in places where medical facilities are limited. Laboratory screening is, however, an area in which new developments are likely to overcome existing difficulties and limitations (WHO 1990).

Compared to all these instruments, the Alcohol Use Disorders Identification Test or AUDIT questionnaire offers the most promise since it identifies, in primary care settings, harmful and hazardous use rather than severe dependence (Babor et al., 1989). It has been cross-nationally standardized by validation in primary health care patients in six countries of different socioeconomic level and has been found to be of high sensitivity and specificity. When the screening agent feels that the subject is not providing accurate answers, or where additional information is desired, there is a supplementary Clinical Screening Procedure which can be added. AUDIT, while, not a diagnostic instrument, has the potential of being useful in appropriately directing persons to different types of intervention.

Screening tests for other drugs have not kept pace with developments in the alcohol field. Biochemical markers are heavily relied upon as the means of detection. It is quite likely that, in the case of these drugs too, questionnaires could provide a sensitive screening method and there is no doubt that they would be easier to apply across a wide variety of settings.

Although screening instruments have been demonstrated to be useful on experimental testing, there are no reports of their regular and widespread use in ordinary service delivery.

More recent developments

Until recently the generalist setting was seen as the most appropriate for detecting and then referring on the alcoholic or drug dependent. With the recognition that there are many clients who require intervention but

for whom referral is not appropriate, interest has begun to focus on interventions that may be delivered through non-specialists. Referral here must be recognized as an important intervention. There may be significant changes arising simply from just being referred, even when the client does not take up the offered referral (Elvy, 1988).

It must be understood in discussing the generalist response that this does not necessarily have to be equated with assistance offered only to those with mild problems or hazardous use. In settings that have the luxury of a range of services, the generalist response would automatically be equated with the service appropriate for the less severely affected. We must bear in mind, however, that the so-called generalist response is the only response available for the entire range of substance abuse problems and levels of dependence in many countries.

Generalist interventions in developed countries have evolved specifically with the less severely affected user in mind. The number of such interventions is likely to be as many as the number of individual practitioners in generalist settings. These practitioners have always had persons with differing degrees of drug-related problems consulting them either directly or indirectly. Yet attempts have not been made until recently to direct these responses in any systematic fashion or to evaluate their effects. The interventions now being tried out for effectiveness in a more systematic manner seem to be attracting the generic label "brief intervention" (Institute of Medicine, 1990; WHO, 1991).

"Brief intervention" is considered to be quite distinct from "brief therapy" (Glaser, 1991). Brief therapy is delivered by staff with some form of specialist training. Thus, brief therapy is at a higher level of technical training, and is applicable only to a minority of those requiring intervention. Brief therapy is brief only in relation to the usual timescale in which the relevant specialist therapeutic procedures are delivered. Brief therapy is delivered over approximately six formal sessions and includes behavioural methods for controlling drinking, assertiveness or social skills training and various forms of cognitive therapy. Although abbreviated to apply them more widely, brief therapies are in no way envisaged as interventions to be delivered by the non-specialist.

Screening implies a readiness to intervene. Brief interventions are a response to this need, to be delivered in a setting where resources are unlikely to be available for diagnosis and treatment in the usual sense. The history of early and simple interventions aimed at hazardous and harmful alcohol consumption is not long (Edwards et al., 1977; Russell et al., 1979; Miller & Hester, 1980; Kristensen et al., 1983; Chick, 1984; Elvy, 1988; Wallace, 1988; WHO, 1991). While these strategies for intervention are being tested, self-help manuals have been developed for these problems (Miller & Taylor, 1980; Miller & Muñoz, 1982; Heather, 1986; Heather et al., 1986).

Some of the initial brief interventions were relatively time-consuming and aimed at achieving specific changes using abbreviated forms of specialist behavioural management (Miller & Hester 1980). Later studies have attempted to deliver these interventions, broadly falling under the heading of behavioural self-control training, more efficiently (Alden, 1988). However, the specific behavioural methods, even if suitable for delivery at general practice clinics, do not quite fall under the category of generalist interventions for the purposes of this paper.

A much more generalist or non-specific intervention was found useful in changing the drinking habits of middle-aged men in the Swedish study in Malmö (Kristensen et al., 1982). The identification was based on a laboratory estimation of serum enzyme level and the intervention consisted of regular feedback of the results of repeated enzyme studies and counselling by a nurse, focused on living habits. This relatively simple intervention was helpful in reducing both the medical and the social consequences of heavy drinking. The main disadvantage of this method with regard to general applicability is that it requires facilities for laboratory testing of a level that may not be readily available.

In a related study at the Edinburgh Royal Infirmary, the addition of a counselling session with a nurse, lasting up to 60 minutes, made a significant improvement to problems related to alcohol (Chick et al., 1984). There was no significant difference, however, in reduction of alcohol consumption when compared to a control group. The intervention here also included the use of a self-help booklet. This study is more in keeping with the idea of brief intervention as a generalist response.

The original study of Edwards and others (1977) was not conducted strictly in a generalist setting but has served to generate more interest in the potential offered by brief interventions than any other. This intervention was ideally suited for use as a non-specialist intervention since it was not in any way technically complicated and was not heavily time-consuming. In a paper that amounts to a discussion of the implications of this study, Edwards & Orford (1977) concluded that the approach to alcoholism treatment should in general include less intervention than has been the fashion. They also suggested that the process of reviewing one's own situation may be the factor that is of therapeutic value to the person or family concerned.

In a study of interventions by general medical practitioners, Wallace and others (1988) reported a more than two-fold reduction in consumption in the intervention group compared to the control group, as the result of a session that covered the clients' current patterns of consumption and related problems and included the issue of an information pamphlet. The authors concluded that general practitioners and other members of the primary health care team should be encouraged to include counselling about alcohol consumption in their preventive activities.

A similar study of an even briefer intervention (of one or two minutes' duration) by general practitioners has provided evidence that giving smokers an information leaflet and a warning that they will be followed up resulted in a significant increase in the number giving up smoking (Russell, 1979).

A WHO study (WHO, 1991) in search of a generally applicable intervention has found that male drinkers who received an intervention consisting of five minutes of simple advice reduced their consumption significantly compared to those who did not receive this advice. More intensive intervention did not lead to greater improvement.

Although many of the formal studies on brief intervention have been carried out on alcohol users, the applicability of similar approaches for other drugs is recognized (Institute of Medicine, 1990). The implications of most of the studies on brief intervention are best summarized in the Institute of Medicine (1990) report, as follows:

> "It appears that a variety of techniques can be deployed in different settings by various kinds of personnel without disrupting the usual flow of activities and that such techniques can produce significant and health-relevant effects."

The idea of secondary prevention through low-cost non-specialist efforts directed at those in early phases of developing problems is clearly attracting interest. Initial results of the efforts so far give cause for optimism as to the possible beneficial impact of these interventions. Along with these generalist interventions a further line of experiment has used self-help manuals as a means of bringing about change. Results indicate that there is a subgroup of those with hazardous or harmful consumption who improve with this kind of minimal intervention (Heather, 1986; Heather et al., 1986; Miller & Hester, 1980; Miller & Muñoz, 1982).

The ingredients that constitute these successful interventions are few. The elements include advising the person that his or her consumption is high and then persuading that person that it needs to be reduced. This involves giving evidence that the individual's consumption is higher than that of the general population or that it is hazardous, feedback of laboratory investigation results, monitoring consumption, continued follow-up appointments and the use of self-help literature. These elements are used in different combinations and it is not yet clear which is the most important.

It remains possible, of course, that the ingredients of the brief intervention package are not really of great consequence to the results of the intervention. The mechanism of improvement with minimal interventions may relate to an individual propensity in a subgroup of alcohol or drug users and not to the specific therapeutic ingredient delivered through the intervention. Results with a variety of these interventions suggest that there is a group of substance users who are, in a sense, "prepared" to limit or discontinue their use. This group could be postulated as having a fluctuating pattern of use - one which shows rapid change with very little intervention.

Those persons responding to "advice", feedback of biochemical test results, mutual surveillance, bibliotherapy and a host of other interventions, may well be the same ready-made group. If this is indeed the case we need to be looking for ways to deliver a stimulus of some sort to all drinkers in order to reach this group as widely as possible, rather than trying to designate which intervention is crucial for success.

CONCLUSION

Common to all generalist approaches is that they are entirely non-specialized and highly flexible. They often include an element of community involvement or awakening to the problem in their midst. Social involvement, when it occurs, is a powerful agent of change, but is however possible only in a truly generalist effort.

Broad-based and powerful community responses have been initiated in some developing country locations through generalist efforts. Where such responses are successfully initiated, the efforts are highly cost-effective because they bring about changes related to both therapeutic and primary preventive goals. It appears to make sense, in these endeavours, to address primary, secondary and tertiary prevention issues as part of one effort. This synthesis of different goals in the one effort has been the result of local

conditions rather than deliberate choice. Observations suggest that such a synthesis may be of use to the more affluent world as well.

There are, therefore, lessons to be learned from both developed and developing country settings. The success or failure of screening procedures and brief or minimal interventions may find application in less developed countries where professional time is at even greater premium than in the developed world. Similarly, syntheses between treatment and preventive efforts, now almost forcibly made a feature of some activities in developing countries, may be worth picking up as a rational approach to be used in developed country settings as well.

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IV. PHARMACOLOGICAL TREATMENT OF DEPENDENCE ON ALCOHOL AND OTHER DRUGS: AN OVERVIEW

INTRODUCTION

Drug dependence, i.e., dependence on psychoactive substances, is a complex process with a number of related but distinct aspects. These include drug-using behaviour itself, drug intoxication, withdrawal syndromes, relapse, drug-induced organ toxicity and psychopathological states that might contribute to initiation of, or relapse into, drug use. These aspects involve quite different underlying physiological and psychological mechanisms, all of which constitute possible targets for therapeutic intervention. Many different potentially therapeutic agents have therefore been tested and used in treating or managing the various aspects of drug dependence.

The factors motivating drug-using behaviour, including antecedent psychopathology, are to some extent independent of the type of drug used. It is generally believed that all abusable psychoactive drugs, despite differences in their specific receptors and molecular mechanisms of action, share the property of activating a "reward" circuit in the brain, and thus of initiating effects that reinforce (i.e., increase the probability of repeating) the drug-taking behaviour. In some individuals, genetic factors or pre-existing depression, anxiety, or other emotional disturbances may make these reinforcing effects of drugs even stronger. Any therapeutic agent that could block or modulate the reinforcing effects of drugs, or relieve the symptoms of psychopathology that add to the strength of the reinforcing effects, would be potentially useful in treating dependence on any type of psychoactive substance. Thus, at least conceptually, the same therapeutic agent may be useful in the treatment of dependence on psychoactive substances of various kinds.

The other aspects mentioned above, however, including the features of drug intoxication, withdrawal syndromes and organ toxicity, are relatively drug-specific. Many of the common medical complications of alcohol dependence, such as cytotoxicity in the liver, pancreas or the brain, are directly attributable to the metabolism of ethanol or the pharmacological actions of ethanol or its primary metabolite, acetaldehyde, and may be amenable to pharmacotherapeutic intervention. To some extent this is also true of cocaine and amphetamines. In contrast, most of the organic complications of use of other drugs are consequences of the route and manner of drug administration, rather than of the drug action *per se* (e.g., miliary abscesses, or AIDS, in intravenous opioid or cocaine users or lung cancer in tobacco smokers) and do not lend themselves to specific pharmacotherapy within the context of this review. Therefore this aspect is not covered in relation to all types of drug dependence.

Finally, some agents have been tested for potential value in treating more than one aspect of dependence on the same category of psychoactive substance. Consequently, some agents may be mentioned in more than one place and context.

MEDICATIONS FOR ALCOHOL DEPENDENCE

Alcohol intoxication

The search for an alcohol antagonist has gone on since the time that ancient Greeks believed that the precious stone amethyst could block or reverse the intoxicating effects of alcohol; hence the term "amethystic" agent. Numerous drugs have been tested for this purpose but none has proved to be clinically useful and intoxication is still treated mainly with supportive care. Many of the agents tested, including triiodo-thyronine, B vitamins, pyruvate, amino acids, propranolol and amantadine, lacked a clear scientific rationale and did not provide any practical benefit (Rada & Kellner, 1979; Sellers & Kalant, 1976). More recent studies have largely focused on agonists or blockers of neuro-transmitter receptors thought to mediate some of the effects of ethanol. L-dopa, aminophylline and ephedrine were reported to reverse some of the acute physiological, behavioural and cognitive effects of ethanol (Alkana et al., 1977) but no confirmatory reports followed (Erickson, 1984). Alpha-2 adrenergic receptor antagonists, such as atipemazole and idazoxan, have also been explored as possible amethystic agents (Lister et al., 1989) but have not yet been adopted clinically for this purpose. Since they do not have serious side effects, they may merit further study. Early case reports (Jeffreys, Flanagan, & Volans, 1980) of reversal of ethanol-induced coma by the opioid antagonist naloxone were not confirmed by subsequent studies (Dole et al., 1982). Lithium decreased self-reported intoxication and cognitive dysfunction in detoxified alcoholics given standardized doses of ethanol in a placebo-controlled double-blind study (Judd & Huey, 1989) but these results, although promising, have not led to the clinical use of lithium for this purpose (Liskow & Goodwin, 1987).

The imidazobenzodiazepine Ro15-4513, a partial inverse agonist at benzodiazepine (BZ) receptors, partially blocks some of the behavioural effects of alcohol in rats (Lê et al., 1989; Lister, 1987; Suzdak et al., 1986) but the drug is not used clinically for this purpose because it is pro-convulsant in high doses, and could precipitate seizures in individuals undergoing alcohol withdrawal (Kolata, 1988). Flumazenil (Ro15-1788), a BZ receptor blocker, has also failed to demonstrate significant reversal of alcohol intoxication in double-blind placebo-controlled studies (Fluckiger et al., 1988); (Lheureux & Askenasi, 1991). In preclinical studies, the calcium L-channel blockers verapamil and nifedipine modified some of the behavioural effects of alcohol (Naranjo & Fan, 1992) but, again, placebo-controlled studies in humans (Perez-Reyes, White & Hicks, 1992) found that neither of these agents antagonized the effects of alcohol intoxication on short-term memory or psychomotor performance.

Alcohol affects the release or metabolism of many neurotransmitters and neurohormones, and the activities of numerous synaptic receptors or "second messenger" systems. There is no valid evidence that any one of these is the exclusive or dominant mediator of the actions of alcohol. Therefore a single effective and safe amethystic agent may never be found.

Alcohol withdrawal syndromes

When chronic alcohol intake is abruptly discontinued and blood alcohol levels decrease rapidly, a characteristic withdrawal reaction emerges. Its severity varies with the intensity and duration of the preceding alcohol exposure and may be increased in individuals with previous experience of withdrawal symptoms (Branchey, Rauscher & Kissin, 1971). Mild withdrawal reactions include tremor, anxiety,

insomnia, anorexia and irritability, lasting 48 hours or less. In severe reactions, these symptoms are accompanied or followed by grand mal seizures or by sweating, tachycardia, fever, disorientation, delusions and hallucinations ("delirium tremens") (Sellers & Kalant, 1976). Assessment of the alcohol withdrawal syndrome can be standardized by use of a nine-item scale (Sullivan et al., 1989).

Controlled studies have confirmed that non-pharmacological interventions alone, such as monitoring of signs and symptoms, personal attention and general nursing care, can substantially reduce the severity of the withdrawal syndrome (Frecker et al., 1982). Indeed, most patients with mild withdrawal reactions can be safely managed on an outpatient basis (Hayashida et al., 1989). However, patients in moderate to severe withdrawal should receive appropriate drug therapy as well (Naranjo & Sellers, 1986). One effective programme is the benzodiazepine loading dose technique, consisting of administration of 20 mg oral doses of diazepam hourly until the patient shows clinical improvement or becomes mildly sedated (Sellers et al., 1983). Dosage is then sharply reduced or stopped, the long half-life of diazepam and its metabolite, desmethyldiazepam, being sufficient to provide gradually decreasing therapeutic effect over the next day or two. Many other sedative drugs, including barbiturates, paraldehyde, chlormethiazole and other non-barbiturates, have been used to treat alcohol withdrawal reactions but on the whole they are not more effective than the benzodiazepines and some tend to cause excessive drowsiness (Sellers & Kalant, 1976; Shaw, 1982; Jaffe, Kranzler & Ciraulo, 1992). Phenothiazines and other antipsychotics such as haloperidol are sometimes used to control hallucinations once the risk of seizures has passed, but because they do not prevent seizures they are generally not as efficacious as benzodiazepines when used early in the course of severe withdrawal reactions.

Some of the effects of ethanol may be produced by its inhibition of voltage-dependent calcium channels (Carlen & Wu, 1987) and cation channels activated by the NMDA type of glutamate receptor (Gonzales & Hoffman, 1991). Accordingly, overactivity of these channels has been found in alcohol withdrawal, and administration of calcium channel blockers (e.g., nifedipine, nitrendipine) and NMDA receptor antagonists such as (+)MK-801 can attenuate the withdrawal reaction in rats (Grant et al., 1990; Little, Dolin & Halsey, 1986). Investigation of these drugs for possible use in humans is in progress, although cardiovascular side effects may limit their use (Naranjo & Fan, 1992). Conversely, ethanol has been shown to activate some dopaminergic neurons (DeChiara & Imperato, 1988) and some aspects of withdrawal after chronic excessive intake of alcohol may be associated with reduced dopamine activity. A dopamine receptor agonist, bromocriptine, has been reported to alleviate some alcohol withdrawal symptoms (Borg & Weinholdt, 1982) but has not found wide use for this purpose.

Various anticonvulsant agents have been used to prevent or treat alcohol withdrawal seizures. Phenytoin was commonly employed for this purpose in the past. Carbamazepine and valproic acid are used in northern Europe but side effects limit their clinical utility (Hillborn et al., 1989), and they do not appear to have any advantage over benzodiazepines (Jaffe, Kranzler & Ciraulo, 1992; Malcolm et al., 1989).

Several agents that decrease adrenergic activity, including the β-receptor blockers propranolol and atenolol (Jaffe, Kranzler & Ciraulo, 1992) and the α_2-autoreceptor agonists clonidine and lofexidine, have been reported to produce rapid improvement in the autonomic symptoms of alcohol withdrawal (Wilkins, Jenkins & Steiner, 1983). However, these treatments have not been systematically compared with benzodiazepine therapy and their clinical role is not yet established (Cushman & Sowers, 1989). Other pharmacological agents that have been tested and, in some cases, incorporated into standard treatments, include magnesium,

chlormethiazole and bromocriptine (reviewed in Liskow & Goodwin, 1987; Jaffe, Kranzler & Ciraulo, 1992; Castaneda & Cushman, 1989; Litten & Allen, 1991; Romach & Sellers, 1991).

Most studies of agents other than benzodiazepines and sedative-hypnotic drugs have suffered from methodological weaknesses (Moskowitz et al., 1983) that prevent conclusive statements about the clinical value of these treatments in alcohol withdrawal.

Drugs to decrease alcohol consumption

Pharmacotherapies designed to reduce alcohol intake can be used in two different circumstances: either at the start of treatment as an aid to reducing the consumption in those individuals who refuse to stop drinking completely or abruptly, or to prevent later relapse in those who have succeeded in stopping. The role of pharmacological agents is essentially the same in these two situations and is based on drug actions that (a) interact with alcohol to produce unconditionally aversive effects (alcohol-sensitizing agents), (b) produce aversive effects of their own which can be linked conditionally to the presentation of small doses of alcoholic beverages in order to produce a conditional aversion to alcohol, or (c) interfere with the activation of the "reward" system by alcohol.

Alcohol-sensitizing agents. Both disulfiram and calcium carbimide inhibit hepatic acetaldehyde dehydrogenase (ALDH) so that alcohol ingestion is followed by increased blood acetaldehyde levels that result in flushing, tachycardia, weakness and nausea. These agents differ in their onset and duration of action (Peachey & Annis, 1985). The effect of disulfiram develops over a period of 12 hours or longer and lasts for several days, whereas that of calcium carbimide is maximal in 1-2 hours and is largely over in a day or less (Peachey & Annis, 1985). The alcohol-disulfiram reaction is usually characterized by more severe hypotension than the alcohol-carbimide reaction. Disulfiram also inhibits dopamine β-hydroxylase and hepatic cytochrome P450. As a result, chronic treatment with disulfiram increases the elimination half-life of a wide range of drugs that undergo hepatic hydroxylation, including diazepam, desipramine, phenytoin and warfarin (Banys, 1988; Ciraulo, Barnhill & Boxenbaum, 1985; Hoyumpa & Schenker, 1982; Sellers, Naranjo & Peachey, 1981). In addition, disulfiram has several contraindications, including liver disease, heart disease and pregnancy.

Although disulfiram has been used as an alcohol sensitizing agent for over 40 years, there is still no scientific evidence of its ability to reduce alcohol intake consistently when patients are merely instructed to ingest it (Fuller et al., 1986; Wright & Moore, 1990). Poor long-term compliance is well recognized as a problem in its clinical use, even in patients who express willingness to take it. Subcutaneous implants of disulfiram were developed to overcome this problem but are no more effective than placebo implants (Wright & Moore, 1990). Calcium carbimide (not sold in the USA) was also no more effective than placebo in relapse prevention in a short-term double-blind study (Peachey et al., 1989). In addition, the alcohol-sensitizing drugs can be used only when the treatment goal is abstinence, not partial reduction of alcohol intake.

Thus, in summary, the alcohol-sensitizing drugs may have a very limited role in the context of a structured treatment programme in cognitively intact patients who are motivated to remain abstinent, and a somewhat greater, though ethically problematic, role for those who are required to do so for judicial or other reasons (Jaffe, Kranzler, & Ciraulo, 1992; Peachey & Annis, 1985; Banys, 1988).

Conditioned aversion therapy. This is essentially a psychologically, rather than a biologically, based method, since the pharmacological component is limited to the production of a conditional stimulus identical in role to electric shock or any other aversive stimulus. Therefore this approach is not discussed here.

Agents to decrease reinforcement of alcohol drinking. Dopaminergic pathways in the brain are widely recognized to play an important role in reinforcement, both by drugs and by natural reinforcers such as food and water (Wise, 1987; Koob & Bloom, 1988). Therefore various dopamine receptor ligands have been tested for their effects on alcohol consumption. Neuroleptics such as phenothiazines and butyrophenones block postsynaptic dopamine receptors and, in animal experiments, decrease alcohol consumption. However, dopamine receptor agonists (e.g., bromocriptine and lisuride) are also reported to decrease consumption in humans (Borg, 1983; Dongier, Vachon & Schwartz, 1991) though the possible mechanism is unclear. More studies are required to establish their possible value.

There is abundant evidence, however, that reinforcement by alcohol and other psychoactive drugs is a very complex process involving not only dopamine but also opioid peptides, serotonin and probably other neurotransmitters and modulators (Koob & Bloom, 1988; Kalant, 1989). Numerous studies in both experimental animals and humans have examined the effects of opioid receptor blockers and serotonin agonists and antagonists on alcohol consumption. Two recent placebo-controlled double-blind trials (O'Malley et al., 1992; Volpicelli et al., 1992) indicate that naltrexone, a long-acting opioid receptor blocker, may help to prevent craving and relapse in detoxified alcoholics. The results were better, however, if naltrexone was combined with coping skills training and supportive care.

In rodents, serotonin precursors and selective serotonin uptake inhibitors consistently decrease voluntary intake of ethanol (Naranjo, Sellers & Lawrin, 1986) in a dose-dependent manner by up to 60% or more. In humans, the effects have been much less dramatic. Zimelidine, a 5-HT uptake inhibitor, reduced alcohol intake in mildly to moderately alcohol-dependent subjects to whom it was given in placebo-controlled double-blind studies (Amit & Smith, 1992; Naranjo et al., 1984). The reduction in total intake during the study period was modest (about 20%) and resulted mainly from a decrease in the number of drinking days rather than a major decrease in intake on drinking days. Similar results have been described with other serotonin uptake inhibitors, including citalopram (Naranjo et al., 1992), viqualine (Naranjo et al., 1989), and fluoxetine (Gorelick & Paredes, 1992; Naranjo et al., 1990) and with the serotonin$_{1A}$ agonist buspirone (Bruno, 1989). Somewhat surprisingly, certain serotonin receptor antagonists also decrease alcohol intake modestly in human subjects. For example, ritanserin (a 5-HT$_2$ blocker) and ondansetron (a 5-HT$_3$ blocker) decreased the desire to drink and reduced the intake per drinking day (Monti & Alterwain, 1991; Sellers et al., 1991). Studies with fluvoxamine, ritanserin, ondansetron and other agents are continuing. However, all of the trials with these agents have been of short duration (3-8 weeks), and the effects, as noted, have been modest. A very recent placebo-controlled double-blind study revealed no effect of buspirone on either alcohol consumption or anxiety during a 25-week follow-up of 67 anxious alcoholics treated with buspirone (Malcolm et al., 1992). Therefore the role, if any, of these agents in the long-term management of alcoholism, and especially in the prevention of relapse, is not yet clear.

Similar uncertainty applies to other pharmacotherapeutic agents that have been tested. Lithium was reported to decrease the desire to drink alcohol and the amount consumed (Judd & Huey, 1989) but a number of controlled clinical trials in alcoholics have failed to establish a role for lithium in the treatment

of alcoholism (Dorus et al., 1989; Pond et al., 1981). Acamprosate (calcium acetylhomotaurinate), an agonist at gamma-aminobutyrate [GABA] receptors has also been reported to reduce the relapse rate in detoxified alcoholics (Lhuintre et al., 1990; Pelc et al., 1992), as has the GABA metabolite gamma-hydroxybutyrate (Galimberti et al., 1992). Enalapril and captopril, two angiotensin converting enzyme inhibitors, reduced alcohol consumption in rats (Grupp, Spinosa & Lingham, 1992) but had no significant effects in humans (Naranjo et al., 1991).

The results described above indicate that it is possible for pharmacotherapeutic agents to affect the reinforcing properties of alcohol, but until we have a fuller knowledge of the mechanisms of reinforcement it is unlikely that any single one of these agents will play a major role in the treatment of alcoholism. For the present, they can be regarded at best as a supplement to cognitive or behavioural approaches (Annis, 1990).

Medical complications of heavy drinking

Chronic heavy consumption of alcohol can cause cell necrosis in various organs, including brain, liver, pancreas and skeletal and cardiac muscle. However, only in liver has the mechanism of cytotoxicity been clarified sufficiently to give rise to clinically useful pharmacotherapies. Chronic alcohol consumption has been shown to increase the oxygen requirement in liver (Israel et al., 1979), thus increasing the risk of perivenous hypoxia. Short-term administration of the antithyroid drug propylthiouracil (PTU) reduced the hepatic oxygen requirement (Israel et al., 1975) and improved various clinical and laboratory indices of liver function (Orrego et al., 1979). A long-term double-blind, placebo-controlled trial of PTU therapy reduced the two-year cumulative mortality by 48% in the whole PTU group and by more than 60% in the more seriously liver-damaged subjects (Orrego et al., 1987). Acetaldehyde, derived from the metabolism of ethanol, has been shown to damage the microtubulin assemblies that are necessary for mitosis and various other cell functions (Tuma, Smith & Sorrell, 1991). Colchicine, which arrests microtubule formation and cell division, has recently been reported to produce beneficial results in alcoholic liver disease, similar to those of PTU (Kershenobich et al., 1988).

MEDICATIONS FOR SEDATIVE/ANXIOLYTIC DEPENDENCE

Dependence on therapeutic as well as high doses of benzodiazepines is well documented (Busto et al., 1986; Busto et al., 1986; Owen & Tyrer, 1983; Petursson & Lader, 1981; Rickels et al., 1990; Roy-Byrne & Hommer, 1988). It is characterized by a distinctive withdrawal syndrome (Smith & Wesson, 1991) that includes paresthesias, tinnitus (Busto et al., 1986; Roy-Byrne & Hommer, 1988; Busto, Naranjo & Fornazzari, 1988), anxiety, sleep disturbances (Rickels et al., 1990; Covi et al., 1973), seizures, hallucinations and disorientation (Robinson & Sellers, 1982). The pattern and severity of the withdrawal syndrome depend on the daily dose, the duration of use and the elimination kinetics of the specific BZ used: those with short half-lives are associated with more risk of severe withdrawal reactions than those with long half-lives (Busto & Sellers, 1986). The problem of diagnosis is complicated by the fact that many BZ-dependent patients also abuse other drugs such as alcohol and opiates (Busto, Simpkins & Sellers, 1983; Stitzer et al., 1981; World Health Organization, 1982). Withdrawal syndromes caused by older sedative-hypnotic drugs such as barbiturates, glutethimide or methaqualone, resemble those due to alcohol and to BZs. The occasions for pharmacotherapy are summarized below.

Intoxication

Benzodiazepine overdose is rarely severe and can usually be managed with supportive care alone. If necessary, however, BZ intoxication can be reversed by the BZ receptor antagonist, flumazenil (Ciraulo et al., 1991). As with alcohol, there is no specific antagonist available to reverse the effects of the older hypnotics and only supportive care is available even though these substances are more likely than the BZs to produce lethal intoxication (Ciraulo et al., 1991).

Physical dependence and withdrawal

The BZ withdrawal syndrome usually resolves spontaneously and without major complications (Busto et al., 1986; Owen & Tyrer, 1983; Petursson & Lader, 1981; Rickels 1990; Roy-Byrne & Hommer, 1988) unless seizures develop. There is no widely accepted treatment strategy and there are no controlled studies comparing the various strategies that have been proposed (Smith & Wesson, 1991; Ciraulo et al., 1991; Alexander & Perry, 1991; Sullivan & Sellers, 1986). Most patients who have used BZs for less than 12 weeks are managed by gradual reduction of dosage and replacement of the previously used BZ by a medication which has a long elimination half-life and which exhibits cross-tolerance with the offending drug. Thus, diazepam ($t½(\beta)$=40h), desmethyldiazepam ($t½(\beta)$=70h) and phenobarbital ($t½(\beta)$=100h) are frequently used for this purpose (Ciraulo et al., 1991; Sullivan & Sellers, 1986) in dosages equivalent to those of the drugs that are being replaced. One recommended strategy is to administer a loading dose equivalent to about 50% of the reported daily dose of the BZ and then reduce the dose gradually to zero by decrements of 5-20% per day (Ciraulo et al., 1991; Alexander & Perry, 1991; Sullivan & Sellers, 1986).

A variety of other medications that do not have the reinforcing effects of BZs (e.g., buspirone, imipramine, carbamazepine, clonidine, propranolol, fluoxetine) have been used as alternative treatments in BZ withdrawal and for alleviation of re-emerging psychiatric symptoms for which the BZ was originally prescribed (Ciraulo et al., 1991; Rickels et al., 1990; Tyrer, Rutherford & Huggett, 1981; Lader & Olajide, 1987). However, the results are inconsistent (Smith & Wesson, 1991; Alexander & Perry, 1991; Lader & Olajide, 1987; Schweizer, Case & Rickels, 1986).

Signs and symptoms of the barbiturate/sedative withdrawal syndrome are quite similar to those described above, except that withdrawal from high doses of short-acting agents is more likely to produce postural hypotension, hyperthermia, grand mal seizures and delirium (Jaffe, 1990). The most usual treatment strategies are either gradual reduction of the daily dose of the drug in question (Ciraulo et al., 1991; Jaffe, 1990), a substitution of phenobarbital followed by a gradual reduction in phenobarbital dosage (Smith & Wesson, 1971), or a loading-dose strategy similar to that described for BZ withdrawal but using phenobarbital. The latter is given every hour in doses of 120 mg until signs of intoxication (nystagmus, dysarthria, ataxia, etc.) appear (Sellers, 1988). No further doses are given, because the long half-life of phenobarbital guarantees that from that point on there will be a gradual reduction in plasma level over the next 15 days.

Relapse prevention

Despite successful withdrawal, as many as 50% of BZ or other hypnosedative users relapse within one year (Arora, Knight & Busto, 1991). There is no specific pharmacotherapy to prevent this and reliance is usually placed on psychological interventions and support.

MEDICATIONS FOR NICOTINE DEPENDENCE

Public awareness of the health effects of tobacco use has increased substantially through the years. Smoking cessation has major and immediate health benefits for men and women of all ages, regardless of the presence or not of a smoking-related disease.

Although it has been estimated that 90% of former smokers quit without using smoking cessation programmes, counselling or nicotine replacement therapies, smokers who do need this assistance should have access to it. Smoking cessation materials and programmes, nicotine replacement therapies, exercise, stress management and dietary counselling can help smokers cope with nicotine withdrawal symptoms until they abate, after which favourable psychological changes are likely to occur. Behavioural intervention should be recognized as the most successful means of smoking cessation.

Nicotine replacement therapies are most suitable for the relief of nicotine withdrawal symptoms in the physically dependent smoker, rather than for the treatment of psychological components of dependence. However, nicotine replacement therapy is expensive for the consumer and is thus unsuitable for most smokers in developing countries.

Cigarette smoking produces nicotine tolerance, dependence and withdrawal reactions in a high proportion of regular smokers, thus meeting the DSM-III-R diagnostic criteria for psychoactive substance abuse disorder (American Psychiatric Association, 1987). Pharmacologic treatment strategies are aimed at relieving nicotine withdrawal symptoms, decreasing craving and managing weight gain and psychiatric problems that may develop following withdrawal. Because the management of nicotine withdrawal is usually intended as the first step in smoking cessation, the same medications are used for both purposes. All these pharmacotherapies are more efficacious when used as adjuncts to behavioural or psychological treatment (Tønnesen et al., 1988).

Nicotine intoxication

Life-threatening nicotine intoxication is almost always the result of oral or percutaneous absorption of highly concentrated nicotine solutions used as insecticides (Benowitz, 1988). Intoxication due to tobacco smoking or chewing is usually mild and of short duration because of the rapid development of tolerance and the short half-life of nicotine. Antagonists such as mecamylamine are available but are rarely used.

Nicotine withdrawal and reduction of tobacco use

The characteristic symptoms of nicotine withdrawal include irritability, frustration, anger, anxiety, difficulty in concentrating, restlessness, decreased heart rate, increased appetite and weight gain, and strong craving for nicotine (American Psychiatric Association, 1987; Benowitz, 1988), although 90% of former smokers quit without using nicotine replacement therapy and behavioural intervention should be recognized as the most successful means of smoking cessation. To date, the most effective pharmacotherapy is nicotine replacement; a secondary role is assigned to non-nicotine treatment of the actual withdrawal symptoms, weight gain or psychiatric problems such as depression which may emerge in some smokers following cessation (Glassman & Covey, 1990).

Nicotine replacement

This process uses a less addictive, less hazardous and more manageable preparation of nicotine than tobacco itself, such as nicotine-containing chewing gum or transdermal patches. These vehicles do not

contain tar or other products of tobacco combustion and prevent the hazards of second-hand smoke to non-smokers (Janerich, Thompson & Varela, 1990). Nicotine gum is more efficacious than placebo gum when it is used in specialized clinics and in programmes providing proper instruction in its use (Tønnesen et al., 1988; Glassman & Covey, 1990; Lam et al., 1987) but benefits seen in general medical practices are small (Lam et al., 1987). The effectiveness of nicotine gum seems to depend upon characteristics of the patient, the degree of compliance, the type of behavioural intervention that is used in conjunction with the gum and the instructions given with the gum.

One concern is that nicotine gum may simply substitute for tobacco in maintaining nicotine dependence. However, the chewing effort required to extract the nicotine, the unpleasant taste of the gum, side effects and the absence of peak blood nicotine levels appear to limit its potential for abuse (Benowitz, 1988; Sees, 1990). Side effects include sore throat or mouth, hiccups, tired jaws and nausea. These may be partially controlled by chewing more slowly and not swallowing the nicotine laden saliva (Benowitz, 1988). Aerosols and nasal drops have been explored as alternative methods of nicotine delivery (Glassman & Covey, 1990) but they can produce nasal irritation and may cause embarrassment when used in public, they are absorbed very rapidly through the nasal mucosa and reach the brain in about 30 seconds, thus reproducing the initial satisfaction of a cigarette. These may prove hard to give up for precisely this reason.

Another widely used nicotine replacement preparation is the transdermal patch. This system provides controlled and continuous delivery of nicotine which is absorbed through the skin into the systemic circulation. Several placebo-controlled trials (reviewed in Palmer, Buckley & Faulds, 1992) have assessed the therapeutic efficacy of this method, both with and without concurrent counselling or behaviour therapy, in smokers who wished to stop smoking. The addition of counselling or behaviour therapy raised the abstinence rates to 35-61% (Palmer, Buckley & Faulds, 1992). The most common side effect was skin irritation. Currently, nicotine patches are available for 16-hour and 24-hour daily application for up to 20 weeks. Longer-term use is not advised.

Treatment of major withdrawal symptoms

The second therapeutic approach, symptomatic treatment of major withdrawal symptoms (anxiety, irritability, restlessness, tension), has had some short-term success in smoking cessation. Clonidine, an α_2-noradrenergic autoreceptor agonist that inhibits presynaptic release of noradrenaline, was reported to be significantly more effective than placebo, with or without behavioural counselling (Glassman & Covey, 1990), but later work suggests that it is helpful only with female smokers. Its side effects, such as postural hypotension, dizziness, lethargy and dry mouth, may limit its use in many patients (Sees, 1990). Combined therapy with decreasing doses of nicotine gum and transdermal clonidine has been developed but has not yet been evaluated adequately (Sees, 1990).

Nicotine increases the release of β-endorphin, norepinephrine and dopamine (Pomerleau & Pomerleau, 1984); the release of the latter may contribute to its euphoriant effect. Chronic use is postulated to result in adaptive decreases in release of these neurotransmitters, so that a deficiency of them occurs during nicotine withdrawal which may account for aspects of the negative mood state during smoking cessation. Pharmacotherapies that alleviate depression and anxiety may improve a patient's ability to concentrate on behavioural treatment (Glassman & Covey, 1990; Sees, 1990). Buspirone was reported to be more effective than placebo in relieving affective symptoms of nicotine withdrawal (Hilleman et al., 1992). Fluoxetine and D-fenfluramine prevented the overeating and weight gain that usually accompany smoking cessation but did not decrease the number of cigarettes smoked (Pomerleau, Spring & Pomerleau, 1992; Spring et al., 1991).

Blockade therapy and deterrent therapy

Both these therapies have also been tested as aids to reduction of tobacco use. Blockade therapy consists of administration of a nicotinic receptor blocker which should prevent the reinforcing effects of nicotine and thus decrease the motivation for its use. A small clinical trial of the ganglionic blocking agent mecamylamine given in conjunction with counselling suggested some utility (Tennant, Tarver & Rawson, 1983) but there have been no further positive reports of the clinical usefulness of blockade therapy. Deterrent therapy employs pharmacological substances that interact with inhaled nicotine to produce aversive effects. Silver acetate, in gums or lozenges, reacts with sulfides in tobacco smoke to produce sulfide salts that are extremely distasteful (Sees, 1990; Jarvik & Henningfield, 1988). Non-compliance is a major problem in its clinical use.

Relapse prevention

More than 80% of smokers fail to quit smoking on their first attempt and, even after seven attempts, more than half return to smoking (Sees, 1990). Of those who, with the aid of nicotine patches, succeed in quitting, about half relapse in 6-12 months (Palmer, Buckley & Faulds, 1992). Pharmacotherapies that alleviate symptoms of co-existing psychiatric disorders such as anxiety and depression may decrease the risk of relapse (Glassman & Covey, 1990; Jarvik & Henningfield, 1988). However, emphasis on the improved health and feelings of well-being that result from smoking cessation is probably the most effective means of preventing relapse.

Medical complications

Cigarette smoking is recognized as the leading cause of preventable death in many countries. It is a major risk factor for coronary heart disease, peripheral vascular disease, lung and other cancers, chronic laryngitis and bronchitis, and fetal damage, to name a few of the many medical complications (Benowitz, 1988; Sees, 1990). However, these problems are treated according to current medical practices for them rather than by any pharmacotherapies specific to the role of smoking in their causation.

MEDICATIONS FOR OPIOID DEPENDENCE

Opioids include natural opiates derived from opium (e.g., morphine and codeine), semisynthetic derivatives of these (e.g., heroin) and wholly synthetic drugs such as pethidine (meperidine) and methadone. All these agents bind to the same receptors as the endogenous opioid peptides (β-endorphin, enkephalins and dynorphin) that act as neurotransmitters or neuromodulators in the central nervous system. Antagonists, such as naloxone or naltrexone, block these same receptors and prevent the actions of both the exogenous opioid drugs and the endogenous opioid peptides. Recent advances in neurobiology of the opioids have provided a rational basis for the development of additional pharmacotherapies for opioid intoxication and withdrawal (Kosten, 1990), as described below.

Intoxication

The characteristic signs of opioid overdose include coma, slow shallow respiration, pin-point pupils, pallor and sometimes pulmonary edema. Death results from prolonged apnea. Treatment consists of the provision of adequate ventilation and the intravenous administration of naloxone. Repeated small doses (0.2-0.4 mg) are given until the patient returns to consciousness and shows signs of opioid withdrawal. However, the

duration of action of naloxone is brief and repeated doses may be required by patients intoxicated with long-acting opioids such as methadone (Ling & Wesson, 1990; Jaffe & Martin, 1990).

Withdrawal syndrome

The opioid withdrawal syndrome includes anxiety, runny nose, lacrimation, sweating, nausea, diarrhea, vomiting, muscle pains, piloerection, insomnia and craving for the drug (Kosten, 1990; Ling & Wesson, 1990; Jaffe, Epstein & Ciraulo, 1991). This syndrome, though uncomfortable, is not usually life-threatening for healthy adults, and many patients who are not severely dependent are able to stop opioid use abruptly ("cold turkey") without therapy. However, the symptoms can be alleviated rapidly by administration of either μ-receptor agonists or partial agonists. Methadone, a pure μ-agonist, is the treatment of choice and the standard against which other pharmacotherapies are measured. Oral methadone is substituted for the abused opioid, initially in equivalent dosage to the opioid being used, and then in gradually decreasing doses over a period of days or weeks (Jaffe, 1990; Ling & Wesson, 1990). For outpatient treatment of withdrawal, L-alpha acetylmethadol (L-AAM), a longer-acting equivalent, has the advantage that it can be given every second day rather than daily but in terms of ultimate opioid abstinence it is not more effective than methadone (Jaffe, Epstein & Ciraulo, 1991). Buprenorphine, a partial μ-agonist, also suppresses the full range of opioid withdrawal symptoms, can be given sublingually and has also been used to manage opioid withdrawal on both outpatient and inpatient basis (Johnson, Jaffe & Fudala, 1992; Kosten & Kleber, 1988).

Clonidine and other α_2-adrenoceptor agonists are also effective in alleviating those opioid withdrawal symptoms that are due to adrenergic overactivity, including some of the distressing autonomic disturbances (Kosten, 1990). Although some reports have indicated clonidine to be as effective as methadone in relieving opioid withdrawal symptoms (Kleber et al., 1985), other reports found it less effective (San et al., 1989). The results probably depend on the outcome measures used: gooseflesh, runny nose and watery eyes are relieved by clonidine, but diarrhea, muscle aches, insomnia, craving and anorexia are not (Jasinski, Johnson & Kocher, 1985). Some of the side effects (hypotension and sedation) limit the maximum dose of clonidine that can be used in outpatient treatment. The greater success of clonidine in inpatient therapy may be related to the higher doses that can be used, as well as the supportive care provided in an inpatient setting (Kleber et al., 1985). Other α_2-adrenergic agonists, such as guanfacine, lofexidine and guanabenz, seem to be as effective as clonidine and have less hypotensive and sedative effect (Herridge & Gold, 1988) but do not seem to have stimulated much research.

Protracted withdrawal syndrome and relapse prevention

Although the phenomenon has been described in relation to other types of drug dependence, opioid dependence is especially noted for the persistence of subtle physiological and psychological abnormalities for many weeks after the signs and symptoms of acute withdrawal have subsided. It may take six to nine months or more of total abstinence to restore normal mood, sleep patterns, basal metabolic rate, temperature, respiration and blood pressure (Martin et al., 1988). When patients who have been maintained on high doses of methadone are withdrawn, these persistent disturbances are associated over a period of months with frequent episodes of craving, mood lability and a high vulnerability to relapse (Dole, 1988; Ball & Ross, 1991; Cushman & Dole, 1973). Two types of pharmacotherapy, methadone maintenance and naltrexone blockade, are used to deal with this problem.

Methadone maintenance

Methadone maintenance therapy is used in opioid-dependent subjects who are unwilling or unable to stop their opioid use completely and are likely to relapse to illicit heroin use. Methadone is administered orally, once a day, in dosage initially equivalent to that of the previously self-administered drug. In the best documented protocol, the dose is then gradually increased by about 10 mg a week to a dose of 60 to 100 mg/day. At this dose patients are very tolerant to exogenous opioids and experience no euphoria when they inject illicit opioids (Dole, 1988; Kreek, 1992). In some programmes this dose level is then maintained for months or years in order to reduce illicit opioid use, reduce parenteral injection (a major concern in relation to AIDS and hepatitis) and to achieve improved health and psychosocial functioning (Dole, 1988; Kreek, 1992; Zweben & Payte, 1990). In other programmes, the dose is reduced over a period of up to six months to the lowest dose that maintains the patient free of withdrawal symptoms (Dole, 1988; Zweben & Payte, 1990). Some programmes, on philosophical grounds, rarely prescribe doses higher than 40 mg per day, despite repeated findings that higher doses are more effective in reducing heroin use and preventing premature termination of treatment (Dole, 1988; Ball & Ross, 1991).

Buprenorphine and L-AAM are still under investigation as alternatives to methadone in this type of maintenance therapy (Jaffe & Martin, 1990; Johnson, Jaffe & Fudala, 1992; Zweben & Payte, 1990; Fudala et al., 1990; Resnick, Galanter, Pycha et al., 1992; Kosten, Morgan & Kleber, 1990). L-AAM, which needs to be administered only three times per week, appears to be as effective as methadone and is expected to be approved for use in the USA in the near future. Buprenorphine has been shown to suppress heroin use in volunteers in laboratory settings (Mello & Mendelson, 1980) and to be equivalent to methadone in reducing heroin use and retaining patients in treatment in outpatient settings (Johnson, Jaffe & Fudala, 1992; Resnick, Galanter, Pycha et al., 1992; Kosten, Morgan & Kleber, 1990). Success at remaining abstinent after cessation of methadone maintenance depends in part upon the adaptive changes (e.g., new job skills, social skills, drug-free friendships, recreational activities) made during the maintenance period (Ball & Ross, 1991; Zweben & Payte, 1990) and the capacity to cope with protracted abstinence which varies considerably in intensity from patient to patient (Dole, 1988; Cushman & Dole, 1973; Kreek, 1992).

Naltrexone maintenance

Naltrexone maintenance therapy is based on the ability of orally administered naltrexone, a long-acting opioid receptor blocker, to block all the effects of opioids, including the reinforcing effects. The abstinent individual who tries heroin or another active opioid while on naltrexone therapy will experience no euphoria and, after several such experiences, should lose the craving for heroin (Jaffe & Martin, 1990; Herridge & Gold, 1988). An opioid-free period is necessary before the start of naltrexone therapy in order to avoid the precipitation of withdrawal symptoms. The sequential combination of clonidine or buprenorphine with naltrexone eliminates the need for this 5-10 day interval, during which relapse frequently occurs, and offers a rapid and effective means of withdrawal from heroin or methadone (Kosten & Kleber, 1988; Herridge & Gold, 1988; Zweben & Payte, 1990; Charney, Heninger & Kleber, 1986; Stine & Kosten, 1992). However, naltrexone may produce some degree of dysphoria because of its blockade of the actions of endogenous opioid peptides and is not well accepted by some groups of opioid users (Ling & Wesson, 1990; Jaffe & Martin, 1990). Concomitant treatment with fluoxetine has been reported to improve retention in a naltrexone maintenance programme (Maremmani et al., 1992).

Medical complications

The great majority of medical complications of opioid use are secondary to the intravenous use of drugs and can be prevented by methadone maintenance which sharply suppresses intravenous use of heroin (Dole,

1988; Ball & Ross, 1991; Kreek, 1992; Zweben & Payte, 1990; Cooper, 1989). Treatment for these complications follows the prevalent medical practice and is independent of the role of opioid use in producing them.

COCAINE AND OTHER PSYCHOSTIMULANT DEPENDENCE

Cocaine, like amphetamine and its congeners, initially increases the levels of dopamine and norepinephrine free in the synapses by either blocking their reuptake (cocaine) or stimulating their release (amphetamine). The increase in dopamine is believed to be responsible for the initial euphoria, hyperarousal and the paranoid delusions, while increases in other catecholamines and neurotransmitters are probably linked to toxicity and other acute effects (Thadani, 1991). However, prolonged increases in catecholamines and other transmitters result in adaptive changes such as increased transmitter metabolism by catechol-O-methyltransferase, decreased biosynthesis from tyrosine, receptor down-regulation or other intracellular alterations. If the stimulant is then stopped, dysphoria, depression, profound sleepiness and other withdrawal symptoms occur (Blaine & Ling, 1992; Gawin & Ellinwood, 1988).

Intoxication

The major patterns of serious intoxication with cocaine or other psychostimulants reflect the actions of excess neurotransmitters (catecholamines, serotonin) in various systems or, in some cases, the local anesthetic effects of cocaine (Cregler & Mark, 1986; Hall, Talbert & Ereshefsky, 1990; Benowitz, 1992). The choice of therapy depends upon the presenting pattern of toxicity. Perhaps the most frequent form requiring pharmacotherapy is excessive behavioural excitation with paranoid delusions, stereotypy and violence. These symptoms respond to neuroleptic agents that have both dopamine and norepinephrine blocking action. Severe tachycardia, hypertension, hyperthermia and the risk of ventricular arrhythmias or intracranial hemorrhage are usually treated with β-adrenergic blockers and conventional medication for acute hypertension. More cardiac specific β_1 blockers, such as metoprolol, should reduce the possibility of aggravating hypertension associated with blocking β receptors on blood vessels but leaving α receptors unaffected (Benowitz, 1992). Grand mal seizures generally respond to diazepam (Roehrich & Gold, 1991). Respiratory depression requires maintenance of adequate ventilation until the drug concentration falls by metabolism to levels that are not life-threatening. In animals, μ-agonist opioids reduce cocaine lethality (Witkin et al., 1991) and calcium channel blockers attenuate cocaine-induced cardiovascular toxicity (Trouve & Nahas, 1986). The latter have been proposed as having clinical utility.

Withdrawal syndrome and relapse prevention

After prolonged use of cocaine or amphetamines in high doses, abrupt withdrawal gives rise to a picture that is generally opposite to that produced by these agents acutely. The characteristic symptoms are depression, fatigue, deep sleep, excessive appetite (Gawin & Ellinwood, 1988; Dackis et al., 1985; Kalant, 1972) and a craving for the drug that frequently leads to renewed use (Herridge & Gold, 1988). Generally these symptoms resolve within 10 to 14 days without any specific intervention although some measures of brain function may not recover for many weeks (Weddington et al., 1990). Even if withdrawal is initially successful, the recurrence of craving in response to drug-linked conditional stimuli may lead to later relapse.

Several of the proposed pharmacotherapies for withdrawal are based on the hypothesis that the withdrawal symptoms and craving result from the depletion of dopamine in the brain or decreased sensitivity to dopamine (Dackis et al., 1985; Koob, 1992). These treatments for cocaine withdrawal are postulated to involve low-level replacement with agents that mimic the acute actions of cocaine, somewhat analogous to

methadone maintenance therapy for heroin addicts. Dopamine agonists, such as bromocriptine and pergolide, as well as amantadine which releases dopamine, have been reported to reduce withdrawal symptoms and/or craving for cocaine (Hall, Talbert & Ereshefsky, 1990; Dackis, Gold, Davies & Sweeney, 1985; Taylor & Gold, 1990; Tennant & Sagherian, 1987; Malcolm et al., 1991; Wilkin, 1990) but there is as yet no firm evidence that such agents significantly alter the likelihood of success in completing cocaine withdrawal, or reduce cocaine use or prevent relapse in the outpatient treatment of cocaine dependence (Jaffe, 1991). Flupenthixol, a dopamine receptor blocker, has also been reported to reduce craving for cocaine, possibly by blocking presynaptic autoreceptors and thus increasing the release of dopamine from the presynaptic terminals (Gawin, Allen & Humblestone, 1989) but as yet there have been no positive reports from studies using flupenthixol that employed appropriate controls.

Tricyclic antidepressants such as desipramine and imipramine have also been tried, initially because of their capacity to block reuptake of catecholamines and their antidepressant effects (Gawin & Ellinwood, 1988; Hall, Talbert & Ereshefsky, 1990; Taylor & Gold, 1990; Wilkin, 1990; Kosten, 1989). Lithium has also been used (Taylor & Gold, 1990; Kosten, 1989; Gawin, Kleber, Byck, Rounsaville, Kosten, Jatlow & Morgan, 1989). While desipramine was reported to be helpful in decreasing craving in several uncontrolled studies and in decreasing cocaine use in one double-blind study (Gawin et al., 1989), several well controlled studies of tricyclic agents showed no beneficial effects (Taylor & Gold, 1990; Weddington et al., 1991; Meyer, 1992). There is now a consensus that lithium is useful only for subjects with dysthymic or bipolar disorder (Kosten, 1989).

In animal studies, frequent repetition of the same dose of cocaine leads to increasing psychomotor excitation and ultimately to seizures; this has been compared to the phenomenon of "kindling" of seizures by repeated subthreshold electrical stimuli. On this basis, the anticonvulsant carbamazepine has been tested for treatment of cocaine withdrawal (Halikas & Kuhn, 1990; Halikas et al., 1992) but the results are inconclusive. Other agents that have been tested include gepirone, a 5-HT_{1A} agonist with anxiolytic effects (Jenkins et al., 1992), fluoxetine (Wilkin, 1990; Pollack & Rosenbaum, 1991) and bupropion (Margolin et al., 1991; Hollister et al., 1992). In monkeys, buprenorphine suppresses cocaine self-administration without reducing responding for food reward (Mello, Mendelson & Bree, 1989). Other opioid agonist/antagonists (e.g., butorphanol and nalbuphine) do not show a selective effect (Mello et al., 1993). In non-randomized non-blind studies, opioid dependent patients treated with buprenorphine used less cocaine than patients maintained on methadone (Kosten, Kleber & Morgan, 1989) but, in a double-blind random assignment study of opiate dependent patients, no difference in cocaine use was observed between patients on methadone and those on buprenorphine (Johnson, Jaffe & Fudala, 1992).

These studies raise a number of important issues that must be taken into account in the evaluation of pharmacotherapies for cocaine dependence, just as for the other types of dependence discussed above. These include: the degree of compliance with the treatment regimen; inpatient versus outpatient programmes; degree of success of the double-blind procedure used; nature of the patient sample (e.g., cocaine only, versus combined abuse of cocaine and opioids); duration of treatment and follow-up; the outcome measures used (self-reports of craving or cocaine use versus tests for cocaine in blood or urine specimens obtained under supervision); and the efficacy of concomitant non-pharmacological treatments used (Jaffe, 1991; Meyer, 1992; Margolin, Kosten & Avants, 1992).

Medical complications

The medical complications of stimulant use are essentially those of acute drug toxicity and of route of administration (Cregler & Mark, 1986; Benowitz, 1992; Pollack, Brotman & Rosenbaum, 1989). These problems and their respective pharmacotherapies have been dealt with above.

BIOLOGICALLY BASED THERAPIES OTHER THAN PHARMACOTHERAPIES

In some countries, considerable importance is given to physical therapies of various kinds, but generally without a clear or testable theoretical basis. Among these may be mentioned acupuncture, transcranial electrical stimulation of the brain, hyperbaric oxygen therapy and cranial cryotherapy (Vrublevsky & Voronin, unpublished document prepared for WHO). A suggested rationale for acupuncture and transcranial electrostimulation is the stimulation of release of endogenous opioids such as enkephalins or β-endorphin, which would presumably compensate for downregulation of activity in the endogenous opioid systems as a result of chronic drug use. There is little or no empirical evidence to support this hypothesis, however, and a notable lack of suitably controlled studies to assess the efficacy of the proposed therapies.

CONCLUSION

A wide range of pharmacotherapies have been used or tested for the treatment of all aspects of dependence on psychoactive substances. Some of these are based on very sound and specific knowledge of the mechanisms of action of the various substances (e.g., the use of specific receptor blockers for reversing the effects of opioid overdose, or nicotine replacement therapy in smokers undergoing withdrawal). Others are based on incomplete knowledge and only partially substantiated hypotheses (e.g., the use of serotonin uptake inhibitors or dopamine receptor ligands of various kinds for reduction of the desire to drink alcohol or take other drugs). By and large, therefore, the acceptance or rejection of proposed therapies must rest largely on empirical evidence gathered in carefully designed clinical trials with suitable controls and appropriately chosen response measures. Most studies to date have not met these requirements and there is a continuing need for clinical trials of high quality (Meyer, 1992). Finally, it must be recognized that most pharmacotherapies available at present are of limited efficacy and should be used as components of comprehensive programmes in which cognitive, behavioural and social interventions play an equal or greater role.

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V. PSYCHOLOGICAL, BEHAVIOURAL AND PSYCHODYNAMIC TREATMENTS FOR SUBSTANCE ABUSE

INTRODUCTION

The purpose of this chapter is to discuss the psychological and behavioural treatments for substance abuse and to define them operationally. In deciding how to present this information, we considered two different approaches. Firstly, we could use broad descriptors such as "relapse prevention" or "cognitive behaviour therapy" and attempt to define the content of what occurs in those treatments. The difficulty with this approach is that many clinicians have differing ideas about what constitutes treatment such as "relapse prevention". In other words, there is not always consensus on the content of a labelled treatment. An alternative approach is to describe components of treatment we can operationally define, knowing that they are often combined with others. We realize that combinations of basic components may yield efficacy which is greater than the sum of their component parts. Our primary objective, however, is to describe the various treatment components, not to review the treatment outcome literature. [Readers more interested in the outcome might wish to consult Miller & Hester (1986)]. Our solution to the quandary of how to present this information is to rely largely on the latter "components" approach except where there appears to be consensus on the critical elements of more complex interventions.

This chapter is organized to conform to the classification scheme presented in the chapter on *Descriptors of Treatment Responses*, to provide a database type of format. We have divided the modality type of "psychological" treatments into three sections - cognitive, behavioural and psychodynamic - to provide some logical grouping of the various strategies. We have added a section called format which indicates whether a treatment is provided on an individual basis, on a group basis, or both.

The information is in tabular form. The table includes data in the areas of stage specificity, setting, target, format, provider, time frame, cost and availability. A caveat is in order regarding our discussions in the areas of stage specificity, setting, target, time frame, cost and availability for in many instances hard data are not available and the information represents our best guesses. We hope this project will provide the data to make necessary modifications.

In the discussions of efficacy, the categories developed by Holder and his colleagues (Holder, et al., 1991) have been adapted wherever possible. These categories start with good evidence and range across fair, indeterminate, no evidence and insufficient evidence of effectiveness. These summary categories reflect the overall results of controlled or comparative studies. Because of the inherent weaknesses in anecdotal evidence, it is not discussed here. Treatments supported by nothing more than anecdotal evidence have been classed as insufficient evidence. We also have used the cost estimates presented in Holder et al., 1991 whenever possible.

Finally, the word "client" is used to describe individuals with alcohol and/or drug problems who are either presenting for treatment or are receiving treatment.

PSYCHOLOGICAL MODALITIES: COGNITIVE STRATEGIES FOR ESTABLISHING A THERAPEUTIC RELATIONSHIP

The most common first steps in the rehabilitation stages of treatment involve establishing a therapeutic relationship with the client. This is often where the environment of and expectations about treatment are established. We have also included assessment here as a treatment component because of growing awareness that assessment may influence outcome independently of other treatment components.

Empathic/reflective listening

Many therapists use empathic responses and reflective listening to develop rapport with clients. Here the therapist does not give advice but listens carefully to the client and attempts to understand by paraphrasing and restating what the client is saying. If the client displays or reports emotions, the therapist reflects those feelings back to the client. For example, if the client appears angry, the therapist might say, "You seem quite angry about what's happened".

Self-disclosure

Another way therapists establish a therapeutic relationship is through self-disclosure. By telling the client relevant information about himself or herself, the therapist shows the client that they have something in common. This also may help the client to see the therapist as experienced and competent. To this end, the therapist might relate the story of his or her own addiction and recovery. The therapist might also choose to be open and express immediate feelings and reactions to what the client says.

Supportive counselling

The primary purpose of supportive counselling is to provide the client with a relationship and environment that allow the client to explore those issues of greatest concern. This is usually less structured than more goal-oriented therapies and often is ongoing rather than time limited. The therapist will typically express unconditional positive regard toward the client and will try to create an atmosphere of warmth and caring.

Assessment

Initial assessment of clients varies considerably in complexity. Some assessments are simple and aimed at determining whether or not the client is an alcoholic or an addict. These assessments often involve going over a checklist of alcohol or drug-related problems and making a yes/no determination on the basis of the summary score. Other assessments are much more detailed and measure functioning in a variety of domains such as quantity/frequency of consumption, antecedents to and consequences of use, problems and dependence, family history, medical and neuropsychological sequelae and motivational state. These more complex assessments may include physical examinations, laboratory work and psychometric testing in addition to a clinical interview.

Goals: The primary goal of these strategies is to set the stage for change. This includes developing an environment of trust and caring in which the client can discuss sensitive issues. Assessment, when properly

conducted, also produces this environment and has the added benefit of providing the therapist with information helpful to design a plan of treatment.

Philosophy: The underlying philosophy is a psychological model that focuses on how the environment of treatment affects a client's willingness to deal with issues of importance.

Efficacy: Assessment and empathic and reflective listening are key elements of brief interventions which are well supported by controlled research. Brief interventions are discussed below. There is no evidence for the efficacy of supportive counselling alone (Holder et al., 1991).

MOTIVATIONAL STRATEGIES

A wide array of approaches attempt to address the client's motivations to continue to drink or use drugs as well as to stop. Those that are psychoanalytically or psychodynamically oriented are presented and discussed here.

Confrontation

Different conceptualizations of denial have led to a number of disparate interventions to overcome it. Programmes which consider an acceptance of the label "alcoholic" or "addict" as a vital first step may use aggressive methods to confront the client. The therapist attempts to persuade the client that he or she "has a problem" or is an alcoholic or addict by forcefully presenting evidence of the client's addiction and substance abuse related problems. Any disagreement or doubt by the client is seen as further evidence that the client is in denial and the therapist forcefully argues this. The purpose of this form of confrontation is to destroy defences that prevent clients from admitting their disease.

Videotape self-confrontation

A form of confrontation which appears to have fallen into disuse is videotape self-confrontation. Here clients are videotaped in an intoxicated state. Later, when they are sober, they are shown the videotape as evidence of how they act when intoxicated.

"The intervention"

Another form of confrontation is sometimes called "the intervention" or "an intervention". Here the therapist meets with family members of a potential client and sets up a surprise meeting of family members, therapist and clients together. Prior to the meeting, the therapist uses role play to show family members ways to tell the individual that his or her drinking or drug use has caused significant problems in their lives. Family members are also shown how to state their desire to see the individual stop drinking or using drugs. The therapist and family members work out the financial arrangements for treatment and the family may pack a suitcase of clothes for the individual if the treatment is residential. The goal of "the intervention" is to have the individual agree to treatment. If the client is unwilling to enter treatment immediately, the therapist and family members try to get the client to agree both to stop drinking or using drugs and to enter treatment if drinking or using drugs is resumed.

Brief interventions

Clinical researchers have recently reviewed psychological theories of motivation and have reconceptualized the notion of denial. This has led to a different approach to overcoming denial. This new approach is known as brief or minimal intervention and while still not widely used, it has been well supported in controlled clinical trials. Common elements of brief (i.e. 1-3 sessions) interventions can be remembered by the acronym FRAMES: objective **F**eedback of personal status following a comprehensive evaluation; an emphasis on the client's personal **R**esponsibility for change; **A**dvice to change; a **M**enu of alternative strategies for change; an **E**mpathic counsellor style; and emphasis on **S**elf-efficacy and optimism. Periodic follow-up visits have also been included in most studies of brief interventions.

Client-centred and other self-exploration approaches

A number of non-analytically based counselling approaches are used with clients. Among them is the client-centred approach first described by Carl Rogers. In its purest form, the therapist does not impose goals or directions on the client. Rather, through reflective listening, the therapist allows the client to develop his or her own goals and the means to achieve them. Some counselling asks clients to define and clarify their values and relate those values to their behaviours and goals. In these approaches, clients are encouraged to take responsibility for their decisions and actions. More existentially-oriented therapists tend to focus on issues of meaning. Spiritually-oriented or religious counsellors may focus on spiritual issues. These approaches often use the empathic/reflective listening and self-disclosure described earlier, but here the goals of these approaches extend beyond that of establishing a therapeutic relationship.

Motivational interviewing

Motivational interviewing is a relatively new approach for increasing clients' motivation for changing drinking and drug use (Miller & Rollnick, 1991). It combines aspects of client-centred counselling with the common elements of brief interventions. Although directive and evocative, in many ways it is the opposite of the direct, aggressive and often hostile confrontational approaches to overcoming denial. The therapist elicits the client's concerns and with reflective listening gradually helps the client shift his or her own attitudes about drinking or drug use. Objective feedback from an assessment is presented in low-key fashion rather than as proof that the client has a disease or is an addict.

Hypnosis

Hypnosis means many different things to different people. In practice what seems to separate hypnotherapy from other approaches is its use of the trance state. The trance state has been broadly defined as attention turned inward. This definition allows for tremendous variability in what different therapists call hypnotherapy. Hypnosis has been used to help clients reconceptualize their addictions, to reduce urges and cravings via post-hypnotic suggestion and to rehearse future events mentally. Many hypnotherapists teach their clients self-hypnosis as a coping strategy to deal with stresses in their lives.

Ericksonian psychotherapy

This form of therapy is similar to hypnosis except that therapists do not induce an obvious trance state. Instead, they use metaphors or storytelling to reconceptualize problems and solutions. The therapist uses stories to bring up and present issues that provoke too much anxiety in the client to be discussed directly. An important goal of this technique is to reduce client resistance to change. In practice this form of treatment seems to share common elements with motivational interviewing.

Narcoanalysis

Narcoanalysis is a procedure whereby the therapist, usually a trained psychiatric nurse, administers enough intravenous sodium pentothal to the client to induce disinhibition but not enough to cause unconsciousness. Once the client has achieved this hypnagogic state, the therapist will interview the client to ascertain his or her thoughts about alcohol and drugs and current motivations either to continue or to stop drinking and using drugs.

Goals: The main goal of these strategies is to increase the client's motivation to change. In this sense, these strategies can also be thought of as attempts to modify the antecedents of alcohol or drug use.

Philosophy: The underlying philosophy is an implicit or explicit psychological model of motivation for change. The more traditional approaches, such as confrontation and videotape self-confrontation, are based on the notion that a client's defence mechanism of denial is a central component of the disease and must be broken down before he or she can begin to recover. The newer approaches draw on theories of attitudinal change in social psychology. These theories emphasize the importance of an individual's statements to himself and others in changing attitudes.

Efficacy: The amount and quality of data on efficacy vary substantially across these approaches. Evidence on more aggressive and directive confrontational approaches has not been favourable. MacDonough (1976) found little improvement when clients were treated with an intensive confrontational approach. Annis and Chan found that clients with low self-esteem fared worse with a hostile and aggressive confrontational approach than if they had not received this approach. Evidence from the general psychotherapy literature indicates that hostile and aggressive leadership styles are associated with more negative outcomes than other leadership styles (Lieberman, Yalom & Miles, 1973). The controlled studies of videotape self-confrontation consistently found poor outcomes and this strategy appears to have fallen into disuse. There have been no controlled trials of "the intervention". Likewise, there have been no controlled studies of the efficacy of narcoanalysis. Controlled clinical trials of hypnosis have been indeterminate (Holder et al., 1991). The picture is complicated by a great diversity of goals and techniques which have been called "hypnosis". Brief interventions have generally received support from controlled clinical trials (Bien & Miller, 1991; Heather, 1989).

STRATEGIES TO ENHANCE SELF-ESTEEM AND SELF-AWARENESS

Many treatment providers place importance on enhancing self-esteem and self-awareness. The following are strategies designed with an emphasis on these aspects of recovery.

Diary/journal writing

One way therapists increase the self-awareness of their clients is to have them keep a structured diary on various aspects of themselves. In keeping a behavioural diary, clients may write down the day's positive and negative events and how to handle them next time. This form of self-monitoring focuses attention on the client's reactions to his or her environment. A journal may also encompass broader themes of self-exploration.

Activity/recreation therapy

A variety of activities has been used by therapists to increase self-esteem. These include involving the client in competitive and non-competitive sports, aerobic exercise, both on-site and off-site challenge experiences, massage, art therapy, movement therapy and work/occupational therapy. Challenge experiences may involve having the client perform difficult physical tasks such as climbing up sheer rock faces or climbing down cliff faces by rope. All of this is done under close supervision with the goal of pushing the client physically and psychologically to do things he or she never thought possible. Art therapies have the client engage in developing creativity and self-expression. Movement therapies encourage clients to become more aware of their bodies and more positive about them. Massage therapy involves receiving massages and in some instances, learning how to give them. In work therapy clients are given responsibilities and expected to perform them. The purpose here is often to instill discipline and positive self-esteem through productivity.

Goals: The goal of these strategies is to modify self-esteem and self-awareness as deterrents to substance abuse.

Philosophy: The underlying philosophy is a psychological model of personality which hypothesizes a relationship between a person's sense of self-worth and substance use.

Efficacy: Little is known about the efficacy of either diary/journal writing or activity/recreational therapies. Evidence relating self-esteem to recovery is mixed.

STRATEGIES TO ALTER MALADAPTIVE COGNITIONS

Cognitive strategies emphasize changing the clients' perceptions and use of drugs as well as life situations that both precede and follow from their use or sobriety. While many approaches also include strategies for behavioural change, the primary focus tends to be on how the client thinks.

Cognitive therapies

In cognitive therapy, the focus is on how the client interprets the world around him or her. The emphasis is on the client's thoughts which have also been described as self-statements or cognitions. The therapist may ask the client to self-monitor his or her thoughts which precede or are associated with many different feelings or events. This self-monitoring can take the form of writing thoughts down on cards or keeping a tally of repetitive thoughts. With this information, the therapist and client look for antecedent events and commonalities in the thoughts. If the therapist is concerned about a client's emotional state, such as

depression, the therapist may examine the thoughts to see if the client is distorting events in such a way as to be predisposed to depression. The first step is identification of maladaptive or irrational thoughts. In the second step, the therapist and client develop different self-statements to counteract and replace the maladaptive thoughts. Cognitive therapists may also focus on the client's positive expectations about the benefits of alcohol or drug use.

Thought stopping

Thought stopping is a technique of cognitive therapy whereby clients learn to interrupt and decrease the frequency of repetitive and intrusive thoughts. The basic procedure is that as soon as the client is aware of thinking the repetitive thoughts, he or she says "stop" aloud or covertly. This interrupts the ongoing flow of the thoughts. The client then has the option of thinking of a scene he or she has prepared in advance. The scene is peaceful and calm. The client thinks of this image briefly then returns to whatever he or she was doing before using the thought stopping. The client practises this procedure every time he or she experiences an intrusive or repetitive thought or craving.

Goals: The primary goal of cognitive therapies is to modify the cognitive antecedents of substance use.

Philosophy: The philosophy is a psychological model which emphasizes the importance of thoughts in directing an individual's actions. Thoughts form the basis for behavioural actions as well as for emotional states. Certain ways of thinking may predispose clients to negative emotional states which, in turn, may precipitate a resumption of substance use.

Efficacy: There have been five controlled studies of the effectiveness of cognitive or cognitive-behavioural treatments. The overall picture is mixed. Two studies found modest improvements in outcome relative to other treatments (Brandsma, Maultsby & Welsh, 1980; Oei & Jackson, 1982) while three studies found no significant differences in outcomes when cognitive therapies were compared to other interventions. Holder and his colleagues (Holder et al., 1991) considered the overall evidence to be indeterminate.

STRATEGIES FOR PROVIDING NEW KNOWLEDGE

Education

Education about the effects of alcohol, drug abuse and addictions takes a variety of forms. A popular format is to give group lectures or show films that describe the acute effects of alcohol and drugs as well as the negative consequences of use and abuse. Typically clients are given descriptions of how heavy alcohol and drug use affects the body, mind, personality and spirit. They may be shown examples of individuals whose lives have been ruined by drinking or drug use. Clients also may be shown graphic scenes of damage caused by people who are intoxicated (e.g. videos of fatal automobile accidents that are alcohol related). In another form of education, therapists lecture clients or show them films that describe a particular model of addiction such as the American disease model.

Blood alcohol concentration training

A less common form of education has been to help individuals learn to estimate their own blood alcohol concentrations (BACs). This has been done in two ways. Originally therapists would give clients controlled amounts of alcohol to drink, ask them to estimate their BACs, then give them a breath alcohol test and immediate feedback about their actual BAC. Clients could learn to discriminate different BACs by internal cues from this feedback process. Subsequently other therapists found that clients could learn to estimate their BACs by self-monitoring the amount they drank and the time it took to drink a given amount. Using those two numbers and a table which lists peak BACs, clients can learn to estimate their peak BACs.

Bibliotherapy

Another form of education, now known as bibliotherapy, has developed in many English-speaking countries and western Europe. In bibliotherapy, clients are given self-help materials that describe a series of concrete steps the client can take in sequence to change his or her behaviour. Bibliotherapy has been used as a form of treatment with minimal therapist involvement. It has also been used in conjunction with a therapist seeing clients individually and in groups to work through the material presented in the book.

Goals: The goal of education is to modify knowledge as an antecedent to substance use.

Philosophy: The underlying philosophy is educational in nature. It emphasizes the importance of providing clients with information they can use to make appropriate decisions about present and future alcohol and drug use.

Efficacy: Controlled research has consistently not supported the use of general educational lectures and films (Miller & Hester, 1986). Controlled studies have supported treatments which have included BAC training (e.g. self-control training) but there is no evidence for the efficacy of BAC training by itself. Controlled studies of bibliotherapy suggest that it is as effective a form of treatment, in some instances, as therapist-administered treatment.

PSYCHOLOGICAL MODALITIES: BEHAVIOURAL STRATEGIES FOR ALTERING SOCIAL CONTINGENCIES

Described here are several different strategies that primarily focus on altering the consequences both for sobriety and for substance use or abuse.

Behaviour contracting

A number of interventions focus on changing the consequences of a client's behaviours. In behaviour contracting, a therapist negotiates a contract with the client by which they agree that the client will receive certain positive rewards if he or she is compliant with the therapist's directions or if certain goals, such as a period of abstinence, are achieved. Typically the rewards chosen are negotiated between the therapist and client but sometimes they are determined by programme policy. An example of the former is when a client agrees to take his wife out to a special dinner if he has been abstinent or successful in moderating his

drinking during the previous week. An example of programme policy altering contingencies is when a methadone programme offers a heroin client travel doses or take-home weekend doses if the client has demonstrated a consistent pattern of urine samples free of opiates or other drugs.

Another form of behaviour contracting done in residential settings is called a token economy. In a token economy, the programme develops a list of specific target behaviours it wishes to have clients do more frequently. The client is reinforced for these behaviours with tokens. The tokens, in turn, can be exchanged for other rewards such as tickets to the movies or being allowed to go on special outings. Different rewards require different amounts of tokens.

External contingencies

Other interventions have focused on developing external contingencies that either reinforce sobriety or punish drinking or drug use. Biomedical monitoring of drug use via urine screens has become a common intervention, at least in the USA. Individuals in businesses and government who have been identified as drug users may be subjected to random urine screens. If a screening test is positive for the presence of drugs, the individual may lose his or her job or be subject to imprisonment if on parole from prison. Case studies have also described treatments which involved community organizations and government institutions. A therapist might, with the consent of the client, contact social service agencies and ask them not to provide the client with services if the client is intoxicated at the time he or she requests them. In addition to contingencies from employers, the legal system and social service agencies, some treatments bring family and community pressure to bear on the client. A programme might, for instance, ask a family to agree to let a client remain in jail if arrested for drunken driving or public intoxication. External contingencies with a positive focus have also been used. Therapists may ask families to support abstinent clients in their efforts to return to work, reintegrate into the community, and so on. Sobriety may be reinforced by providing the client with services, treatments or rewards the client wishes to receive.

Marital/family therapy

Variations of family and marital therapy exist and have different theoretical bases but a common goal, redefining how the client and other family members interact to reinforce the client's sobriety. Behavioural marital and family therapy teaches a client and other family members specific communication and problem-solving skills. The emphasis in structural family therapy is on the family as a functional unit that consists of a collection of interrelated individuals and subsystems. Once substance abuse has developed in a family unit, a homeostasis may develop which can maintain the abuse and resist change. The purpose of structural family therapy is to help family members change the rules that maintain the homeostasis. This in turn results in a restructuring of the roles in the family. In both cases the husband and wife are typically seen together. One variation of structural family therapy that has been used with adolescent drug abusers is called unilateral family therapy. In this form of treatment, the therapist works with the client alone to bring about a crisis in the family. When the crisis is reached, the therapist sees the entire family and works to make changes in the roles of the different family members. Once this is accomplished, the therapist may return to seeing the client on an individual basis. Behavioural therapists may also work with an individual to bring about changes in how family members communicate with each other and solve problems.

Goals: The most common goal of altering social contingencies is to modify the consequences of substance use. Clients are typically rewarded for remaining sober and sometimes punished for substance use. Marital

or family therapy and behavioural contracting may focus on both the antecedents to use and the consequences of use.

Philosophy: The underlying philosophy for most of these interventions is a psychosocial model which emphasizes the relationship between behaviours and reinforcers. For structural marital and family therapy, however, the philosophy is still psychosocial but focuses more on interpersonal dynamics.

Efficacy: Overall, the effectiveness of altering social contingencies seems well supported by controlled research. Randomized clinical trials have found that adding behavioural marital therapy to a programme improved the outcomes (O'Farrell & Cowles, 1989). Holder and his colleagues (1991) concluded that the level of evidence is good for behavioural marital therapy. Case studies of behaviour contracting have also found that the client's drinking behaviours were substantially reduced during the period of a behavioural contract (Miller, 1975). Experimental support for the efficacy of a family systems approach is currently lacking.

STRATEGIES TO MANAGE USE

Included here are interventions which focus directly on changing the client's alcohol/drug use and which teach methods to deal with internal and external cues to use. These interventions are self-control training, drink/drug refusal, drug-free leisure time activities and giving advice.

Self-control training

Self-control training consists of a sequence of self-change skills that clients learn either from a therapist or from a self-help manual. The training can be used to pursue a goal of either moderation or abstinence. It commonly consists of the following techniques: self-monitoring of use or urges, setting limits on consumption, controlling the rate of consumption (e.g. sipping versus gulping), developing rewards for achieving goals and punishments for missing goals, and analysing situations that put the client at risk of relapse.

Drink/drug refusal

In this training clients are taught specific assertiveness skills to refuse the social pressures of others to drink or use drugs. First the therapist describes the various components of assertiveness - including eye contact, body language, tone and volume of voice - in addition to the verbal content of appropriate assertiveness statements. He or she then models these behaviours in role play. The client takes the role of a friend trying to persuade the therapist to drink or use drugs and the therapist responds assertively. It is then the client's turn to describe situations where he or she is likely to encounter social pressures. Using these situations as a basis, the therapist takes the role of the client's friend and tries to persuade the client to accept a drink or use drugs. After the role play, the therapist gives the client constructive feedback about what he or she did well and what needs improvement. Following this the therapist and client engage in further role play sessions until the therapist determines that the client is proficient in assertively refusing social pressures to drink or use drugs.

Drug-free leisure time activities

Since many clients have spent much of their leisure time drinking or using drugs, they may not know what to do once they stop drinking or using drugs. One form of counselling aims to help the client rediscover or explore leisure time activities. This ranges from suggesting activities that are incompatible with heavy drinking or drug use to taking clients out on excursions to sample different activities. This form of counselling is not to be confused with treatments such as challenge experiences described earlier, where the purpose is to build confidence and self-esteem. The purpose here is to help the client fill his or her leisure time in pleasurable ways that are also inconsistent with drinking or drug use.

Giving advice

Although advice is not usually thought of as a specific treatment, therapists frequently give various kinds of advice in treatment for alcohol and drug problems. Giving advice varies somewhat from other treatments in this section in that the therapist will usually tell clients what to do rather than show them how to do it. The most frequent forms of advice seem to focus on the following: abstaining completely from alcohol and drugs; attending Alcoholics Anonymous, Narcotics Anonymous, other 12-step groups and less frequently other, less traditional groups (e.g. Rational Recovery, Women for Sobriety, Drinkwatchers, Secular Organizations for Sobriety); getting a sponsor to assist in recovery efforts; and coping with urges to drink/use and relapses.

Goals: The goal of self-control training and drink/drug refusal is to modify the consumption of alcohol and other drugs directly. Giving advice spans the spectrum of goals. The primary goal of drug-free leisure time activities is to modify the antecedents of substance use.

Philosophy: The philosophy behind most of these interventions is a psychological model which assumes that clients either do not know how to change their behaviours or do not know how to deal with pressures or urges to drink or use drugs.

Efficacy: Self-control training has been extensively tested in randomized clinical trials. Its efficacy has been well supported (Hester & Miller, 1989b; Holder et al., 1991). Social skills training is discussed below. It is well supported by controlled research and typically includes training in drink/drug refusal skills. It is difficult to estimate the impact of giving advice independent of the context in which it is given. For instance, giving advice is a part of brief interventions which are supported by controlled research and discussed above. It is also a part of traditional confrontational approaches which are not supported by controlled research. Controlled trials of drug-free leisure time activities have not been conducted.

STRATEGIES TO TEACH GENERAL COPING SKILLS

In addition to teaching clients ways to change their drinking, a number of interventions train general coping skills. Included in this class are relaxation training, stress management, social skills, problem solving skills, job-finding and specific job (i.e. vocational rehabilitation) skills.

Biofeedback

Biofeedback is a process in which clients learn how to control various aspects of their physiological functioning. In treatment they are usually attached to a device which monitors and gives immediate feedback about a specific physiological function. Through this monitoring and feedback process, clients learn how to discriminate between various levels of functioning and how to increase and decrease them. The assumption here is that clients will learn how to better control various aspects of their physiological functions that are associated with arousal and anxiety. The most common forms of biofeedback have been muscular and peripheral body temperature, monitored by electromyograph (EMG) and thermal measurement devices respectively. A less common form of biofeedback today is measurement of brain waves with an electroencephalograph (EEG). The purpose of EEG biofeedback is to help the client learn how to produce more alpha brain waves because they are associated with states of relaxation. Its use has declined, however, since researchers found few differences in the physiological state of relaxation produced by EEG and EMG biofeedback and the latter is much cheaper to administer. Another form of biofeedback is blood alcohol concentration discrimination training which was described earlier.

Relaxation training

There are numerous ways to teach clients relaxation skills. While no one technique stands out as superior in its effectiveness, there do seem to be large differences in the acceptability of the techniques to different people. In addition to biofeedback there is progressive muscle relaxation, autogenic training, yoga and transcendental meditation. In progressive muscle relaxation the client voluntarily tenses and relaxes groups of muscles. The therapist asks the client to focus his or her attention on the sensations of the muscle as it releases tension. The client also is directed to breathe slowly and deeply throughout the tensing and relaxing. Therapists will often make audio tapes of this training and ask the client to practise at home daily.

The goal of relaxation is the same in autogenic training but the process is different. Here the client repeats a series of phrases while breathing deeply slowly. An example is, "My hands are getting warm and heavy ... I am becoming more and more relaxed". In yoga, the client is taken through a series of physical stretches while at the same time focusing on slow deep breathing. In transcendental meditation the client is given a word, called a "mantra", to repeat over and over again while practising slow deep breathing and emptying the mind of thoughts.

Restricted Environmental Stimulation Therapy (REST)

Some evidence exists to suggest that alcoholics tend to have excessively fast EEG brain activity. REST is a technique developed to reduce excessively fast EEG activity. From a content standpoint, REST seems to constitute a variation of relaxation training. In REST the client lies comfortably on a bed for 90 minutes in a dark silent room that is air-conditioned and sound-proofed. At the 90-minute mark, the client listens to a taped anti-alcohol message. The client then continues to rest in the room for another hour before being removed.

Stress management

Because many clients have histories of drinking heavily or using drugs in response to stressful situations, stress management training seems to be gaining in popularity. This training involves teaching a variety of skills depending on the client's particular situation. It may involve training in relaxation skills, training the client to use different self-statements or cognitions to reconceptualize the stressful situation, or assertiveness skills. For instance, rather than say to themselves, "This job is too big, I'll never get it done in time", clients might be encouraged to tell themselves, "Relax, take a slow deep breath. Now, take this one step at a time. What do I have to do next?" Alternative stress management procedures have included systematic sensitization.

Social skills

Broadly defined, social skills training involves teaching clients how to interact with others to get their needs met and to resolve conflicts. The two general categories of social skills training are assertiveness and communication skills. In the former, therapists define both the verbal and non-verbal aspects of assertiveness and then use role play to practise assertive behaviours with the client. The procedure is the same as that for alcohol/drug refusal training. The difference here is that clients learn how to be assertive in a broad range of situations. In communication skills training therapists teach clients how to listen and talk to other people. This can range from learning how to initiate conversations with strangers to dealing with conflicts with a spouse. Typically the therapist will describe how it is done and then behaviourally rehearse a scene with the client. The client may learn how to ask open-ended questions, how to listen to what another person says and how to verify that he or she understood what that other person said. The therapist may teach the client how to make empathic statements. After each behavioural rehearsal the therapist gives the client constructive feedback. Training ideally continues until the client can be assertive or communicate more effectively in a wide variety of situations.

Problem solving

Training in problem solving typically consists of four steps. The first is to define the problem and here the client specifies the problem situation as well as the goals he or she wishes to achieve. The second step involves generating alternatives. In this step the client brainstorms possible solutions. Evaluation or criticism of an alternative is discouraged in this step. Thirdly, there comes decision making. Here the client evaluates each choice. The likely consequences and the value of each possibility are considered. Only then does the client decide upon a course of action. The fourth step is to do evaluating. As the client takes the course of action he or she evaluates the results. If the course of action is successful, the client keeps doing it or may expand on it. If the client is not as successful as he or she wishes, a re-evaluation of the problem or the choices of action may be appropriate.

Job-finding skills

Knowing how to find a job involves skills different than the job skills themselves. While many people may have adequate job skills, some do not know the most appropriate ways to go about getting a job. Job-finding skills training teaches those skills. Elements of this training include: developing a resumé; instruction and practice in filling out job applications; using a variety of sources to generate job leads (e.g.

friends, relatives, and the telephone book); behavioural rehearsal in telephone techniques to secure interviews and in interviewing; and information on what is appropriate employment in view of a client's background and experience.

Job skills

The complement to job-finding skills is training in actual job skills. This is sometimes referred to as vocational rehabilitation. If clients have few job skills they can improve their chances of getting work if they receive additional training either in basic education (e.g. reading, writing) or in applied job skills (e.g. typing, carpentry, business management). When this type of training is provided it is usually, though not always, provided by a specialized vocational training programme rather than by a specialized treatment programme.

Goals: The primary goal of strategies to teach general coping skills is to modify the antecedents to substance use.
Philosophy: The philosophy underlying these strategies is a belief that teaching clients how to deal better with life stressors (e.g. unemployment) that predispose them to drinking or drug use, will lessen the likelihood that they will use alcohol or drugs to deal with those stressors.

Efficacy: Relaxation training by itself is not well supported by controlled research. There is, at best, modest evidence of its efficacy in controlled studies (e.g., Freedberg & Johnston, 1978) and the overall picture would indicate that it has little impact on drinking related outcomes. One possible reason for these findings may be indicated in the results of a study by SD Rosenberg (Rosenberg, 1979). He found an improvement on drinking measures at follow-up for clients who had received relaxation training, but only if they had high levels of anxiety.

Controlled research provides evidence supportive of social skills training (Chaney, O'Leary & Marlatt, 1978; Holder et al., 1991). There is also good evidence of effectiveness for stress management training (Holder et al., 1991). To our knowledge, training in problem solving, job finding or job skills have been evaluated only as components of more comprehensive programmes and their specific impact has not been parcelled out.

STRATEGIES TO COUNTER-CONDITION AND EXTINGUISH CRAVINGS AND URGES TO DRINK OR USE DRUGS

A number of treatments have been developed to reduce or eliminate clients' conditioned responses to cues or stimuli associated with drinking and drug use. If an abstinent client experiences urges or cravings when exposed to these cues, this may pose a threat to the client's sobriety. Several approaches are aimed at breaking the relationship between cues and craving. These include aversion therapies, fading procedures and cue exposure.

Aversion therapy

There are three general classes of aversion therapy: chemical, electrical and imaginal or covert sensitization. In both chemical aversion and covert sensitization the procedure is similar but the agent is different. We

will describe the procedure for chemical aversion to illustrate the process. In chemical aversion therapy the client is exposed to the sight, smell, and taste of alcohol after he or she has received a dose of emetine but before experiencing nausea. Once the client becomes nauseous he or she continues to see, smell, and taste alcohol. Through repeated pairings of alcohol and nausea, the client develops an aversion to the alcohol and may become sick at the sight or taste of it even in the absence of emetine. The procedure is similar whether the chemical substance produces nausea either systemically as with emetine or externally as with odours that the client smells and becomes nauseous. (A variation of this aversion therapy has been to produce apnea, usually through the administration of succinylcholine, and then pass alcohol over the lips and nose of the client. This procedure was used in the 1960s but appears to have been abandoned.) In covert sensitization the therapist typically presents images to provoke nausea. While covert sensitization can be done on an outpatient basis, chemical aversion has generally been done on an inpatient basis under medical supervision. In electrical aversion the procedure is somewhat different. Here the unconditioned stimulus is an electric shock, usually administered to the client's hand or forearm.

Fading

Fading is a procedure in which the client gradually consumes smaller and smaller quantities of alcohol or drugs. This is done by switching to lower doses gradually and has most often been used in cessation of smoking.

Cue exposure

Cue exposure is a relatively new form of counter-conditioning. Cues are presented either in vivo or in the client's imagination. Clients first develop a hierarchy of cues which range from the least to the most powerful in their ability to elicit cravings. The client is taught relaxation exercises and is asked to practise them to achieve a state of deep relaxation. Following this, the client is gradually exposed to the cues and rituals in the hierarchy. If the client signals that he or she is starting to become aroused or tense, the therapist backs up a step in the hierarchical list of cues until the client is calm once more. The therapist moves ahead and presents the next cue in the list while the client tries to remain calm. Gradually, over repeated sessions, the client is able to remain relaxed and calm in the presence of cues which in the past had resulted in arousal and the experience of cravings.

Goals: The goal of counter-conditioning treatments is to modify both the antecedents to and consequences of use.

Philosophy: The philosophy is a psychological model with an emphasis on classical conditioning and taste aversion.

Efficacy: Uncontrolled clinical outcome studies of chemical aversion have been published by one hospital group in the western USA for 50 years. Abstinence rates at one year are typically around 60% in these reports. Controlled comparisons, however, present a much more mixed picture. A recent comparative study by the same hospital group found a significantly better outcome for aversion therapy compared to treatment with more common treatments in the USA (Smith & Frawley, 1991). Trials with treatment populations other than of this hospital group, however, have not found significant differences in outcome relative to

control groups receiving other forms of treatment. The results of controlled comparisons for electrical aversion is also mixed, while the evidence for covert sensitization is fair (Holder et al., 1991).

PSYCHOLOGICAL MODALITIES: PSYCHODYNAMIC

Psychodynamic therapies are based on a variety of theories about the structure of the mind and its development. Freud is generally credited with formulating the view that behaviour is the outcome of an interplay of unconscious and conscious motives. It is hypothesized that many conflicts arise from the need to accommodate primitive desires within the demands of sociocultural expectations concerning acceptable behaviour. Various psychological defence mechanisms operate in a predominantly unconscious attempt to resolve wishes and constraints that are regarded as incompatible. Many of these conflicts are believed to have had their origin in childhood.

During the past 50 years a bewildering range of schools of psychodynamic therapy have developed. Most therapies have been tried in the management of substance abuse. In most circumstances the underlying conflicts rather than the drinking or drug taking as such, are taken as the primary target for therapy. Psychodynamic therapies have commonly been employed alongside other therapies more specifically focused on substance abuse. The process of psychotherapy is often stressful for the client and there is some doubt of its value except in selected cases. There have been few evaluation studies of these approaches and their efficacy remains not proven (Miller and Hester, 1986; Saunders, 1989; Holder et al., 1991).

STRATEGIES OF PSYCHODYNAMIC THERAPY

Many varied strategies have been developed to relieve the psychodynamic conflicts, neuroses and interpersonal difficulties that are often associated with substance abuse. Psychoanalysis is a technique for accessing the unconscious mind by a process of free association in which the client voices thoughts as they come into the mind without conscious editing. This therapy is often very prolonged. Recently there has been a trend toward briefer and more focused psychodynamic psychotherapies. These can be conducted on an individual or group basis. Some of these approaches, such as transactional analysis, have been regularly used with substance abusers.

Experiential therapies are founded on a belief that understanding underlying conflicts is less important than a capacity to experience and acknowledge feelings that are released in the trusting relationship with a therapist. Carl Rogers (1969) was a major proponent of this philosophy and his non-directive approach has developed into a range of encounter and experiential groups that have often been part of the therapeutic community movement. Elements of this approach are to be found in the "Concept" houses such as Synanon. These therapists share a common belief in the process of self-actualization attained by means of enhanced self-awareness and freedom of expression. This form of psychotherapy is more concerned with self-fulfilment than with unravelling conflicts. These therapies are exemplified by the emphasis on a holistic approach toward individuals and their psychological problems seen in Gestalt therapies. They are closely allied to spiritual or conversion experiences toward a way of life that excludes substance abuse.

Settings

Psychodynamic and experiential therapies may be employed in any setting. They can be part of an inpatient, day patient or other residential programme. On their own they are most often experienced on a regular consultation or out patient basis.

Administrative auspices

Psychodynamic therapies may be integrated into health or social services, though many of these approaches are offered by independent trained counsellors or psychotherapists working either as part of a group or in an individual private practice.

Target drugs

All forms of substance abuse may be targeted by these approaches. Clients' personality attributes, intrapsychic or interpersonal conflicts and concomitant psychopathology are usually taken as more critical determinants of therapy than the substance used or the degree of dependence. Many therapists would, however, expect the patient to be drug-free or at least recovered from withdrawal symptoms prior to therapy.

Interactive unit

Most forms of psychotherapy have been offered on an individual or group basis. The underlying psychodynamic concepts have also been applied to family and marital therapy.

Providers

The training requirements of psychotherapists and counsellors are very varied and standardization and accreditation of therapists is a major problem in many countries. For some a personal analysis is a prerequisite of training and this may take several years. For others training is much less rigorous. Many professionals will have obtained an element of psychotherapeutic training and will use psychodynamic concepts as part of their approach to understanding their clients. The cognitive strategies for establishing a therapeutic relationship owe much to the tenets of psychodynamic therapy.

Time frame

At one extreme, therapy may be four or five hourly sessions per week over a period of years, but in most cases the frequency is once or twice weekly and the duration between three and 12 months. Some experiential groups are intensive, extending over many hours or even days but with low frequency.

Cost

The cost of these therapies varies from moderate to high (Holder et al., 1991) although an element of psychodynamic therapy may be obtained at low cost to the client when it is part of professional training that is then offered free at the point of delivery of care. It should be noted that the training costs themselves are often high and an element of these opportunity costs need to be taken into account in assessing the total cost to the health service.

Availability

In many countries there is virtually no therapy of this specific form available and in all but the most affluent and developed it is in very limited supply. However, similar therapies may be more available in different forms (see, for instance, the chapter on mutual help groups). An element of psychodynamic therapy is present in many psychological approaches and a pure form of psychological treatment is possibly less common than is often supposed.

The level of utilization is hard to assess. There has been increased demand for counselling in affluent industrialized countries. In many countries it is restricted to the minority who have the means to pay. Some individuals with problems or substance abuse utilise these counselling agencies and receive help without being labelled as problem drinkers or drug takers. Their numbers are unknown. Where the agency approached has a specific responsibility for substance abusers the likelihood of a client receiving psychodynamic therapy is mostly dictated by the prevalence of staff trained in this approach.

Philosophy: Substance abuse is viewed as a maladaptive way of dealing with unresolved intrapsychic and interpersonal conflicts. From this standpoint psychotherapy aims to improve the client's understanding of these conflicts and, within the context of the relationship with the therapist (transference), attain a more balanced self (Wolberg, 1977). It is assumed that this change will be associated with a reduction in or cessation of substance abuse.

Efficacy: It is difficult to tease out the contribution that a psychodynamic approach has made to the therapies with which it is often combined. There is no conclusive evidence of efficacy based on careful controlled evaluations (Miller and Hester, 1986; Saunders, 1989). Nonetheless, individual reports of benefits suggest that psychodynamic approaches may be most relevant when substance abuse coexists with neuroses or personality disturbances that may be amenable to these techniques. This underlines the benefits of careful matching of clients with therapies.

Therapists' own characteristics may also play a very important and little explored part in predicting outcome.

GROUP TREATMENT

Therapy in groups is one of the units of treatment summarized in the table 1 (at the end of this section). Group treatments have such a long-established place in the management of alcohol and drug related problems that they merit additional consideration. It is possible that the model of Alcoholics Anonymous (originating in 1935), whose sessions are conducted in groups, has been very important in influencing the widespread popularity of the group approach. Groups also have the advantage of economy by allowing a number of clients to participate in treatment simultaneously. In addition, groups have the merit of facilitating identification with other sufferers who have similar problems and thus overcoming feelings of isolation. Mutual understanding facilitates support and fellowship but it also ensures that denials and evasions, which are prominent defences amongst substance abusers, can be recognized and dealt with.

Many psychological treatments of the kind described above can be offered in groups (see format column in the table at the end of the chapter). These include cognitive behavioural approaches, of which Oei and Jackson (1982) demonstrated the benefit for alcoholic patients in a randomized controlled trial. Other examples are social skills acquisition groups, educational groups about the effects and dangers of substance abuse, assertiveness training, fellowship and mutual help support groups - as evidenced, for example, by Alcoholics Anonymous, Narcotics Anonymous, Vie Libre or groups based on families or on a particular workplace (a pattern that is common in Eastern Europe). Other activities such as role play, psychodrama, music and dance therapy take place in groups. Many therapies concerned with spiritual change or conversion are also group activities that are believed to have therapeutic effects.

In many parts of the world, groups are based on the principle of mutual help. Their strength lies in bringing together individuals with common problems and a single goal through fellowship, identification and mutual understanding. These groups have become commonplace for alcohol problems, tranquillizer misuse and other forms of drug dependence. Relatives of clients have also been brought together in groups for mutual

support and self-help. (Al-Anon and groups for the families of drug abusers are examples). Groups often seem more effective if patients are interviewed and prepared in advance so that participants can anticipate some of the issues and experiences likely to arise in the group process.

The range of procedures described above may make use of group processes but they are not commonly thought of as group therapy. In group therapy the dynamic processes of the group itself are deemed therapeutic. Such groups are commonly conducted by a trained group psychotherapist often accompanied by an observer. In most circumstances the group will be closed so that the same individuals return on a regular (usually weekly) basis over a considerable period of time. Each session lasts 60-90 minutes and there is no fixed agenda. Closed groups usually have 8-12 participants whereas open groups are somewhat larger and the membership more fluid. Groups within therapeutic communities may have as many as 30-50 members.

Group therapy has a number of advantages for substance abusers. The groups provide clients with an opportunity to learn from each other, reducing the sense of personal stigma and uniqueness by sharing experiences with others similarly affected. This often provides an environment of support and encouragement within which changes can be made over time.

Certain key therapeutic mechanisms have been identified in the group process. These include interpersonal learning, opportunities for identification, catharsis and the development of social skills. Groups also are valuable in instilling hope, encouraging information sharing and providing role models (Brown and Yallom, 1977). The group normally has a leader who acts as facilitator encouraging therapeutic processes and discouraging denial, evasions and other psychological defences.

Group psychotherapy can provide a corrective to the distorted interpersonal relationships of early life that may influence adult behaviour. Within the group, participants may also experiment with new ways of expressing themselves or handling old conflicts with support and encouragement from group members. In such circumstances members may find, for example, that expressing anger does not bring the feared rejection or that it is possible to be positive and friendly toward another person without being exploited. Such experiences may later be transferred to actions in everyday life outside the group.

Some groups focus on particular categories of client, such as younger drug or alcohol abusers, women, drunk driving offenders, the homeless or ethnic minorities.

Therapeutic communities are another variety of group treatment in which alcohol or drug abusers live together in a community where there is regular scrutiny of members' behaviour and feelings. Most of these groups are concerned with the here and now of current observable behaviour. Synanon is one well-known example of this approach. This form of residential treatment is frequently protracted, lasting a year or more (Rosental, 1989).

Group treatments may be part of an integrated package of therapies which combine individual therapies with groups of various kinds. Many residential treatments are organized on this basis. In some, the mix of therapies is a relatively inflexible package while in others there is a choice of therapies from which client and therapist select an optional mix tailored to the client's needs.

Philosophy: Group therapy, in common with other psychodynamic approaches, assumes that substance abuse is a symptom of underlying intrapsychic or interpersonal difficulties which need to be addressed if a lasting cure is to be attained (Flores, 1988).

Efficacy: Despite widespread popularity, group therapy in substance abuse has not been shown to be more effective than other treatment methods. It seems likely that certain individuals benefit from group techniques but scientific information on how to select clients who are likely to benefit most is still lacking.

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PSYCHOLOGICAL TREATMENTS

Strategy	Stage	Setting	Target	Format	Provider	Time Frame	Cost	Availability
Establishing a therapeutic relationship								
Empathic/reflective listening	ALL	ALL	SD: ALL IU: ALL	BOTH	ALL	TS: 50-60	LO--MOD	WIDE
Self-disclosure	ALL	ALL	SD: ALL IU: ALL	BOTH	ALL	TS: 50-60	LO--MOD	WIDE
Supportive Counselling	ALL	ALL	SD: ALL IU: ALL	BOTH	PSY, COU	TS: 50-60 TC: 2-16	LO--MOD	WIDE
Assessment	AS	ST: ALL	SD: ALL IU: ALL	IND	PSY	TS: 60-180 TC: 1-3	MOD	MOD
Motivational strategies								
Confrontation	RX	ST: ALL	SD: ALL IU: IND, GP	BOTH	PSY, COU	TS: 50-60 TC: 2-16	MOD	WIDE
Videotape confrontation	RX	ST: IP	SD: ALC IU: IND	BOTH	PSY, COU	TS: 50-60 TC: 1	LO	NO
The intervention	AS	ST: OPT	SD: ALL IU: IND, FAM	IND	PSY, COU	TS: 50-60 TC: 1	MOD	LTD
Brief interventions	AS--RX	ST: OPT OT	SD: ALC IU: IND	IND	ALL	TS: 120-180 TC: 1-2	LO	MOD
Client-centred & exploratory approaches	RX	ALL	SD: ALL IU: IND, FAM	BOTH	ALL	TS: 50-60 TC: 2-16	MOD	MOD
Motivational interviewing	AS--RX	ALL	SD: ALC IU: ALL	IND	ALL	TS: 50-60 TC: 1-6	LO--MOD	LTD--MOD

Strategy	Stage	Setting	Target	Format	Provider	Time Frame	Cost	Availability
Motivational strategies (contd)								
Hypnosis	RX	ST: ALL	SD: ALL IU: IND	IND	PSY, COU	TS: 50-60 TC: 2-16	MOD--HI	LTD
Ericksonian psychotherapy	RX	ST: ALL	SD: ALL IU: IND	BOTH	PSY	TS: 50-60 TC: 2-16	MOD--HI	LTD
Narcoanalysis	RX	ST: IP	SD: ALC, COKE, MARJ IU: IND	IND	MED	TS: 50-60 TC: 2-5	HI	LTD
Enhance self-esteem and self-awareness								
Diary/journal writing	RX--SL	ST: ALL	SD: ALL IU: IND, GP	BOTH	PSY, COU	TS: 50-60	LO--MOD	MOD
Activity/recreation therapy	RX--SL	ST: IP	SD: ALL IU: IND, GP	GP	COU	TS: 60-240	MOD--HI	LTD
Altering maladaptive thoughts								
Cognitive therapy	RX-ST	ST: ALL	SD: ALL IU: ALL	BOTH	PSY	TS: 50-60 TC: 12-20	MOD	LTD
Thought stopping	RX-ST	ST: ALL	SD: ALL IU: ALL	BOTH	PSY	TS: 20-60 TC: 2-6	MOD	LTD
Providing new knowledge								
Education	RX--SL	ST: ALL OT	SD: ALL IU: ALL	BOTH	ALL	TS: 50-90 TC: 2-30	LO	WIDE

Strategy	Stage	Setting	Target	Format	Provider	Time Frame	Cost	Availability
Blood alcohol concentration training	RX	ST: OPT	SD: ALC IU: IND	BOTH	PSY	TS: 50-60 TC: 2-6	LO	LTD
Bibliotherapy	RX--SL	ST: ALL OT	SD: ALL IU: ALL	BOTH	ALL	TS: 50-60 TC: 2-8	LO	WIDE
Altering social contingencies								
Behaviour contracting	RX--SL	ST: ALL OT	SD: ALL IU: IND, FAM	BOTH	PSY	TS: 50-60 TC: 8-32	LO	LTD
External contingencies	RX--SL	ST: ALL OT	SD: ALL IU: ALL	BOTH	PSY, COU	TS: 10-60 TC: 2-104	LO	WIDE
Marital/family therapy	RX--SL	ST: ALL	SD: ALL IU: IND, FAM	BOTH	PSY, COU	TS: 50-60 TC: 2-16	MOD	MOD
Managing use								
Self-control training	RX	ST: OPT	SD: ALC IU: IND	BOTH	PSY, COU	TS: 50-60 TC: 6-8	LO--MOD	LTD
Drink/drug refusal training	RX--RP	ST: ALL OT	SD: ALL IU: IND	BOTH	PSY, COU	TS: 50-90 TC: 3-6	LO	WIDE
Drug-free leisure time activities	RX--SL	ST: ALL OT	SD: ALL IU: IND	BOTH	PSY, COU	TS: 60-240 TC: 1-8	MOD	LTD
Giving advice	RX--SL	ST: ALL OT	SD: ALL IU: ALL	BOTH	ALL	TS: 50-60 TC: 1-20	LO	WIDE
Teach general coping skills								
Biofeedback	RX	ST: ALL	SD: ALL IU: IND	IND	PSY	TS: 50-60 TC: 8-16	MOD--HI	LTD

Strategy	Stage	Setting	Target	Format	Provider	Time Frame	Cost	Availability
Relaxation training	RX	ST: ALL OT	SD: ALL IU: IND	BOTH	ALL	TS: 50-60 TC: 8-16	LO-- MOD	WIDE
Restricted Environmental Stimulation Training	RX	ST: OPT	SD: ALC IU: IND	IND	PSY	TS: 90-120 TC: 1-3	LO-- MOD	LTD
Stress management	RX--SL	ST: ALL	SD: ALL IU: IND	BOTH	PSY, COU	TS: 50-90 TC: 8-26	MOD	MOD
Social skills	RX--SL	ST: ALL	SD: ALL IU: IND	BOTH	PSY, COU	TS: 50-90 TC: 8-26	MOD	MOD
Problem solving	RX--SL	ST: ALL	SD: ALL IU: IND	BOTH	PSY, COU	TS: 50-90 TC: 8-26	MOD	LTD
Job-finding skills	RX--SL	ST: ALL OT	SD: ALL IU: IND	BOTH	PSY, COU	TS: 60-240 TC: 8-16	MOD	LTD
Job skills	RX--SL	ST: ALL OT	SD: ALL IU: IND	BOTH	COU	TS: 60-480 TC: 8-52	MOD	MOD
Counter-condition and extinguish cravings								
Aversion-nausea	RX	ST: IP	SD: ALC IU: IND	IND	MED	TS: 35-50 TC: 5-7	HI	LTD
Aversion-electric	RX	ST: IP, OPT	SD: ALC, COKE, MARJ, TOB IU: IND	IND	PSY, MED	TS: 50-60 TC: 5-10	MOD- HI	LTD

Strategy	Stage	Setting	Target	Format	Provider	Time Frame	Cost	Availability
Aversion-covert	RX	ST: OPT	SD: ALC IU: IND	IND	PSY	TS: 50-60 TC: 6-8	MOD	LTD
Fading	AS--RX	ST: OPT	SD: ALC, TOB IU: IUD	BOTH	PSY, COU	TS: 50-60 TC: 2-8	LO	MOD
Cue exposure	RX	ST: ALL	SD: ALC, COKE IU: IND	IND	PSY	TS: 60-90 TC: 6-16	MOD	LTD

Stage specificity
- Acute stage
  - ET - Emergency treatment
  - DT - Detoxification
  - SC - Screening
- Rehabilitation stage
  - AS - Assessment
  - RX - Intervention
  - ST - Stabilization
- Maintenance stage
  - CC - Continuing care
  - RP - Relapse prevention
  - SL - Supportive living

Setting
- ST - Specialized treatment settings
- IP - Inpatient
- RE - Residential
- INT - Intermediate
- OPT - Outpatient
- OT - Other treatment settings
- ALL - All treatment settings

Target
- SD - Specific drugs
- ALL - All drugs and alcohol
- MARJ - Marijuana
- TOB - Tobacco
- ALC - Alcohol
- COKE - Cocaine
- IU - Intended interactive unit
- IND - Individual
- GP - Group
- FAM - Family
- ALL - All interactive units
- CH - Characteristics of the interactive unit

Format
- IND - Treatment given on individual basis
- GP - Treatment given on group basis
- BOTH - Treatment given to both groups and individuals

Provider training
- PSY - Psychology
- MED - Medicine
- COU - Counsellor
- ALL - Providers from all backgrounds special characteristics

Administrative auspices

Time Frame
- TS - Time per session (No. of minutes)
- TC - Time per course of therapy (No. of weeks)

Cost (per course of therapy)
- CS - Cost per session
- NC - No cost
- LO - Low cost
- MOD - Moderate
- HI - High

Availability
- NO - Not available
- LTD - Available but limited
- MOD - Moderately available
- WIDE - Widely available

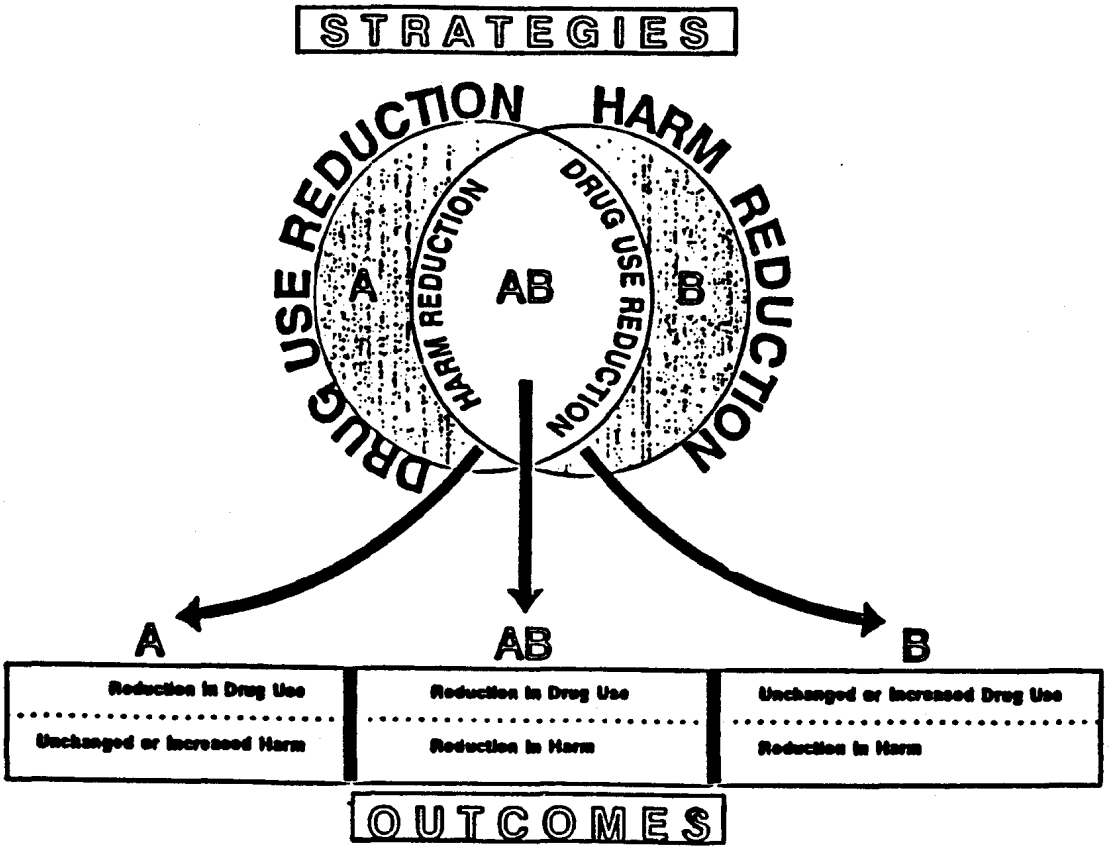
VI. HARM MINIMIZATION

Until recently there has been little to challenge the modern approach to drug policies in which a "war" is being waged against illicit drugs. The focus has been on the substance with minimal attention paid to the well-being of the drug user and his or her family and community. Factors that significantly influence international drug policies often have little to do with health or social issues. It is now recognized that it is no longer acceptable to ignore the impact that drug policies have on the health and well-being of our communities. After decades of highly restrictive drug policies, it is evident that the international drug problem is still growing, to the greater harm of our communities. In response to this, drug policies are being questioned, and now there is a call for a more balanced approach between the control of substances and the prevention of the harm associated with their use.

WHAT IS MEANT BY HARM MINIMIZATION?

Harm minimization is a term that is often used interchangeably with the term harm reduction. It is a term which has recently received considerable prominence within discussions related to alcohol and other drug issues. Owing to a lack of clear definition, and because of its association with a range of controversial alcohol and other drug intervention strategies, the term has been largely misunderstood. Although most of the concepts and strategies which are referred to under the harm minimization umbrella are not new, it is their specific grouping together which provides an opportunity to adopt a different perspective when addressing drug issues. To avoid further confusion in relation to this potentially useful term, a clear and universally acceptable definition is necessary.

Figure 1 provides a graphical description of the discussion which follows, illustrating the subtle differences in the ways in which harm minimization has been defined. Currently, the terms "harm minimization" and "harm reduction" are often used in two different ways - inclusive and exclusive.



Harm minimization as an overall aim or objective - inclusive

Firstly, the term is used to describe overall or general aims or objectives of alcohol and other drug policies and interventions. Thus it provides an alternative to the traditional "drug-free" goal. In this context, the problem is defined as any risk or harm associated with alcohol or other drug use. Harm may be defined in terms of the type of harm experienced (including health, psychosocial, vocational and economic problems) and in terms of the level of harm experienced (to an individual, family, wider community or society) (Newcombe, 1991). Risk relates to the probability of a possible outcome occurring. The primary aim of any intervention, therefore, is to reduce the associated harm. This contrasts with most mainstream approaches in which drug use *per se* is considered to be the problem, and where the primary aim is to eradicate illicit drug use on the one hand and to reduce alcohol and other licit psychoactive substance use on the other. In general, it is expected that a reduction in alcohol and other drug use will result in a reduction in drug related harm.

To further illustrate this, intervention strategies that aim to reduce both harm and the level of alcohol and other drug use are represented by *AB* in Figure 1. These type *AB* strategies constitute by far the largest group of alcohol and other drug intervention strategies currently utilized. Other strategies, while aiming to reduce harm, may at the same time actually result in an increase in overall drug use, as in some cases of the sanctioned use of methadone for individuals with an opioid dependence. These are represented by type *B* strategies in Figure 1.

Many countries adopt an overall drug policy aim of reducing drug use (the so-called "drug-free" or "abstinence" philosophies). Other countries argue that, in reality, the eradication of drug use is not possible. They recognize that certain strategies which aim to reduce the level of drug use may actually contribute to drug-related harm, here seen as type *A* strategies in Figure 1. For example, the decreased availability of certain drugs through criminalization may result in the adoption of more hazardous routes and patterns of drug administration. Of note is the rapid change from opium smoking to opium and heroin injecting in opium-producing areas of Asia as drug control measures have escalated and traditional cultures have been eroded by economic development. The situation in relation to alcohol is somewhat different. Most countries tolerate certain levels and patterns of alcohol use (Moser, 1980). Current government strategies, therefore, range from prohibition (Mohan, 1991), through a reduction in per capita consumption of alcohol (WHO, 1991) to the promotion of "sensible drinking" (Ministerial Group on Alcohol Misuse, 1991). Some countries which endorse the philosophy of harm reduction have specifically adopted the reduction of alcohol and other drug-related harm as their national campaign goal (Australian Department of Health, 1992; Health and Welfare Canada, 1992).

In this context, then, harm minimization may be referred to as an inclusive term that includes any strategy which reduces actual harm or the risk of harm through alcohol or other drug use (that is, both *AB* and *B* strategies as represented in Figure 1). When conflict arises, strategies aimed at reducing harm take precedence over efforts to reduce levels of drug use. As part of the National Campaign Against Drug Abuse, the Australian Minister for Health, Neal Blewett (NCADA, 1987), stated:

> "The National Campaign has as its aim 'to minimize the harmful effects of drugs on Australian society'. Its ambition is thus moderate and circumscribed. No Utopian claims to eliminate drugs, or

drug abuse, or remove entirely the harmful effects of drugs, merely to minimize the effects of the abuse of drugs on a society permeated by drugs."

There has been increasing support for a clear differentiation between the two terms "harm minimization" and "harm reduction". In distinguishing between the two, harm minimization refers to the overall goal, whereas harm reduction is an operational term, referring to strategies which may be adopted to achieve such a goal.

Harm minimization as a collection of specific strategies - exclusive

Secondly, "harm minimization" is widely used to refer to specific strategies designed to reduce alcohol or other drug related harm without necessarily affecting the level or pattern of underlying drug use. "Harm reduction strategies thus fall outside the dichotomy of supply reduction and demand reduction" (WHO, 1992). Within an international political environment where "zero tolerance" attitudes pervade, because they do not address levels of drug use and because they tend to focus on illicit drug use, these strategies may be viewed as controversial and often do not receive widespread support. Specific harm reduction strategies as referred to in this context cover a wide spectrum, including:

- strategies to reduce unsafe drug administration practices, such as needle-syringe exchanges, education on cleaning of injecting equipment and targeted education on less risky practices of inhaling solvents by children;
- strategies which promote less hazardous routes of drug administration, such as promoting a change from drug injecting to drug inhalation;
- strategies which promote the use of less harmful drugs or drug preparations, such as methadone maintenance and other drug substitution programmes;
- strategies which aim to create a safer drug using environment, such as improving road conditions, the training of drug users in the management of drug overdoses, the provision of "fixing" rooms and educating users about the risks of using drugs alone;
- strategies which aim to modify risky behaviour associated with drug use, such as welfare and housing support to minimize the need to resort to criminal activity for survival, the provision of condoms and information to reduce the risk of unsafe sexual practices, the installation of ignition interlocks on cars to prevent drinking-driving, and drug screening in the workplace; and
- strategies which reduce discriminatory and persecutory practices against drug users, thereby reducing the marginalization of drug users and increasing accessibility to prevention and treatment services, such as decriminalization of drug use and the establishment of drug user advocacy groups.

The term "harm minimization" used within this context is thus exclusive. It excludes those strategies which aim to reduce harm through a reduction in drug use (that is, it refers only to type *B* strategies as represented in Figure 1). Further to this, a distinction is not made between alcohol and other drugs, recognizing the arbitrary nature in which the legal status of a drug is determined in history and across cultures.

This paper proposes that the first definition, in which the term is used as an overall aim or objective and in which it is defined by inclusion rather than exclusion, has greater practical utility and therefore will be used as the basis for further discussion. The second definition, in which there is a grouping together of a

range of controversial intervention strategies, risks marginalizing these strategies further and provides little opportunity for determining the role of such strategies within a comprehensive, multi-faceted approach for reducing drug-related harm. Such specific harm reduction strategies as needle-syringe exchange are unlikely to succeed unless they are positioned within an overall strategy which includes complementary mainstream interventions such as education and treatment. The further discussion in this paper does not make a distinction between the two terms "harm reduction" and "harm minimization".

DEVELOPMENT OF THE HARM MINIMIZATION CONCEPT

It is useful to consider the history of the development of the harm minimization concept as an overall objective as defined above. In the early part of this century the response to alcohol and other drug problems was dominated by the moral and disease models. With both models, owing either to moral weakness or to an inherent vulnerability, certain individuals were viewed as having no control over their use of alcohol or other drugs. The only cure for the problem was considered to be total abstinence. A prohibitionist and abstinence mentality pervaded, focusing on the control of the substance, with the ultimate aim of eradicating drug use. The development of such a mentality was the result of an extremely complex interplay of factors in a rapidly changing society.

The emancipation of women contributed to the temperance movement (Sandmeier, 1980). The demands of a new industrial society of the 20th century called for greater controls on social and economic life (Levine, 1984). Population movements sparked overt racism, influencing the public perception of the use of specific drugs, such as opium use among Chinese (Helmer, 1975), marijuana use by Mexicans (Musto, 1973) and cocaine use by Afroamericans (Ashley, 1975). Although medical and other scientific arguments relating to the harmful health and social consequences of alcohol and other drug use contributed to the debate, they played only a secondary role to moral, political and economic arguments. This attitude was further reinforced, for example, by periods of alcohol prohibition in the USA and powerful temperance movements in other nations. Although this strategy proved to be a great political and social failure, with mass disobedience and the creation of influential criminal networks, it paralleled the establishment of prohibitionist policies for other drugs (Room, 1990).

In contrast, at the same time, a limited number of other countries chose to act upon the issue of alcohol and other drug use within a public health framework. Due to political and historical events, however, it was the adoption of a prohibitionist approach and the use of law enforcement in the United States that helped to determine the future international response to the problem. The strategic model adopted to achieve such an abstinence goal was based on the market model of demand and supply, the commodity being the drug. This model still dominates global drug policies today. Drug demand strategies include education, treatment and rehabilitation. Supply reduction strategies range from crop destruction and substitution, interdiction and scheduling of drugs, to controls in the production and marketing of licit substances such as alcohol.

Over time, it became apparent that many interventions targeting alcohol or other drug users did not neatly fit within the supply reduction/demand reduction dichotomy. Increasing emphasis has been focused on the harmful health and social consequences of alcohol and other drug use rather than upon drug use *per se*. The shift in attitude also resulted from a recognition that both law enforcement and drug treatment approaches had failed to achieve a drug-free society. This change in perspective has enabled this issue to be viewed

primarily as a health and social issue. Although a range of harm reduction strategies, such as the charitable provision of shelter and food to severely damaged itinerant alcohol users, has been used for decades, most of these programmes have also called for a reduction in, or cessation of, substance use. However, in certain countries, not all harm reduction strategies have emphasized abstinence as the long-term goal. For example, in the United Kingdom opioids, including heroin, have been made available to individuals with an opioid dependence through limited medical prescribing. It was not until the early 1960s that abstinence-oriented interventions were directly challenged through the introduction of methadone maintenance programmes in the USA. Although many such programmes were introduced as an interim measure on the road to abstinence, others argued in favour of a long-term maintenance role for methadone (Bellis, 1981; Newman, 1991).

There were signs in the 1970s that the principle of harm reduction, although not referred to in these particular terms, was gaining greater support among clinicians working with individuals who were experiencing problems related to their alcohol use but who were not prepared to stop drinking. It was argued that, at least, such individuals should be encouraged to adopt less harmful patterns of alcohol use. The further development of this philosophy witnessed the advent of the concept of controlled drinking (Heather and Robertson, 1981).

At the same time, the debate broadened to include a wide range of professionals working in the field. In 1974, the 20th WHO Expert Committee on Drug Dependence (WHO, 1974) stated in its report:

> ".... the Committee is of the opinion that the *broad purpose of prevention* in this field should be *to prevent or reduce the incidence and severity of problems associated with the non-medical use of dependence producing drugs.* This is a much broader goal than the prevention or reduction of drug use *per se.*"

Although controversial, it was not until this principle of harm minimization was more widely applied to illicit drugs, such as heroin, that the associated ethical and philosophical issues became paramount in any discussion of the issue. The appearance of HIV infection and AIDS acted as a catalyst to this discussion and provided the necessary rationale for the targeting of illicit drug use within the framework of a harm minimization philosophy (Wodak, 1991). This has in part required an acknowledgement that the prevention of HIV infection has a higher priority, in terms of health, than the prevention of illicit drug use. Although the focus has been on HIV infection, the debate itself has enabled a broadening of the discussion to include all aspects of harm associated with illicit drug use, ranging from hepatitis and septicaemia as a result of asterile injecting practices through to criminal behaviour and social marginalization resulting from the illicit nature of the drugs used. In contrast to its earlier use as a primary treatment for opioid dependence, methadone is now widely promoted in various countries (predominantly developed countries) as a strategy for reducing HIV infection and other harm associated with drug injecting and the use of illicit drugs.

STRATEGIES OF HARM MINIMIZATION

The concept of harm minimization recognizes that there is a continuum of levels and patterns of drug use and a continuum of drug-related harm. It also recognizes that many, if not most, drug users do not experience any significant problems related to their drug use. Likewise, there is a range of possible

intervention goals and strategies which may target non-users through to casual users and habitual users. Therefore, it acknowledges that there is no single or limited set of strategies which can adequately address the full range of potential drug related harms. The operationalization of this concept involves the use of goal and strategy hierarchies where the goal is not limited exclusively to an abstinence outcome although abstinence remains part of this hierarchy. The risks and harmful consequences of different patterns of drug use are identified and priorities for action to reduce harm are determined.

The New South Wales Drug Strategy (NSW Department of Health, 1992) illustrates how this concept may be incorporated within a comprehensive drug policy:

"A harm minimisation approach to these problems therefore necessarily involves a range of strategies including demand reduction, supply control, controlled use, safer drug use, and abstinence."

It then goes on to state that:

"In practice this means a Drug Strategy based on a harm minimisation approach should have the following primary objectives:

(i) To minimize the harm and the social problems to the individual and the community resulting from the use of drugs;
(ii) to reduce the prevalence of hazardous levels and patterns of drug use in the community; and,
(iii) to prevent the initiation into harmful or hazardous drug use, especially by young people."

An essential element to this process is that of defining indicators of drug-related harm as opposed to indicators of drug use. In defining such indicators, it is also important to recognize that the consequences of drug use are not always viewed as being harmful. Some consequences of drug use may be viewed as being neutral or even beneficial. For example, the religious use of hallucinogens by some indigenous populations; the use of opium tonics by the elderly in Central Asia to treat pain; and the use of coca products to ward off hunger and fatigue in the Andes. Therefore, indicators need to be able to reflect both harmful and beneficial consequences. Such indicators are necessary for determining intervention goals and for measuring the success of interventions, the goal being not only to reduce harm but also to optimize any benefits. Often intermediate goals are set which are reviewed and renegotiated from time to time. The content and structure of the different hierarchies will vary across communities and cultures and over time. Intervention goals and strategies which are appropriate and feasible for one community may not be so for another community (Shinfuku, 1992). Particular problems arise in cultures and communities where the drug and its use, for moral or religious reasons, are considered to be greater evils than the actual physical harm associated with the drug use. In the words of O'Hare (1992), here laws exist as a statement of dominant societal values rather than for the purpose of reducing drug-related harm. For example, methadone maintenance therapy may not only be inappropriate for certain communities because of its cost and because of the practical difficulties of dispensing and supervision, but also because methadone is itself a psychoactive substance.

It may be argued that the use of such goal and intervention hierarchies is too simplistic and quite artificial when considering the actual implementation of effective strategies. Drug issues are extremely complex and it has been recognized for a long time that there is no "magic bullet" when it comes to looking for solutions to the many and varied problems encountered. Effective measures in the long term are always the complex multifaceted ones which properly account for the cultural context in which they must operate. A goal of harm minimization will only be effectively achieved where all strategies work in the same direction. Further, it is necessary to recognize that strategies do not occur on a continuum; rather, each strategy is discrete. There is a repertoire of strategies, the nature of which must be properly understood if any serious attempt is to be made to reduce alcohol and other drug-related harm. Homel, Miller and MacAvoy (1992) state: "The critical point is that no single strategy is likely to be as effective as a coordinated approach that focuses on preventing the problem and reducing harm itself rather than the constituent elements causing the harm." Therefore it is not a simple matter of moving down the intervention hierarchy until a successful intervention is identified.

GOALS OF HARM MINIMIZATION

A further complicating factor when considering the concept of harm minimization is that of the determination of intervention goals. Harm minimization allows for multiple goals depending on the harms which are identified for targeting. These goals themselves vary over time in accordance with the dynamic nature of drug use patterns and consequences. It may be artificial to consider harm on a continuum. In reality, different types of harm are quite discrete, and no objective or absolute assessment of harm may be made. The different types of harm are assigned different values by different individuals and communities as well as across different cultures. The evaluation of harm reduction strategies needs not only to focus on the outcomes that the strategies are aiming to modify but also to recognize that such strategies may impact on other outcomes. In other words, a specific strategy may result in different outcomes on separate harm reduction measures. Newcombe (1991) provides examples of the complexity of evaluating such strategies. One example describes a mass media campaign used to reduce the risks associated with the inhalation of volatile solvents by informing the general population about the use of inhalants. A possible outcome may be an increase in the number of young people trying solvents but with a decrease in the number of deaths and health problems actually experienced by the users. To that particular community, what is an acceptable prevalence of volatile substance use considering the reduction in morbidity and mortality? There is obviously no simple evaluative framework that can be utilized for assessing the overall impact of such strategies.

The example of volatile solvents as presented above raises an issue which requires further discussion. A commonly cited argument against the harm reduction concept relates to the risks associated with meta-messages used in prevention programmes. The appropriateness of providing messages on such specific harm reduction strategies as needle and syringe exchange, safe drug use practices and controlled drinking through mass media campaigns may be questioned. It is argued that such messages may negatively influence non-users, particularly youth who may be at a stage of pre-experimentation. In such cases, a more appropriate approach may be the combination of an abstinence meta-message with specific harm reduction messages targeting high-risk populations or current drug users. A harm minimization policy has the potential to undermine the acceptability or desirability of an abstinence goal that in some cultures may be the preferred outcome. For example, a policy of "sensible" drinking, with meta-messages stating "safe" or

"sensible" levels of alcohol consumption, is likely to be inappropriate and may even accentuate alcohol-related problems in many developing countries where there are no well-established traditions of alcohol use and control. Further research is necessary to determine the impact of alcohol in developing countries and to compare the possible outcomes, both positive and negative, of interventions aiming for abstinence versus those with a harm reduction aim (Partenan, 1988).

Associated with the emergence of the concept of harm minimization has been the concept of "risk reduction". This concept focuses on particular behaviours that may result in harmful outcomes, rather than on the outcomes themselves. It may be a more useful concept for measuring the efficacy of intervention strategies than that of harm minimization.

ILLUSTRATING THE CONCEPT

The wide-ranging utility of harm minimization as an overall objective may be illustrated by three case studies, one on injecting drug use, one on drinking-driving and one on criminal justice.

There are multiple risks associated with injecting drug use. These may be prioritized according to the level of risk or the severity of consequent harm to the individual, the family and the community. For example, a community may identify the following problems: the public health risk of disease transmission, such as HIV and hepatitis, through the sharing of injecting equipment; the risk to the individual of overdose and other toxic effects due to the variability in the purity of, and the adulteration of, illicit drugs; the risk of tissue damage through actual injecting practices; the harm and economic costs to the local community through criminal behaviour; the risk of drug dependency in the individual user; the risk to the general public of discarded used needles and syringes; the anguish experienced by the user's family; disruption within the workplace; and visual annoyance at seeing drug users inject in public. Once the problems have been identified, goal hierarchies for each problem may be formulated along with appropriate strategies for intervention. With the problem of disease transmission, the intervention goals may range from the cleaning of injecting equipment between use to the cessation of needle sharing, through to changing the route of drug administration or total abstinence from drug use. Strategies employed would thus range from educating drug users on how to clean equipment, the distribution of bleach, the provision of clean needles and syringes, making available purer forms of the drug which may be taken by other routes than injecting, the provision of drug substitutes such as methadone, through to drug-free treatment. For each of the other problems identified, similar goal hierarchies and intervention strategies may be formulated. They should not be regarded as exclusive but rather complimentary to one another. Cultural limitations need to be recognized when determining hierarchies and strategies. In this case, for developing countries, it is likely that it would be more realistic to develop education strategies for users on cleaning techniques than to try to secure resources for the distribution of new needles and syringes.

A further example is the issue of drinking and driving. It is easy to identify that the problems are those associated with alcohol-related motor vehicle crashes and consequent morbidity and mortality. The range of goals may include establishing a safer driving environment to minimize the harm which may result from those who drink and drive. Strategies could include safer roads and cars with impact inflation bags. A further goal may be to try to reduce the amount of alcohol that drivers consume. Strategies may include the promotion of low alcohol beverages, lower pricing of low alcohol beverages, server intervention

programmes, the location of breath analyzers at drinking venues, random roadside breath testing and preventive education campaigns. Interventions may be aimed at preventing those who have consumed excessive amounts of alcohol, from driving. Possible strategies may include car ignition interlocks, "buddy" systems where non-drinkers volunteer to drive drinking friends home and driver assessment and intervention programmes for those who have been apprehended for drinking-driving. Another goal may be to prevent those who drink from driving. Strategies may include the provision of adequate public transport to drinking venues and discouraging driving by not making car parking facilities available at such venues. At the top of the hierarchy may be the goal of preventing the consumption of any alcohol by those who propose to drive. Strategies may include the promotion of alcohol-free beverages at functions and drinking venues, and the use of public education campaigns and the banning of alcohol advertising in an effort to alter social norms and expectancies about drinking and driving.

The health and welfare sectors do not have exclusive right to the harm minimization concept. It is a concept which may be applied to all aspects of drug-related harm and adopted by the full range of individuals and agencies that have contact with drug users, including the criminal justice system. Pearson (1991) proposes that the criminal justice system has four main roles to play in the reduction of drug related harm:

" - The containment of the numbers of new users recruited into the system through effective and focused low-level policing in conjunction with other prevention strategies.

- The encouragement of existing users to take 'early retirement' from drug-using careers, and to enter treatment programmes which include maintenance prescribing as an intermediate objective.

- The minimization of counter-productive aspects of enforcement strategies through arrest-referral schemes, diversion programmes and other community-based activities which avoid the excessive use of custodial measures and enhance the prospects of rehabilitation.

- The minimization of harm to the wider community, by a reduction of crime committed by users in order to sustain their habits."

These three very different examples demonstrate the broad utility of the harm minimization concept and how it may be applied as an overall objective as compared to its use exclusively in referring to specific harm reduction strategies. The concept has equal validity with regard to both licit and illicit drugs, and it may be used to examine the roles of different community sectors in responding to identified problems. However, the concept does have significant limitations when looking beyond the industrialized world where most debate has occurred. Most examples used for describing the principles of harm minimization draw on the experiences of well-resourced developed countries, typically citing activities surrounding the issue of HIV infection, such as needle and syringe exchange and methadone maintenance programmes. Such measures are resource prohibitive and culturally inappropriate for most developing countries (Shinfuku, 1992). Although many developing countries have adopted a "zero tolerance" approach to drug use (and many Muslim countries take this attitude to alcohol) with a focus on the eradication of drug use, a historical review of drug policies in some of these countries demonstrates the past adoption of a range of strategies that have aimed to reduce drug-related harm. Most notable has been the controlled provision of opiates to opiate "addicts" in countries such as Pakistan and China. Currently, there are frequent reports, from various countries in South and South-East Asia, of clinicians utilizing the concept of drug substitution by providing

opium to individuals with heroin dependence. Evidence of increasing injecting drug use and resultant HIV infection in Asia, and to a lesser extent in Latin America and Western Africa, has provided a reason for examining the role of specific harm reduction strategies in the developing world (Poshyachinda, 1992). As developing countries work towards the development of national drug policies and strategies, there is an urgent need for a clear understanding of where the overall concept of harm minimization may be positioned within these societies.

The concept of harm minimization is not new for either the developed or the developing world. Only recently, however, has the concept been clearly articulated so broadly at international level. It is an issue that has stirred intense debate. O'Hare (1991) states that "harm reduction is not merely a debate over treatment ... the principle has implication for the future shape of drug control systems". Such a model of harm minimization, as compared to the traditional market model of demand and supply, allows for the issue to be positioned within a health and social welfare context. It also allows for the introduction of a more relevant evaluation framework in which the success of an intervention is determined by the direct health and social indicators that relate to a reduction in drug risk or drug-related harm rather than by the use of the indirect indicator of a change in the level of drug use.

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VII. MUTUAL HELP FOR THE RECOVERY OF ALCOHOL AND DRUG ABUSE

INTRODUCTION

Mutual aid groups are a prominent aspect of contemporary life. An increasing number of people, both in developed and developing countries, are helping one another solve their problems. There are groups for the mentally ill, the physically handicapped, those who eat too much or who do not eat at all, gamblers, smokers and those who abuse alcohol and other drugs.

It was estimated in 1990 that 15 million North Americans participated in more than half a million self-help groups, many of them specific to recovery from dependence (Yoder, 1990). One survey reported that almost one-tenth of the adult US population had had direct exposure to a meeting of Alcoholics Anonymous at some point, although of these only one-third had had alcohol problems of their own. When non-alcohol-oriented groups were included, it was found that more than one-eighth of the population (13.3%) had attended a 12-step meeting (Room & Greenfield, 1993).

Although the effectiveness of self-help groups rests largely upon personal testimonials, they have become a salient feature of today's service scene and of society in general. They fulfil functions in today's society that were once served by family, church and service professionals.

Self-help and mutual aid are respected American values, reflecting the country's image of problem solving. Self-help is related to several other fundamental American values such as "individualism", "voluntarism" and "antistatism" (Hurvitz, 1976). Each stresses the rights and obligations of the private person, either alone or in voluntary association with others, and in opposition to an intrusive authority (Nurco & Makofsky, 1981). However, although this is true for the USA, self-help organizations in many other countries have developed according to their different backgrounds.

The most striking characteristics of self-help protagonists are their independence and distrust of professionals. The organizational structure of self-help groups replaces professional elitism with member solidarity and group autonomy. The bureaucracy and professionalism prevalent in regular service organizations are replaced with reciprocity and direct democratic participation (NIDA, 1978; Room, 1993).

HISTORICAL ASPECTS

Mutual aid, assistance, cooperation and natural support systems have existed from time immemorial. In contradiction to the predator theory of Social Darwinism, Kropotkin (Katz & Bender, 1976) pointed out that tribal or clan societies survived because of mores and laws that supported cooperative action. The very condition of civilization lay in humanity's early development of cooperation through food-gathering and the maintenance of a group for safety and defence. The village community was developed by stronger clans that practised these habits while less united clans disintegrated.

Later, mutual aid groups expanded their activities beyond physical survival. By the Middle Ages and the Renaissance, the physically or mentally disabled, as well as strangers and pilgrims, relied on church and town charities. Various structured organizations such as guilds, trade unions and reform groups played an important role in the development of the relief laws for the poor that extended statutory welfare and health benefits.

The Industrial Revolution had a significant impact on the social, economic and health problems of a growing population. The Friendly Societies which followed the guilds were unique institutions where working people in different occupational groups could find help in coping with the stress of industrialism. The Incorporation of Carters (1550), the Fraternity of Dyers (1670) and the Goldsmith Friendly Society (1712) were just a few of the 191 Friendly Societies founded before 1800. Both unions and Friendly Societies were the main mutual-aid organizations of the late 18th and early 19th centuries. Their main purpose was to attend to the economic needs of their members, but they were also concerned with other issues such as social and political improvement.

Structurally speaking, these multifunctional societies were organized and directed locally - characteristics similar to those of some contemporary self-help groups. Friendly Societies, cooperatives of workers and trade unions, were early expressions of self-help organizations devoted to helping their members with housing and work problems, burial and loan arrangements and health and pension plans. Immigrant groups arriving in the USA after 1880 organized their own mutual aid organizations to cope with the numerous problems and needs they faced in their efforts to adjust to their new life (Katz & Bender, 1976).

In the 20th century, especially after the Second World War, many new expressions of the self-help phenomenon arose, less related to economic survival than to existential issues. The main goal of most of these organizations was solving personal problems through inner change, though political advocacy was the concern of others. Both old and new self-help organizations have an impact on the personal views and on the practical aspects of the lives of the participants. The main differences between them are the criteria for membership and their relations with the outside world. In the self-help groups of the 19th century in England, members were already tied by their social and economic background; in the new self-help groups, membership was based upon individual experience, independent of social position, occupation or race (Mäkela, 1992).

As self-help movements have developed, the final stage is one of bureaucratization and professionalization (Katz, 1961). Nevertheless, there are many exceptions to this model among the new self-help organizations, such as Alcoholics Anonymous and others (Bloomfield, 1991). Their growth and expansion to many countries during recent decades has changed neither their non-hierarchic and non-bureaucratic structure, nor their independence from the outside world (Mäkela, 1993).

Among contemporary groups that practise mutual aid are the natural and informal social networks of family, workmates, schoolmates, neighbours and friends. In addition, there is a wide range of self-organized and self-directing educational, healing, economic and socially supportive groups (Katz, 1981).

DEFINITIONS AND TYPOLOGIES

Among the many definitions of self-help groups, the following is probably the most widely cited:

> "Self-help groups are voluntary, small group structures for mutual aid and the accomplishment of a special purpose. They are usually formed by peers who have come together for mutual assistance in satisfying a common need, overcoming a common handicap of life-disrupting problem, and bringing about desired social and/or personal change. The initiators and members of such groups perceive that their needs are not, or cannot be, met by or through the existing social institutions. Self-help groups emphasize face to face social interactions and the assumption of personal responsibility by members. They often provide material assistance, as well as emotional support; they are frequently `cause' oriented and

promulgate an ideology or values through which members may attain an enhanced sense of personal identity" (Katz & Bender, 1976).

The main attributes that define these groups are their spontaneous origin, that they are not usually set up by an outside initiative, and that they always involve face-to-face interactions and personal participation. Bureaucratization is antithetical to the self-help organization: members agree on and engage in activities. Typically, groups fill the participants' need for a reference group, for a point of connection and identification with others, and for a base of activity and source of ego-reinforcement.

Through these attributes, self-help groups differ from "mutual aid" groupings and agreements i.e. those exercising political or economic power, such as unions, cartels, corporation boards, "old boys" networks and friendship cliques. The groups are distinguished also from various voluntary membership organizations, such as "service organizations", which are oriented towards traditional philanthropy. The definition excludes such temporary or unplanned natural associations as children playing together, the short-lived "emergency collectivism" of neighbours in times of natural disasters, and the "encounter group", since these transient groups lack the necessary "common problem", "specific purpose" and "ideology" (Helmerson, 1989).

There are several types of primary focus mutual-help groups. These include groups oriented towards individual change or personal growth (e.g. Alcoholics Anonymous, Women For Sobriety), groups that focus on protecting alternative patterns of living or identities (e.g. gay activists, women's movements, ethnic support groups), groups oriented more towards social advocacy, the promotion of change or enforcement of laws (e.g. Mothers Against Drunk Drivers) and organizations that focus on providing support for the stress and pressures due to life in society (e.g. groups of single parents or ex-prisoners). A differentiation can also be made between those groups that seek a withdrawal from deviance through self-change (e.g. Narcotics Anonymous) and other groups that seek to modify the definition of deviance, thus condemning society rather than themselves (e.g. Junkiebond).

Self-help groups dedicated to personal change, such as those for people with alcohol and drug problems, all include the key element of self-disclosure. In other words, the process of recovery requires that members of the group acknowledge their faults and inner sufferings and make "public" what used to be "private". This self-disclosure facilitates healing through a process of identification with others "like me". Another important feature of these groups is that they are based on the principle of peer support which is why they are also called mutual-help groups.

For the purposes of this chapter, the mutual-help recovery resources for people with alcohol and drug problems will be classified as follows:

- groups with the same principles and ideology as Alcoholics Anonymous (AA), known as 12-steps organizations;
- groups inspired by AA but which have modified the AA ideology and the principles;
- mutual-help organizations with no connection to AA and a different background;
- other resources for alcohol and drug abuse treatment that include a self-help component.

This classification serves to categorize the large number of different examples of mutual-aid. Most self-help groups began in the USA, where they have become an important feature of the therapeutic arena and society in the last four decades. It is here that most information is available on mutual-help resources. This chapter, however, includes all information available from other parts of the world.

ALCOHOLICS ANONYMOUS AND OTHER 12-STEPS SELF-HELP GROUPS

Alcoholics Anonymous (AA) has a worldwide membership of more than 1.7 million, has established groups in more than 100 countries (mainly industrialized, non-socialist and non-Islamic societies) which have an annual membership growth of 6.6% in the USA and Canada, and 15% in the rest of the world (Mäkela, 1993). These numbers indicate the enormous impact AA has had since its appearance in 1935 and of its ability to involve and help alcohol-dependent persons. AA's effectiveness has been described from various perspectives in a great deal of literature, in which it is seen as a charismatic organization, a cognitive therapy and a new social movement (Back & Taylor, 1976; Antze, 1976; Boscarino, 1980; Ogborne & Glaser, 1981; Glaser, 1982; Robinson, 1983; Galanter, 1990; Room, 1993). Most self-help organizations dealing in substance abuse, behavioural, or emotional problems are the issue of AA ideology. Its history is well documented by the organization's major texts and by many scientists interested in the AA phenomenon (AA, 1939; AA, 1957; Glaser, 1981; Kurtz, 1982; Peterson, 1992).

AA Background

The direct origins of AA are the Oxford Groups, a revivalist religious fellowship led by Lutheran minister Frank Buchman in the early part of this century. These small groups, independent of traditionally organized churches, stressed the search for moral and spiritual values. Members improved their lives through conversion, prayer and meditation.

Many alcohol-dependent persons attended those meetings for the help they found in achieving and maintaining sobriety. Among them was one of the co-founders of AA, Bill Wilson. The teachings and methods of Buchman are contained in the book ***Soul Surgery*** and were influenced by the development of AA. There are several similarities between the Oxford groups' principles and procedures and those of AA: a step-like approach to the conversion/recovery process; confrontation of the denial of sin/alcohol-dependence through person-to-person confession; meetings in informal, friendly settings, separate from religious institutions; maintenance of conversion/recovery through work with the as yet unconverted/unrecovered; use of an illness model to describe sin/alcohol-dependence; identification of selfishness or self-centeredness as the root of sin/alcohol-dependence; avoidance of theological discussions while insisting that recovery depends on reliance on "God" or a "higher power" as defined by the recovering individual (Hurvitz, 1976; Glaser, 1981; Peterson, 1992).

Buchman developed his step-by-step approach as a missionary in China. This method uses the Five C's: confidence, confession, conviction, conversion and continuance. This approach is the acknowledged inspiration of AA's 12-steps.

Founding of AA

By sharing their experiences of alcohol dependence and their desire to better their lives, founders of AA (Bill Wilson and Dr Bob Smith) and other alcohol-dependents discovered that they were able to remain sober. The principles of the Oxford Groups, plus the reading of William James's ***The Varieties of Religious Experiences***, furthered their knowledge of how an alcohol-dependent person could recover. In 1935, they initiated their legacies of recovery, unity and service, as well as the AA basics - a 12-step programme for personal recovery, the 12 traditions for the survival and unity of AA groups, and the 12 concepts of worldwide service that guarantee help to the alcoholic-dependent. Several books and pamphlets lay down and explain these principles and are considered the basic AA literature.

The AA Programme

Alcoholics Anonymous is a system of beliefs and interactions (Mäkela, 1991). As a belief system, it does not advocate any eschatological, theological or ontological concepts. AA interests itself only in this life and the relationships of an individual to himself/herself, to other people and to some "higher power". It is clear, however, that Christian and especially Protestant traditions and world views have had an important influence on AA and on its spread to other societies with similar backgrounds.

The AA belief system gradually changes the newcomer's world view and perception of himself/herself. Newcomers admit they are powerless over alcohol and that their lives have become unmanageable. Surrendering and acceptance of the inability to control both alcohol use and one's life are key to this first step, which solves the problem of denial, resulting in a new, controlled self. However, the change is spiritual, based on the belief in a "higher power", according to each person's understanding (steps 2-3). It is necessary to honestly make a moral inventory, admitting one's faults to God and to other human beings (steps 4-5). An honest will to change one's imperfections should manifest itself, as well as a willingness to make amends and repair the harm caused others (steps 6-9). One is continually required to analyze one's life, mending errors with God's help and helping other alcohol-dependents who are still suffering (steps 10-12).

Although AA claims to be "spiritual" and not "religious", the programme represents a finding of or a re-encounter with God. Many members view AA as a "religion" while for others the "higher power" may mean a cosmic principle or even the group itself. Beliefs and actions go together as both the newcomer and the long-term member are in the same danger of relapse. The sharing of experiences at a meeting, following the 12-step principles and sponsoring other members are constant reminders of "where I was". By praying or referring to a "higher power", one learns to believe in it.

There is also an "AA discourse" that helps the alcohol-dependent to re-think his/her life and rebuild both the past and the present on AA's beliefs and interactions. Rituals, slogans and mottos are used, although they may vary from one group, or culture, to another. Honesty and humility are required basics of the programme, along with interaction and sharing with other members. There is an emphasis on the individual's responsibility to lead a constructive and moral life, and meditation and prayer are encouraged.

Alcoholics Anonymous sees the alcohol-dependent person as an individual who needs to change his/her personality and alcohol-dependence as a disease (although not clearly defined) of "mind, body and soul". Besides hope, the newcomer finds a social network (or "social cocoon") that will help him/her keep to the programme, and avoid loneliness when coping with the desire to drink or other problems in life. The AA programme of living in sobriety and not merely abstinence becomes a way of life.

Psychologically, AA members progress through a series of coping mechanisms which are necessary to deal constructively with abstinence, self-image and interpersonal relationships. Newcomers are advised to attend as many meetings as possible and work through the programme on a daily basis ("just these 24 hours"). All members are encouraged to be active in the rota of "service" for the group (serving as "coffee maker", treasurer or secretary) or at other levels of the service structure (as a representative or a delegate of the group) and to follow the 12-step programme.

The AA meeting

The AA meeting is informal, yet much more structured than many other gatherings. The format and the interactions vary widely not only from country to country but also within a society. Regular meetings last from one to one and a half hours. The number of meetings a group holds may vary from once a week to several meetings each day. A group may hold "closed meetings" for AA members only, or "open meetings"

for when newcomers and non-AA members are also present. There are meetings to "study the AA literature" or to celebrate "anniversaries" of members. Meetings take place in various types of facilities, varying from group to group.

Interactions at the meetings are based on a non-written, but specific set of rules of speech and behaviour (such as the absence of cross-talk when someone is "sharing"). The newcomer learns these after attending a few meetings. A few examples are: to talk in turn, to speak only about personal experiences, to avoid giving lectures about scientific theories or religious doctrines, and to avoid giving advice to other members or denouncing the programme.

The opening and closing of the meeting generally include the reading of some fragment of the AA literature by the meeting coordinator. At the end a basket circulates for voluntary contributions. Some groups begin with a moment of silence, others conclude with the "Serenity prayer". At the close of some meetings, members make a circle holding hands, while at others members only shake hands. In some groups the "Lords Prayer" is included. After the meeting, many members go to the "meeting after the meeting" or "coffee therapy" in a nearby cafe or restaurant.

AA as an organization

The independence of AA as an organization, its lack of strong bureaucracy and the practice of direct participation all seem to have played key roles in the movement's growth and permanence. Although in AA there are no authorities, long-term members with charismatic or strong personalities are informal leaders and role models.

Alcoholics Anonymous is based on a cell structure. This means that each group is autonomous and independent but open to anyone wanting to stop drinking. A group has a life of its own - it may grow or fade out, it may divide or join with another spontaneously. There are no records or membership fees, funding coming from voluntary contributions (the 7th tradition). This cell and network structure has played a central role in the strength and spread of AA (Mäkela, 1992; Mäkela, 1993).

Since AA groups are open to anybody wanting to quit drinking, the social and demographic composition of membership varies widely. Each member chooses to stay in the group where he/she feels most comfortable. In recent decades AA has been able to adjust to the many changes taking place within every society. This has resulted, especially in the USA, in a variety of "special interest" groups, such as gay groups, all women groups, groups for young people, for ethnic minorities, for persons of different occupational status, for the deaf, and so on. Mexico has also shown some signs of diversification, with some mixed sex groups holding an "all women meeting" once a week. There are two "gays only" groups in Mexico City (Rosovsky, 1992).

Spread of AA

Though AA was viewed as an "American by-product for the white, Anglo-Saxon and Protestant alcoholic", it has expanded rapidly during recent decades to different cultures. In 1986, 53.8% of AA members worldwide were in the USA and Canada, 5.2% were in other anglophone countries, 1.3% in Scandinavia, 4.6% in other European countries, 34.5% in Latin American and 0.8% in all other countries (Mäkela, 1993). AA typically spread through American AA members who visited or emigrated to other countries or through alcohol-dependent persons who learned of the programme while in the USA.

Alcoholics Anonymous first spread to other anglophone countries, where the original English AA literature could be used. These countries generally had developed economies, strong Protestant traditions and close contact with the USA. This gave support to the view of AA as a continuation of the temperance tradition,

characteristic of English-speaking and Nordic countries, where distilled liquor was the dominant beverage and Protestantism the dominant religion (Robinson, 1983; Levine, in press). After the 1960s AA spread to countries with different backgrounds. AA is now strong in Catholic countries which have a high level of beer consumption, but tends to have fewer groups in traditional wine-drinking cultures (Mäkela, 1991).

In Western Europe almost all countries have a growing number of AA groups. The exception is Denmark which has a poor AA presence. During the period of Soviet influence, AA groups were not present in Eastern European countries. Now, along with recent sociopolitical changes, there are signs of the spread of AA to Poland and some countries of the former Soviet Union. In Italy, Spain and Portugal, which are Catholic countries with high wine consumption, AA activities have begun to rise during the last two decades.

In almost all countries of the Americas there are AA groups. Only in Cuba were AA activities still unknown by 1986. Mexican AA members recently visited to initiate a relationship. AA was introduced early to several countries in Latin America. By the mid-1940s there were AA groups in Colombia, El Salvador and Mexico. Only in Haiti, Chile and Bolivia are AA activities still insignificant.

In many Asian countries AA is practically unknown and, where some AA groups are present, the membership may represent foreigners living there. In Hong Kong, for instance, only one of 16 weekly AA meetings was held in Chinese (Mäkela, 1991). In Africa, only South Africa shows a considerable presence of AA. In New Zealand, AA was introduced in the late 1940s and had around 300 groups by 1986. Australia almost tripled the number of groups between 1965 and 1986. Other countries of Oceania had no AA activities in 1986.

The publishing activities of AA played an important role in the spread of the programme. The AA World Office in New York has helped different countries to develop their own service structure and has given them the right to translate and publish the literature in their own language.

The AA model of recovery has been applied to a variety of other problems, such as dependence on other substances or to help the relatives and friends of the alcohol and drug abuser. Although most of these organizations are operating in the USA, the ones listed below have a certain degree of international influence.

Narcotics Anonymous

Narcotics Anonymous (NA) is the largest self-help effort available to narcotic-dependent persons in the USA. NA was founded in 1953 and its World Service office is located in California.

Narcotic Anonymous is based on the 12-step programme of AA. Three of the 5-member committee who created NA also belonged to AA. It seems that one of the main reasons for creating NA was that AA members objected to the discussion of drug-related subjects at their meetings. Both alcohol-dependents and drug dependents perceived the need for another organization. Many of the NA founders have remained members of AA as well. Similarities with AA can be seen in many practices, in that NA members accept the 12 steps and traditions, substituting drug terms for AA references to alcohol.

Although NA claims not to follow the AA structure, essentially it has adopted the AA programme (Nurco & Makofsky, 1981). There are several chapters of NA in over 50 countries, with more than 22 000 groups in 1991. In addition, more than 2000 meetings are held in correctional and treatment facilities.

During the last few years NA has begun to have a growing number of groups in Latin America and Europe. There are NA groups in Eastern Europe and in some Asian countries. The NA literature has been translated into many languages (NA, 1992).

Cocaine Anonymous

Cocaine Anonymous (CA) is another AA-derived self-help organization founded in 1982 in the USA for the purpose of giving support to the cocaine user and his/her specific problems. In 1992 CA had 1500 international chapters (The Self-Help Sourcebook, 1992).

There are other international organizations based on AA's 12-steps programme of AA, but these mutual-help groups have, up to now, had less impact than the above, particularly outside the USA. Some examples are **Smokers Anonymous** (founded in 1982 in California, with more than 500 groups in the USA) and **Pill Addicts Anonymous** (founded in 1979 in the USA, with only six groups in 1992) (Yoder, 1990).

Twelve-steps groups for the family of the dependent person

Relatives and friends of alcohol or drug dependents may also find help in self-help groups. Among those based on the philosophy and programme of AA, the first was **Al-Anon** which was created in 1951 by the spouses of the two founders of AA. Their main idea was that the family, as well as the alcohol-dependents need help, since alcohol-dependence "is a family disease" and relatives may experience stress and emotional suffering. Al-Anon's founders felt that they needed to apply the principles of the AA programme to deal with the problems of adjusting to life with an active or sober alcohol-dependent.

The first family groups had different names such as AA auxiliary or Triple A but in 1952 the name of Al-Anon Family Groups was chosen. The organization is independent of AA and has its own offices and own literature (Lois Remembers, 1987). More than 32 000 Al-Anon groups meet in around 100 countries. Wherever there is AA Al-Anon is probably present too (Rosenqvist, 1992).

Alateen, founded in 1957, is a fellowship of young Al-Anon members, usually teenage children of alcohol-dependents. It is affiliated with Al-Anon.

Adult Children of Alcoholics (ACOA), is a 12-step programme for adults who, as children in the home of an alcohol-dependent, have grown up with emotional distress that is an impediment to full participation in adult life. ACOA was founded in 1976 in the USA. Its groups may be affiliated to Al-Anon or to another international organization, Adult Children of Alcoholics (ACA), which was founded in 1984 and has more than 1350 groups in five countries. Both Al-Anon and ACOA attract not only the children of alcohol-dependents, but also people who grew up with other kinds of family dysfunction such as violence or mental illness (Yoder, 1990).

The ACOA programme aims to help people raised by alcohol-dependent parents without consistent models of adulthood or healthy relationships. Through inattention and neglect, many ACOA members develop low self-esteem and lack of maturity in their relationships (Miller & Tuchfeld, 1986). The ACOA groups have not spread out of the USA as widely as Al-Anon. Many individuals with these problems also attend Al-Anon meetings.

Nar-Anon (an international group, founded in 1967) and **Co-Anon** (an international group, with more than 42 groups, founded in 1985) are the respective self-help resources for the relatives or friends of drug dependent persons and cocaine abusers (The Self-Help Sourcebook, 1992).

Another growing mutual-help movement for friends or relatives of people with alcohol or drug dependency, is **Families Anonymous (FA)**, founded in 1971 in the USA. It is also based on AA's 12 steps and traditions. Families Anonymous gives support to relatives or friends of people who abuse alcohol or drugs or who have behavioural problems. FA has a large number of publications, more than 300 groups in the USA and has spread to many countries (Galanter, 1984; Families Anonymous Inc., 1991).

SELF-HELP GROUPS THAT HAVE MODIFIED AA PRINCIPLES

There are other mutual-help organizations inspired by the AA philosophy and methods which for various reasons have changed some aspects of the AA programme. These groups may have a special social or religious focus or they may be restricted to the USA or to other specific areas. Some lack the "spontaneity" typical of other self-help organizations.

Women for sobriety

Women for Sobriety (WFS) is an association of self-help groups for alcohol-dependent women. It was founded in the USA in 1975 by Jean Kirkpatrick, a Ph.D. member of AA, to meet the recovery needs specific to women. WFS is largely influenced by feminist philosophy. There were 250-300 groups with approximately 5000 members in the USA in 1989. "Turnabout" is the autobiography written by Kirkpatrick about her drinking history. She points out that alcohol-dependent women need to rebuild their self-confidence and self-esteem and that they suffer from a harsh social prejudice.

The "New Life Program" of WFS is based on 13 affirmations that can be summarized as no drinking, positive thinking, believing one is competent, and growing spiritually and emotionally. The most important differences between AA and WFS is the view of female recovery from alcohol-dependence as a process of building self-esteem because women have been humiliated by society. Therefore, unlike AA, the WFS emphasis is not on humility but on competence and building one's self-control instead of on surrender. The meetings take a different form from those of AA (Kaskutas, 1989). Many women alcohol-dependents attend both AA and WFS meetings. Others feel uncomfortable speaking at mixed AA meetings or find more support, acceptance and nurture in WFS than in AA (Yoder, 1990).

Secular Organizations for Sobriety (SOS)

Like many other organizations Secular Organizations for Sobriety (SOS) was also founded in southern California by a recovering alcohol dependent who hoped to provide an alternative to AA for people who could not accept the "God or higher power issue" of the AA programme. Persons dependent on other substances are also accepted in SOS. Within two years SOS had grown to include about 5000 members in 80 groups throughout the USA, with new groups forming in Australia, Great Britain and Canada. SOS groups meet once a week for an hour and a half and discuss topics drawn from secular literature or from the book "How To Stay Sober: Recovery Without Religion" by SOS founder, James Christopher (Yoder, 1990). The SOS programme is based on six suggested guidelines that encourage members to accept the fact that the dependents, stay clean and sober one day at a time, to see sobriety as a lifelong priority, to be responsible for achieving a life free of alcohol or drugs and to share thoughts and feelings with other members. Some SOS members also attend AA meetings.

Another mutual-help organization that claims to be international and which has modified the AA programme is **Overcomers Outreach** which was founded in California in 1985 as a "Christian ministry of self-help for persons who could benefit from a secular 12 step group in the Christian community; it includes alcoholics, drug addicts, overeaters, gamblers, co-dependents, etc." Overcomers Outreach claims

to have 943 affiliated groups. Still another organization is the **Calix Society**, founded in Minneapolis, Minnesota in 1947 as an adjunct to AA to give support to recovering alcohol dependents seeking spiritual development through the Catholic church. Small groups of Calix members meet regularly with a priest who serves as spiritual director. The Calix Society includes religious activities such as celebrating the liturgy, receiving the sacraments, prayer, meditation and retreats. Members may include non-dependent persons with a personal interest in the disease, and they receive the bi-monthly newsletter ***The Chalice***. Calix units have been established in 70 cities throughout the USA, as well as in Canada and Great Britain (The Self-Help Sourcebook, 1992).

Links

In Sweden, Denmark and Norway there is the AA-influenced **Links** organization, though in the first two countries it was founded before the AA. The main goal of the Links is to help alcohol dependents (Kurube, 1992a).

The first society of Links in Sweden was founded in 1945, eight years before the Swedish AA. The initiator was an inspector at the Temperance Board in Stockholm who had read an article on AA in ***Reader's Digest***. He gathered together seven recovered alcohol dependents from different temperance organizations plus the Oxford group team.

The **Swedish Links** has received financial support since 1947 from the municipality of Stockholm and state grants since 1952. From its beginnings the society of Links had contacts with the AA movement in the USA. Currently the Swedish Links is initiating efforts to establish international collaboration with other mutual-help groups not related with the AA 12-step programme, Sobriety International. (The purpose of Sobriety International is to address issues of alcohol policy around the world. While politically and religiously independent, it supports WHO's aim to reduce alcohol consumption in the European Region of countries by 25% by the year 2000, legislation for a zero alcohol level for drivers and restrictions on alcohol advertisement (Kurube, 1992b).)

By 1990, the **Swedish Links** had some 17 500 members, including support members. Danish Links had a membership level of 5000 and Norwegian Links 300. In Denmark, working people with alcohol problems who had heard about AA in Sweden, founded in 1948 the Links organization (formerly Ring in Ring). They did not accept the disease concept of alcohol dependence but considered it a cultural and social problem. Professionals were involved in the group's development, because Ring in Ring which became Links in 1962, ran its own outpatient clinics (Kurube, 1992b). The **Norwegian Links** were founded on the initiative of one of the Swedish Links groups in 1979 (Kurube, 1992a).

The Links programme in Sweden and Norway is a shortened and partly modified version of AA's 12 steps. The Links seven-points differs from AA's steps on the issue of the "higher power". Instead, Links members put their faith in the group's solidarity and strength to achieve and maintain sobriety.

In a different fashion, the **Danish Links** created a treatment model, strongly influenced by professionals, by which the psychological roots of drinking are acknowledged and the alcohol dependent is oriented to understand his/her drinking mechanisms. Links members include alcohol dependent persons and support members such as the family.

Danshukai

In Japan, the **Danshukai** or Association for Quitting Drinking has its origins in the temperance movement but incorporates AA principles. The initiative for the temperance movement in Japan came from Protestant

missionaries who founded the First Temperance Association in Tokyo in 1887. In 1950, contacts with AA were made and in 1953 the first Friend's Association for Quitting Drinking was founded within the national Federation of Temperance Associations.

Besides the temperance movement and AA, the medical profession also influenced the creation of Danshukai. The principles of AA were modified in relation to anonymity, formalization of structure and membership fees on the basis that it was necessary to adjust the AA programme to Japanese culture. Danshukai's, "Programme for a New Life" has many similarities with the seven points of Links. This Japanese programme focuses on the importance of meetings, mutual respect for others' personalities and shared spiritual kinship. The central points are personal change and the creation of a new life. The spiritual dimension of the programme is strongly related to Japanese religious philosophy.

Danshukai's local associations evolved from patients' clubs in treatment clinics and receive professional supervision. Nevertheless, in Japan medical professionals are more likely to refer people to AA than to Danshukai, so rivalry does exist between the two movements. The higher status that AA seems to have among young doctors may reflect a shift in traditional Japanese thinking from the importance of the group to the importance of the individual.

Danshukai's activities include moulding opinion on matters related to alcohol. From its beginning, Danshukai has called for legislature on alcohol treatment and to provide financial means to the association. Danshukai has some 40 000 members, including support and family members (Kurube, 1992b).

Although the organizations described in this section were inspired by the 12-step movement, modifications made to the recovery programmes and activities stemmed from other philosophies such as feminism or temperance, from the workers movement, or from the practices and beliefs of the Catholic church or other religious traditions. In some cases, the changes to the AA programme resulted from the influence of medical professionals.

MUTUAL-HELP ORGANIZATIONS THAT HAVE NO CONNECTION WITH AA

There are several organizations that, while based on mutual help, have no connections with AA's programme and have a different background. These organizations originate either through professional theory and leadership or social movements, such as temperance or the anti-alcohol movement.

In the USA, **Rational Recovery Systems**, an organization founded in California in 1986, claims to have more than 350 groups internationally. Its goal is to help persons to recover from substance abuse and dependence through self-reliance and self-help groups. The programme is non-religious and is based on rational-emotive therapy. Some groups have professional advisers (The Self-Help Sourcebook, 1992).

In Europe there are several mutual-help organizations for alcohol or drug abusers that have a mainly religious or social background. Among these is **Kreuzbund**, a German organization founded in 1896 on the initiative of an abstainer whose brother was an alcoholic. By 1990 Kreuzbund had some 10,000 members in 1100 groups (including family and support members). It is rooted in the 19th century temperance movement as well as in other abstinence organizations such as Blaues Kreuz (Lutheran), Blaues Band, Freundeskreise and Guttempler. Kreuzbund is the largest group and is non-political and non-religious, although from the very beginning it has received financial support from the Catholic Church.

These associations collaborate in action to influence the publics opinion of alcohol and drug issues. Until 1960 Kreuzbund also included members who were not alcohol-dependent, but since 1960 it has been

devoted only to alcohol-dependent persons. Family and support members are accepted in some activities if they agree to maintain sobriety. The organization has developed rapidly in recent years and it has its own rehabilitation programme based on personal change by group therapy.

Kreuzbund calls its programme "Guidance Work to Self-Help". The organization aims to give the alcohol dependent both a new orientation and a new social network without alcohol. The groups are organized according to geographic area and three group meetings are held every week with the participation of family members. Moral issues and family problems are the main subjects of these meetings (Kurube, 1992b).

Another European mutual-help organization is the French **La Croix d'Or**, founded in 1919 on the initiative of the Catholic anti-alcohol movement Croix Blanche. In 1990 La Croix d'Or had 30 000 members, including alcohol dependents and support members. Like Kreuzbund, this organization is involved not only in the recovery of members but also in issues of social change.

La Croix D'Or's motto is "Honour, Health and Happiness". There are four requirements for members: to have the desire to stop the abuse, to admit the need for help, to help other alcohol dependents and to avoid taking the first drink. Its ideology stresses the hope that every alcohol dependent person can achieve happiness as a consequence of total abstinence. Another important goal is the promotion of public awareness of prevention and treatment of alcoholism through campaigns and educational programmes (Kurube, 1992b).

Along with La Croix d'Or, there are other international groups, such as **La Croix Bleue**, a Protestant organization founded in Switzerland at the end of the 19th century, and **Vie Libre**, a more recent lay organization. In France, there are also several associations for former alcohol dependents that were created without a religious background. Many have a corporate basis, such as **Joie et Santé** or **Amitiés**, which are associated with large companies such as the railway and airlines systems or the electricity and gas companies (Mossé, 1992).

The Rotterdam **Junkiebond** was one of the first Dutch Drug User Self-Organizations (DUSOs). Founded in the early 1980s, its members are heroin users who, along with other DUSOs, were in the forefront of prevention prior to the AIDS epidemic. Junkiebond was the first organization to establish a needle distribution programme for preventing the spread of hepatitis B. The group also actively cooperates with research groups.

DUSOs emerged in the Netherlands with direct government support. Churches, professionals and the mass media encourage these organizations. The Amsterdam Medical Service for Heroin Users (MDHG), founded in 1975, is another DUSO that is extremely active in local and national policy developments.

A National Federation of Junkiebonds is based in Lelystad. In a number of other countries, related activities have also been growing. In Germany and Switzerland Junkie Unions and other self-organized groups are flourishing. In Australia a number of anti-AIDS self-help organizations for drug users can be found. In Europe and the USA, DUSOs are gaining wider recognition as preventive tools. Several New York projects have demonstrated that DUSOs can be effective. DUSOs are specific mechanisms for stimulating communities and their patient populations towards a greater responsibility for their own health.

Among active drug users, ex-users and allied organizations there are different specific interests. Thus there are street-oriented Junkiebonds, policy-oriented Junkiebonds, issue-oriented organizations of ex-users and others, political organizations run by non-user community organizers with the participation of users, and agency-run or programme-run projects to put ex-users on the streets to conduct education. In addition,

Dutch Junkiebond prevention literature (e.g. the Rotterdam pamphlet **Junky's Blood**) is widely distributed (Kaplan, 1992).

TREATMENT RESOURCES THAT INCLUDE A MUTUAL-HELP COMPONENT

Some treatment resources for alcohol and drug abuse combine professional intervention with mutual help. In some cases this approach is inspired by the AA philosophy, while in others by a different set of principles.

Patients' Clubs in Eastern Europe

During the late 1940s, some years before the emergence of the first AA groups in many countries, self-help groups were used by medical professionals as part of their treatment and for aftercare. This was customary in European countries such as the Czech Republic, Poland, Slovakia and the former Yugoslavia (Swiatkiewicz, 1992).

The development of self-help activities was interrupted in Poland in the 1950s and 1960s because of political restrictions on non-state activities and prevalent moralistic perceptions of alcoholism. A climate of anti-alcohol attitudes was promoted by the state propaganda and the promulgation of laws that provided for compulsory treatment of alcohol-dependent persons.

During the 1970s, the patients' clubs renewed their development. These Polish clubs were influenced by community psychiatry and by the experience of the self-help clubs for alcohol dependents in former Yugoslavia founded by Dr Hudolin (Lang & Srdar, 1992). The clubs were established in local communities and collaborated with the local commissions for mental health protection in preventive and rehabilitative projects. As a result of the social and political changes in Poland after 1980, the alcohol treatment services were re-examined and new opportunities for the development of self-help organizations were offered.

The first **Polish Abstainers' Club** was founded in 1960 by several alcohol dependents. In 1989, the Federation of Abstainers' Clubs was established, comprising 200 clubs with some 40 000 members, including family members. The federation receives financial support from the health system. The AA groups came more prevalent in the early 1980s and they have received financial help from the government. The clubs are active in prevention activities and they include family members.

Although the Polish Abstainers' Clubs consider their rehabilitation programme as equivalent to that of AA, there are some basic differences. Abstainers' Clubs, called "The Way to Sobriety I, II", is based more on psychosocial and practical principles than the programme of AA. Both movements are equally important nowadays in Poland, and many Abstainers' Club members simultaneously attend AA meeting. Cooperation between the two groups is, however, sometimes problematic due to ideological and practical issues. The future of the two movements is uncertain due to the ongoing shortage of official funds (Swiatkiewicz, 1992; Kurube, 1992b).

In former Yugoslavia there was a nationwide network of several hundred "clubs" initiated by a psychiatrist, Hudolin, and designed to carry out aftercare for alcohol dependent patients. According to Galanter (1990), the ideology of the programme was closely aligned with the country's political orientation at the time he made his observations. The system operated in collaboration with physicians and recovering patients, leading to an apparent enhanced social cohesion and commitment to common ideals, such as the acceptance of the goal of abstinence.

In former Czechoslovakia in the mid-1940s, Dr Skála and Dr Janda were working with alcoholics using a biological therapy (emetine). They realized that it was necessary to work more intensively and longer with patients to avoid relapses. Their work gave birth to the sociotherapeutic club TROTTING (Czech abbreviation for "Clubs of those Striving for Sobriety") at the Apolinar clinic. The club was inspired by AA but acquired its own specific feature, and has been meeting regularly since 1948. The psychiatrists did not want to leave the patients by themselves, preventing "the dangers sometimes encountered in AA, of group disintegration or misleading by psychopathic personalities" (conversation with J. Skála, 1986). Besides, the unified system of health care in the former Czechoslovakia required a medical worker to be in charge of such a group. Cooperation between patients, ex-patients and therapists developed in these club meetings on the premises of the alcohol dependency treatment centre. Dr Skála pointed out that the model has many elements of the therapeutic community and also of behaviour therapy. With the recent sociopolitical changes in the country, the current status of this treatment resource is not known.

Relationship between 12-steps Programmes and Professional Treatment.

The relationship between self-help organizations based on the 12 steps of AA/NA and those based on professional treatment may vary considerably in different countries. In some societies, most professionals (psychiatrists and psychologists) view alcohol and drug problems as a symptom of an underlying mental disturbance. Others accept the disease concept but have been trained to use various pharmacological or psychotherapeutic techniques to treat these problems and they may have limited faith in lay activities. The "spiritual" dimension of the 12-steps programme may not be accepted by many of these professionals. There may, of course, be some feelings of rivalry. Followers of the 12-step programme in some societies may show ambivalent attitudes to professionals. While they view professionals as having prestige and power, many AA/NA members may distrust them because of bad experiences in the past and may feel that professionals do not understand their problem. Some claim they have been incorrectly treated by professionals, when prescribed medicines that possibly worsened their dependence.

In many cases, of course, professionals take 12-step organizations into account as part of the treatment for dependence. In many hospitals, mental health centres or prisons where there are professional programmes for the treatment of alcohol and/or drug problems, AA/NA groups have easy access and frequently hold meetings on the premises. These "institutional groups" often complement the psychiatric or psychological treatment of the patients. Many professionals frequently refer patients to AA/NA groups and work in close collaboration with them. In still other cases, the 12-step programme is an integral part of professional treatment regimes and recovering alcohol or drug dependents are part of the institution's professional staff.

In some countries, especially the USA, there are many of these institutional 12-step treatment programmes. The first attempts to apply the 12-step programme to professional treatment took place in the early 1950s. However, it was during the 1970s and 1980s that this combination became a dominant feature of professional treatment in North America (Mäkela, 1992). In these institutional centres the 12-steps belief is combined with more scientific theories of dependence. The meetings at these centres differ from regular AA/NA meetings. At the institutional meeting, each patient is pressured to speak, there is confrontation to break denial, and counsellors tend to hand out causal explanations and psychological interpretations of patients' behaviour (Cook, 1988a). The disease concept, which in AA/NA is a metaphor for the powerlessness of human beings, becomes at the professional centres a well-defined scientific theory. Treatment centres that use the 12-step programme may be part of a mandatory treatment system in some countries. This may result in many new members being poorly motivated, which contrasts with the AA/NA principle of voluntary participation. At the professional 12-step centres, sponsorship and the 12th-step work are the responsibility of recovered patients who are paid as counsellors. Many members leaving such centres and attending regular AA/NA groups may have a different approach to the programme than the traditional AA/NA newcomers (Mäkela, 1992). One of the main treatment modalities combining the 12-step programme with a professional and institutional approach is the Minnesota Model.

Minnesota Model

The origins of the Minnesota Model (MM) are in the founding in Minneapolis of three treatment centres for alcohol dependence: Pioneer House, Hazelden and Willmar State Hospital (in 1948, 1949 and 1950 respectively). In the first two, non-professional recovered members of AA played an important role on the creation and shaping of the programme format. In Willmar State Hospital, by 1950 the alcohol-dependent patients were removed from the psychiatric wards and a new "inebriate treatment programme" was introduced (Cook, 1988a).

Nowadays there are many MM treatment centres in the USA and other countries. However, it was not until the 1970s that a marked growth was seen in the application of the MM approach in the USA, when state and private insurances started to compensate for treatment of alcohol dependence. The number of private for-profit specialized units for alcohol and drug problems grew from 199 in 1979 to 879 in 1987. In the same period, the number of private nonprofit institutions, including many of the MM type, grew from 2736 to 3693 (Stenius, 1991).

Four key elements can be identified in the MM philosophy: the possibility to change beliefs, attitudes and behaviours of alcohol and drug dependents; the "disease concept" as held by AA, NA and the American Psychiatric Association; treatment goals of abstinence from all mood altering chemicals, improvement of lifestyle and personal growth; and the principles of AA and NA, summarized in the 12-steps, including spiritual awareness, recognition of choice and personal responsibility and the reconstruction of relationships.

There is considerable uniformity in philosophy and practice between different MM facilities around the world. A multidisciplinary approach, the AA programme and the involvement of recovered alcohol or drug dependents as counsellors are the basis of the model. In its simplest form, the MM treatment involves assessment and admission to a residential treatment facility (for 3-6 weeks in the USA or 6-8 weeks in the United Kingdom) and the progression to a halfway house and aftercare that usually includes intensive attendance at AA or NA. In its fuller form, MM comprises a range of facilities to meet the needs of different groups, such as women and teenagers.

There are three levels of intervention practised by many MM centres: health promotion, prevention and treatment. Depending on the type of service needed, there is a first phase where information, diagnosis or referral are provided. The following step may consist of education, external care or detoxification and medical care. This is followed by a primary residential treatment, extended rehabilitation (therapeutic community for more than two months), residential intermediate care (halfway house), outpatient care and aftercare (AA/NA meetings, counselling, individual/group therapy), and an intensive family programme.

The staff is multiprofessional and recovering alcohol and drug dependents play a central role. The therapeutic milieu shares the common attributes of other therapeutic communities: an informal, communal atmosphere; the group meeting having a central place in the therapeutic programme; sharing of work and participatory management and decision-making by staff and residents; and the acceptance of certain basic values and beliefs.

In countries where treatment of alcohol and drug dependence is paid for by public funds or by insurance companies, the MM treatment has been very popular. However, with the economic crisis that has resulted in restrictions on public expenditure, there are doubts about the long-term expansion or even survival of many of these centres without state or medical insurance support. In countries where neither of these resources have been available, such as Mexico, the MM treatment centres are private institutions that treat only clients of upper socioeconomic levels.

Most studies on MM results have been criticized on methodological grounds, but the published figures show that as many as two-thirds of admissions apparently achieved a genuinely good outcome at one year follow-up. The success of the MM treatment approach seems to be related to the value of a "comprehensive" or "multiprofessional" approach to the management of dependence. In particular, the role played by counsellors who are themselves former alcohol or drug dependents is valuable in a therapeutic community approach that utilizes group therapy, the sharing of life histories and supervised peer evaluation (Cook, 1988b). Another important aspect of the MM approach is an examination of the rationale behind every action of the patient.

Therapeutic communities

Therapeutic communities (TCs) dealing with drug problems began in the USA with the foundation of Synanon in the late 1950s in California. The origins of this approach to recovery go back to ancient Greek civilization which strove to provide citizens with a community whose structure, support and challenges allowed individuals to be a part of something greater than themselves, thereby enabling them to expand their sense of personal meaning. An early Christian mystical sect is reported to have practised rituals of public confession (Glaser, 1981; Heit, 1991).

In this century, the Oxford groups movement has included similar practices in its meetings. Maxwell Jones and colleagues have incorporated these ideas into their work in mental institutions, using a democratic therapeutic group process with the patients.

While it is acknowledged in the United Kingdom that the psychiatric therapeutic community have influenced the treatment methods of TCs, no such influence has affected the initial development of TCs in the USA. Alcoholics Anonymous is the immediate antecedent of Synanon and the other early American TCs. Both these TC models have an existential view of recovery and employ the self-help group process to achieve it (Rosenthal, 1989). The theory underlying this approach is based on the view of narcotic dependence as symptomatic of an underlying character disorder. This defect results from inadequate socialization, and the individual typically reacts to stress by the use of drugs.

There is an important conceptual difference between treatment resources practising the 12-steps philosophy and those employing the traditional TC model. For the 12-step programme, dependence is a "primary disease", a mental, physical and spiritual illness. The TC approach, however, views dependence as secondary to personal and social problems.

Synanon

In 1957, Charles Dederich, the founder of Synanon, was deeply involved in AA in California, devoting much of his time to helping alcohol dependents and working and living in a 12-steps house. However, he was strongly influenced by Emerson's ***Self-Reliance*** and began to distance himself from AA meetings because of "the religious overtones of the meetings and the lack of the utilization of thoughts of anthropology, psychology, philosophy and sociology". He began to hold meetings with other alcohol dependents in his own apartment and started to experiment with different forms of group therapy. This evolved into a more directive type of discussion with strong cross-examination under his leadership and control. This approach gradually developed into the **Synanon** method (Room & Mäkela, 1993).

By 1958, the first drug dependents had started to come to Dederich's meetings, which were soon moved to an empty store that became a clubhouse. Many of the dependents began to drift away, feeling that the newly-established Synanon Foundation was moving further and further away from AA principles.

At the beginning, Dederich tried to develop a residential programme for both drug and alcohol dependents. Eventually it focused on drug abusers, especially heroin dependents. The initial aim of the Synanon programme was to rehabilitate the dependent and discharge him after a two-year period. Unfortunately, by the mid-1960s, it had become clear that many of Synanon's graduates were drifting back into drug use. As a result, Synanon's leaders concluded that society at large was a dangerous and pathological milieu. Thereafter, they promised the dependent person a rewarding life free of drugs only as long as he remained part of the Synanon organization (Antze, 1976; Glaser, 1971).

Synanon thus became a way of life in itself rather than a means of re-entering society at large. The policy on funding was to avoid the use of public resources. It was felt that public funds would inevitably mean public control, so Synanon charged an admission fee.

Synanon's ideology is practised through two separate fields of action: "The Floor" and "The Game". The Floor refers to everyday life among members, with its rigid and detailed set of standards for attitudes and behaviour. The Game is the heart of Synanon's programme, a daily exercise lasting three or four hours and involving some 12 players seated in circle. Short of physical violence, players may say or do anything they wished. It consists, in practice, of a series of "indictments" directed against each player until he/she "breaks" either by crying or by exploding in anger. The Game allows individuals to express and share fears, resentments and misdeeds with the group. It represents a device for purging feelings and for generating a cathartic experience on a routine basis. It has become, over time, a learning experience and a form of cognitive conditioning. It serves as a way to teach the origin of interpersonal tensions and the constructive development of emotional bonds along with feeling of new closeness with fellow players.

However, Synanon became a violent cult responding to Dederich's every whim. The latest incarnation of Synanon is the De Lancey Street Foundation in San Francisco, a self-help residential education centre for former substance abusers and ex-convicts (Hurvitz, 1976).

In the meantime, the TC movement took root, adopting many of Synanon's original methods. The first American TCs shared three common elements: there were no staff, there were no licences or standards to be met, and there was no funding or other financial concerns (Heit, 1991). These early TCs evolved almost independently of medical and psychiatric mainstreams. The fact that they were outsiders gave them the freedom to discover innovative methods. It allowed them to form communities that provided long-term personal involvement with residents in an environment that promoted learning, change and spiritual growth.

Today there are few TCs that still have these early attributes since most are now professional organizations. They have a large number of staff and all the legal, bureaucratic and resource development machinery that this involves. They have many standards for individual credentialing and several levels of regulatory oversight. There is also more concern and funding.

As many as 500 second and third generation TCs had appeared in the USA by 1982, founded by former TC residents and employing variations of the treatment approach. Programmes such as Daytop Village, Gateway Foundation, Samaritan Village and Phoenix House do generally conform to the traditional TC approach, although they have substantially modified many original TC practices.

The basic TC model

The therapeutic community considers substance abuse a disorder of the whole person affecting some or all areas of functioning. Cognitive and behavioural problems appear, as do mood disturbances; thinking may be unrealistic or disorganized and values are confused, antisocial or nonexistent. In the TC's view of recovery, the aim of rehabilitation is global. The primary psychological goal is to change the negative

patterns of behaviour, thinking and feeling that predispose to drug use. The main social goal is to develop a responsible drug-free lifestyle (Glaser, 1971; Therapeutic Communities of America, 1993).

Individuals admitted to TCs encounter a highly structured environment which stresses honesty, trust and self-help. In addition to daily group counselling, seminars and individual activities, all clients are assigned house responsibilities. These chores serve to teach the residents basic cooperation, responsibility, respect and discipline.

Among the elements that serve as common threads in TCs today are a structured hierarchy, or a programme that sets firm and consistent limits; a reward system with increased privileges and responsibilities as people begin to control their behaviour, a social learning and role-modeling process with positive peer pressure, the development and maintenance of positive values, stressing the benefits of a drug-free and non-violent life and the healing power of the community where the TC forms a loving family (Rosenthal, 1991).

Structurally, the TC model is a 24 hour-a-day residential programme with a primary treatment staff most often composed of trained ex-abusers. Although traditional programmes usually consider the optimal length of treatment to be at least 15 months, this is no longer practised by most TCs. Some programmes may involve residential care for a few weeks, followed by a year or more of outpatient treatment. Nevertheless, long-term residential care seems to be more successful in helping drug users.

Clients enter the TC voluntarily, although this decision is generally made under some form of pressure from families, employers or the law. Factors such as communal nurturing, empathic understanding, control of personal behaviour, self-disclosure and a shared common code of conduct and belief system are apparent keys to their success (Rosenthal, 1989).

The TC model can be found in its standard and other versions. There are, for instance, TCs with a strong medical influence where the intervention includes detoxification and the use of antabuse or methadone. Psychiatric and psychological evaluations are important in this type of programme, although a variety of therapeutic group processes provide the major treatment intervention (Spiegel & Sells, 1974). Although medical and social service professionals play an important role in these TCs, former drug dependents are still used as counsellors and group leaders. The residential phase of recovery is shorter than in other non-medical TCs, as they offer an outpatient support programme.

There are other TCs in which chemicals are used only during detoxification. Their programme is similar to that of standard TCs but they differ in that there is no emphasis on a hierarchical structure and the guiding philosophy implies belief in positive reinforcement rather than in punitive measures. However, discipline is strict and residents have many prescribed activities. Staff may include mental health professionals as well as recovered drug dependents.

Due to the illegal nature of many drug-related activities rehabilitation of convicted drug abusers is an important application of the TC model. There are programmes for criminals on probation and also for inmates within the jails.

Most TCs include a family programme and many also have special programmes for women, adolescents, HIV-positive persons or other special population groups. Many TCs offer training programmes in counselling, vocational guidance, education and work and some are involved in community prevention programmes.

Other countries have adopted the American TC model with some variations. There are many TCs for drug problems in non-anglophone countries such as Italy and Brazil. A French TC known as **The Patriarch** was

created in 1972 and currently has centres in many countries where young drug dependents are expected to stay an average of three years.

COMMENTS

Mutual-help groups for alcohol and drug abusers have been in existence for several decades. Recently researchers and health professionals have shown a growing interest in the mutual-help phenomenon. There are several important reasons for understanding these self-help organizations better: the increase in alcohol and drug abuse in many societies; the growth, diversification and impact of the mutual-help phenomenon; and the need to find more effective available resources for recovery. The increasing cost of public health services and the limitation of funds have also promoted interest in self-help activities. There is a trend towards increasing the responsibility of health care in small communities and individuals.

Mutual-help groups may be seen as social inventions practising a kind of psychotherapy that, in most cases, has its origins in a religious tradition and secular democratic philosophy.

Self-help movements such as AA, are viewed by Room (1993) as an essentially modern phenomenon, both in ideology and practice. On the one hand, AA attacks individualism at the same time it stresses the importance of individual will, thought and action. In the context of developed societies, AA can be seen as a corrective to the culture of individualism or egoistic pride, while in other societies it may actually further the introduction of individual thought and action.

Mutual-help groups have often played an important role in determining policies concerning problems of alcohol and drugs. The current popularity of literature inspired by the 12 steps is one indication of the impact of these beliefs around the world.

In terms of health policies on the treatment of alcohol and drug dependence, self-help groups should not exclude the responsibility for providing health care services. Unfortunately, there is always the danger that this approach may be used simply because it does not cost anything and not because they may be effective.

Professionals have long been involved with self-help groups and are valuable because of their resources and technical advice so they should not be excluded. However, there are various potential dangers with this collaboration. Professionals may try to control the self-help activities instead of understanding the group's philosophy and dynamics. Another danger is that one may try to formalize or institutionalize these groups, which could mean their destruction.

The adoption of self-help in professional settings has many advantages but it is not a resource available in many regions, due to cost and prevalent attitudes among professionals. In many countries, non-residential self-help groups may be the only lasting resource for the recovery of alcohol and drug dependent persons. Nevertheless, professional involvement is important, especially in cases of dual diagnosis. People with psychiatric disorders in addition to dependence may face many problems when attending only non-residential self-help groups. In many cases, the group may discourage the search for professional help, believing that its programme is sufficient to deal with the problem and that the disorder can be controlled as recovery progresses. In cases of serious mental illness this can be very dangerous. Psychiatric disorders are more prevalent among alcohol and drug abusers than among the general population and many psychiatric patients are chemically dependent.

An advantage of mutual-help groups is that they offer their members a life-long network of peer support to help avoid relapses and improve their lives. This cannot be provided by professional treatment. Not all

dependent persons can join such groups, often because the mutual-help phenomenon is not yet as diverse as in the USA. Consequently, people who have difficulty with the spiritual aspect of the 12-step programme may face difficulties if there are no other mutual-help groups available.

Nowadays self-help groups are an important feature of society and the treatment milieu. There is every reason to believe that the phenomenon of mutual-help groups for alcohol and drug dependents will continue to grow, due mostly to their capacity to adapt to different societies and different cultures.

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VIII. THE ROLE OF TRADITIONAL HEALING IN THE MANAGEMENT OF SUBSTANCE ABUSE

DEFINITION AND DELIMITATION

The term "traditional healing" as used here refers to non-orthodox therapeutic practices based on indigenous cultural traditions which operate outside official health care systems. Although often validated by experience, these practices are not founded on a positivist system of logico-experimental science.

"Alternative therapies" which are demonstrably offshoots of Western school medicine, or are idiosyncratic interpretations or oppositional variations thereof (e.g., homoeopathy, naturopathy, etc.) are not included here as they do not fulfil the definition of traditional healing. Acupuncture, although derived from Chinese traditional medicine, is now practised on a global scale and used in the treatment of substance abuse, and therefore will not be included either.

What is included in the present chapter are therapeutic ventures based on Islamic, Buddhist and Hinduist religious traditions, syncretistic amalgamations of traditional non-Western indigenous practices with Christian faith healing, and Western-inspired mutual aid groups that have been reinterpreted and repatterned according to non-Western cultural traditions making them essentially different culture-specific approaches.

CONCEPTS OF TRADITIONAL HEALING

Some important general concepts of traditional and folk healing can be extracted from the above approaches to substance abuse. The following are operational in many traditonal practices and of relevance to the therapeutic and preventive management of substance abuse.

Suggestive and symbolic ritual

Traditional therapy is usually conducted in the context of a ceremony composed of several ritual-symbolic procedures involving the use of culturally validated sacred or arcane symbols by traditional practioners. These include incantations and invocations, recitations of story, parable and simile, as well as skillful manipulation of images and objects. The audience often participate in the therapeutic ceremonies along with the clients. Implicit and explicit suggestion based on collective beliefs is operant in the ritual-symbolic procedures of treatment and prevention and serves the therapeutic goal. The effects of suggestion are intensified through the relatively common utilization of altered states of consciousness in traditional therapies.

Purification

Various procedures are followed as purifying measures to eliminate the addictive and "polluting" substances, some going so far as to be a general cleansing of body and mind. The cleansing is brought

about by herbal emetics and laxatives, intake of holy or healthy fluids, ablutions, washings, dousings, sweat baths, steam baths, fumigation with incense or smoke, brushing with twigs and rubbing with oils. These procedures have hydrotherapeutic, physiotherapeutic and suggestive-symbolic aspects.

Confession, pledge and sacrifice

The admission of harmful behaviour associated with substance use as a transgression against divine rules, or as the neglect of obligations to kinspeople or community members, is combined with a solemn pledge or sacred vow before the healer and audience. The patient promises to correct his or her behaviour and the pledge is usually associated with the commitment to make a personal sacrifice for rehabilitation and/or compensation. These actions, intended to appease and reconcile supernatural agencies and/or significant others, have the marked effect of alleviating anxiety and relieving the patient's guilt. They may also lead to re-acceptance by kin and community.

Catharsis

In a culture-congenial situation that facilitates psychodramatic abreaction, affective release may be achieved through a catharsis triggered by adequate sensory stimulation, or in an altered state of consciousness induced by psychological, physiological or phytochemical means. Therapeutic effects are increased through the experience of empathy shown by an understanding and accepting audience of kin and community members.

GEOGRAPHICAL OVERVIEW

Buddhist treatment centres in Thailand

Detoxification and rehabilitation treatment for substance dependence is performed at five Buddhist monasteries in Thailand. At four of these the focus is on opiate dependence although cannabis, solvent and *kratom (Mitragyna speciosa)* addicts are also admitted. At the fifth monastery of Wat Ta Shee, the majority of the clientele are alcoholics. The duration of obligatory inpatient treatment is short, ranging from a few days to a few weeks depending on the centre, but patients are invited to stay longer. Some actually join the monastic community and become co-therapists.

Each centre has its own procedures but common principles can be defined. The treatment requires total commitment; it utilizes the culture-congenial death and rebirth myth and the symbolism of religious initiation. For example the patient can take a solemn public vow to abstain forever, or may participate in a mock funeral of his former self to shed the vestiges of his evil addict personality.

In most centres mixtures of various herbal medicines (not identified) are orally administered in the initial treatment phase, with the stated purpose of eliminating chemical and spiritual pollution. At Wat Tam Krabok the patient has to go through a nauseating ordeal in a group therapeutic setting reminiscent of Pavlovian deconditioning, although the addictive drug is only spoken of and not taken. The herbal medicine, said to consist of "100 plant ingredients", is administered daily for five days with copious

amounts of water. The mixture has a strong emetic effect which is intensified by the visual, auditory and olfactory stimulus of collective retching and vomiting, accompanied by the loud rhythmic drumming of already detoxified peers and by the exhortations of the monk-therapists. The herbal medicines used at Wat Pa Pang, Wat Tam Talu and Wat Ta Shee induce a brief period of semi-comatose sleep or unconsciousness followed by a delirium-like state which may counteract physical withdrawal symptoms. The effects of the herbal treatment - physical exhaustion after prolonged vomiting and loss of consciousness - emphasize the death-rebirth symbolism, suggesting to the patient the start of a new life.

This intensive and dramatic treatment is followed by a period of recuperation, assisted by physiotherapeutic measures such as herbal steam baths. During the rest and recreation phase religious teaching and therapeutic counselling is intensified. Although mainly conducted in groups, individual therapy is available, with rehabilitated addicts playing an important role in both. There is also the opportunity for musical and other entertainment. At some centres it is possible to help in temple and facility construction or religious artwork as a kind of voluntary ergotherapy. The treatment is free, Thai temple communities relying on donations from the pious. The substistence contribution is minimal and may be waived. Maintaining contact with family is encouraged and family members are accommodated in some centres.

Extent of utilization: On the basis of previously published figures it has been estimated that the number of patients treated at Wat Tam Krabok since 1960 runs to the tens of thousands, and several thousand others must have been treated at the other centres that started in the 1970s.

Acceptability: Patients come from Thailand and other countries of South and South-East Asia. A few Westerners can always be found among clientele and monk-therapists. In spite of the initial treatment ordeal, the clients' dignity is always safeguarded and there is no stigma attached to having been a drug addict since many of the therapists share the same experience. The larger community participates in funding through donation, sponsorship and volunteer activity. The work of the Buddhist treatment centres is recognised by government authorities such as the Narcotics Control Board, which has led to some grant support. The centres have had positive publicity in national and international media, particularly Wat Tam Krabok. The attitude of the official health care system appears favourable and Thai experts on drug addiction treatment remain open-minded towards this approach.

Efficacy: Enquiries on long-term results are made by the centres and results are stated in round figures such as "70% success, 25% relapse" without specifying time limits. Scientific follow-up studies conducted in the late 1970s by the Drug Dependence Research Centre, Institute of Health Research, at Chulalongkorn University, indicated that the rate of success as measured in six-months post-discharge abstinence rates was not inferior to that achieved by modern drug dependence treatment in medical institutions (Poshyachina 1980, 1982, 1985). Westermeyer reached a similar conclusion (1979, 1980) in 1972/73 while observing treatment outcome in Laotian narcotic addicts treated at Wat Tam Krabok. He compared results with those attained in an official drug treatment programme in Laos. In terms of public cost-effectiveness the Buddhist centres are admittedly far superior to official treatment programmes. In terms of safety for the patient there may be some concern regarding the possible toxic effects of the unknown herbal agents which induce emesis that can result in collapse or impairment/loss of consciousness. A higher mortality rate than in medical facilities was reported among aged opium addicts in the past but the number of admissions of such patients

has been steadily decreasing. (Jilek, unpubl.notes; Jilek-Aall & Jilek, 1985; Poshyachinda, 1980, 1982, 1985; Tam Krabok Monastery, date undertermined; Westermeyer, 1979, 1980.)

Traditional healing in Laos

Opium addicts are treated by Buddhist monks in religious and quasi-religious settings, often after taking a solemn vow to abstain. Withdrawal symptoms are treated by massage, induced sweating, special diet and herbal remedies, some of which have sedative effects. Addicts may stay at a temple for individually determined periods, to receive counselling and participate in religious ceremonies. Doctors specializing in herbal treatments who operate outside religious settings also treat opium addicts and may add decreasing doses of opium or alcohol to the herbal remedies they administer during the withdrawal period. Massage, acupuncture and other techniques are also used.

Acceptability: Due to the traditional therapeutic role and high prestige of the Buddhist clergy, treatment in religious settings is very well accepted by the community and by motivated addicts. Government attitude toward the Buddhist clergy is tolerant and sympathetic in general, extending to their healing activities as well. (Sources: Jilek, unpubl.notes; Westermeyer 1973, 1982).

Hmong Shamanic rituals integrated in modern treatment programmes

Shamanic rituals, traditionally used in Laotian Hmong villages to free opium addicts from their dependence, have been integrated into a modern opium detoxification and rehabilitation programme for drug addicts in a hill-tribes refugee camp in northern Thailand by the International Rescue Committee, in consultation with the author.

Hmong Shamans iniate new patient groups through a ceremony meant to entice the opium goddess to leave the addicts for a new residence in a miniature palace built and symbolically provisioned for her needs. Addicts surrender opium smoking utensils and choice specimens are put in the miniature palace. The addicts take a sacred vow in front of the palace to never use drugs again, while the senior shaman invokes supernatural powers for confirmation.

The patient group is exorcised, united by a rope tied to a sacrifed pig which serves as spirit messenger. The officiating shaman symbolically travels to the other world to free the addicts' souls from their captivity in the power of the opium spirits. Finally the new abode of the opium goddess and the surrendered opium utensils are burnt in a big bonfire. As the smoke rises, it is declared that the opium goddess has definitely left the addicts and returned to the other world with the opium items. The ceremonial is concluded by a communal meal shared by patients, shamans and staff. Throughout the three remaining weeks of inpatient treatment the shamans continue to render spiritual support to clientele of the International Rescue Committee detoxification centre.

Acceptability: Although participation in the shamanic rituals is absolutely voluntary, most patients do take part. The ceremonial appeals to the great majority of hill-tribes refugees of various ethnic groups more than the unadapted medical programmes or those with Christian religious influences. However, even christian

hill-tribe patients participate in the ceremony. Catholic religious functionaries have been both tolerant and supportive.

Efficacy: The main effectiveness of this shamanic input is in motivating hill-tribe addicts to remain compliant and cooperative within the modern therapeutic programme. In marked contrast to the previous experience of having many patients drop out while under treatment, the new programme with shamanic input achieved unexpectedly high treatment course completion rates of 80% to 90% and a significantly increased half-year abstinence rate of around 70% in 1988/89 (Jilek, unpubl.notes & videos; Jilek, 1990).

Traditional treatment in Malaysia

Traditional treatment of substance dependence (mostly opiate addiction, but also alcohol abuse) is performed by Malay traditional therapists, Chinese-Taoist practitioners and Hinduist-Ayurvedic healers. In spite of the religious orientation of these practitioners, the clientele is not limited to co-religionists. Adaptations of ritual procedures may be made in a remarkably tolerant manner to accommodate patients of other religious persuasion. In recent years treatment centres based on Malay-Islamic and on Chinese-Taoist traditions that specialize in the detoxification and rehabilitation of substance dependent patients have become operational. These centres treat groups of clients in inpatient programmes of one to several weeks' duration that are more standardized than the widely varying approaches of practitioners who operate individually.

Acceptability: Traditional treatment approaches to substance dependence appear well accepted by motivated addicts and by the community in Malaysia; Government Health authorities hold a generally supportive attitude towards them. Surveys have shown that traditional resources are extensively used for the management of substance abuse problems and are often turned to first (Sources: Heggenhougen, 1984; Heggenhougen & Navaratnam, 1979; Jilek, unpubl.notes; Johnson, 1983; Lee, 1985; McGovern, 1982; Spencer, Heggenhougen & Navaratnam, 1980; Teo Hui Khian, 1983; Werner, 1979).

Treatment based on Malay Islamic traditions

In spite of the considerable variety of procedures available, most treatments based on Malay Islamic traditions follow the general principle of initial internal purgation and external cleaning from chemical and spiritual pollution, combined with the sedative alleviation of withdrawal symptoms and followed by spiritual-didactic counselling. Internal purgation of the drug-poison is the proclaimed purpose of inducing emesis and/or diuresis and bowel movements through herbal medicine, salt water and pushing fluids. Water treated by religious and magical ritual, e.g., mixed with the ashes of holy scriptures, is often used. External cleaning is part of an exorcistic ritual of highly suggestive symbolism intended to release the addict from drug-bondage which is commonly viewed as evil spirit possession or the effect of black magic wrought by drug manufacturers or dealers.

As a result of such exorcistic procedures the addict feels released from the burden of guilt and therefore free to resume a healthy lifestyle under the guidance of spiritual-religious counselling. The techniques employed include body writing with Islamic verse, magic or Hindu symbols according to the client's religion; rubbing with ashes of sacred items; face washing and cooling baths in water which has either been blessed and

scented with roses or other flowers, or in water with lemon or lime juice added. The latter has physiologic as well as psychologic effects and usually terminates the intensive treatment phase.

Religious-magical formulae accompany the ritual acts. The patient may enter an altered state of consciousness by repetitious chanting of the divine appelation and thereby become especially receptive to preventive didactic counselling. A sacred oath or other religiously buttressed commitment concludes the treatment, encouraging the client to abstain from taking substances, to embrace a healthy lifestyle and to avoid the company of drug users. Clients are frequently fortified against relapse through protective charms or talismans.

The following are among the herbal remedies administered as medicinal teas: (with antiphlogistic action) *Limacea oblongata, Erythrina subumbrans, Gomphandra*; (with diuretic action) *Moringa olifera*, leaves of white hibiscus; (with purgative action) *Cassia alata*; (with sedative action) *Mimosa pudica, Acanthus ebracteatus;* (with tonic action) *Aquilaria malaccensis*; (with antispasmodic-anticolic action) Mesua ferrea, *Randia, Turmeric, Zingiber officinale.*

Efficacy: Experimental pharmacological studies at the Universiti Sains Malaysia have shown that certain herbal medicines administered in traditional treatment of opiate addicts have the effect of suppressing withdrawal symptoms in mice and a similar effect in humans appears likely. One follow-up investigation of addicts treated by Malay traditional methods was conducted under strict scientific criteria (rating non-traceable patients as therapy failures) and found one-year post-therapy abstinence rates ranging from 8% to 35% in the total clientele of five different healers (Spencer et al., 1980).

Chinese medicine and Taoist traditions

Chinese practitioners use herbal remedies according to yin-yang principles and magical rituals founded in Taoist tradition in Malaysia. The intended objectives and some of the methods used in traditional Chinese drug dependence treatment are similar to those employed in Malay Islamic therapy. Sometimes there is initial purgation of the body from the drug-poison by inducing vomiting, diuresis and defecation. There is always sedation and often sleep-induction by herbal medicines. This is followed by baths, usually in flavoured or spiced rainwater which is often magically treated to counteract the addiction-provoking supernatural forces generally assumed to have been instilled in the drugs by the manufacturers.

Chinese herbal remedies, such as the "anti-opium leaf" *Combretium sundaicum*, have traditionally been used to alleviate withdrawal symptoms in opium addicts (McBride, 1910). Today the main tradition-derived therapy of drug addiction among Chinese populations anywhere consists of acupuncture, often combined with physiotherapy, especially acupressure massage, and sometimes also with the administration of herbal remedies. Extracts of mixed herbs such as qiang huo, gou teng, chuan xion, fu zi and yan hu suo are commonly used, and seemed to have a suppressive effect on the morphine withdrawal syndrome in addicted laboratory rats in experiments conducted at the University of Hong Kong (Yang & Kwok, 1986). Encouraged by the example of Chinese traditional medicine, administration of herbal tea blends and other plant remedies and nutrients is today incorporated in many drug treatment programmes of the industrialized world and is said to be highly beneficial (Nebelkopf, 1987).

Treatments derived from Hinduist traditions

Hindu healers often go into a trance to contact spirits and divine entities and to perform ritual acts of symbolic connotation.

Ayurveda

In the treatment of substance dependence, herbal remedies are prescribed to counteract withdrawal symptoms and provide relaxation, usually in combination with soothing lime or lemon water baths, in accordance with the rules of Ayurvedic medicine. Ayurvedic medicine is considered an official, indigenous health care system in India and Nepal. Drug dependence treatment based on Ayurvedic and other Hinduist traditions enjoys the same government support in Malaysia as do treatments based on Islamic or Chinese traditions. Acceptance and cross-utilization of traditional therapies by adherents of other religions is common in Malaysia and the Indian subcontinent.

There is reference in the classical texts of Ayurveda to a precursor of the severe mental disorder which is brought on by alcohol abuse but a specific treatment is not mentioned. Somatic consequences of chronic alcohol abuse such as gastro-intestinal and hepatic complications were described by C'araka (1st century AD) who recommended herbal remedies with thirst-reducing, appetite-enhancing, generally roborant, digestion-stimulating, muscle-relaxing and tranquilizing properties. These are still used today in the Ayurvedic treatment of alcohol abuse and are administered orally in the form of an asavam, a weak (1-2%) alcoholic preparation of mixed herbal remedies obtained by fermentation of an aqueous solution with added sugar-containing nutrients.

Scientific evaluation: "SKV", an Ayurvedic formula employed to curb alcohol abuse, is a fermentation of cane sugar, raisins and a solution of 12 identified herbal ingredients. The University of Madras tested it for effectiveness in controlling ethanol addiction and reversing ethanol-induced pathological changes in rats (Shanmugasundaram et al., 1986a, 1986b) and observed a marked reduction in ethanol intake, attributed to a constraint on the craving for alcohol. Other findings included an increase in food intake, reversal of ethanol-induced ECG and EEG abnormalities, and reduction of the elevated gamma-GT values indicative of alcoholic liver damage. The hepatic and cerebral lesions seen in ethanol-addicted rats were not apparent in alcoholic rats treated by "SKV", which also had no adverse effect on the test animals.

In Malaysia, Hinduist-derived therapies focusing on the treatment of drug addictions appear to be more common than in India and have been well documented in the above-cited literature.

Yoga

Yoga techniques are commonly employed for the physical and spiritual strengthening of the recovering client during and after traditional detoxification. Yoga therapy has a crucial role in the rehabilitation of drug dependent patients at the Nav-Chetna Drug De-addiction and Rehabilitation Centre, Varanasi, India, which provides a package of systematic yoga exercises in the pre-and post-detoxification phases (Sharma & Shukla, 1988). The exercises relating to body postures, breathing and "purification" appear especially suited to counteract withdrawal symptoms. A pre-detoxification yoga programme was developed which

reduced drug craving and engendered positive attitudinal changes so that addicts were motivated. In the post-detoxification period, yoga furthered the process of physical recovery and psychosocial reintegration (no statistics given).

Transcendental meditation

Transcendental meditation originated in ancient Vedic traditions of India but has in recent decades spread around the globe. Western countries are using it more and more in the management and prevention of drug dependence and therefore it has lost much of its traditional Hinduist connotation.

Transcendental meditation organizations and teachers are to be found in over 100 countries and in many places special programmes have been designed to combat drug abuse (Clements et al., 1988). These programmes operate largely outside the official health care system. The transcendental meditation technique is said to be acquired by most adepts in four to five instructional sessions and then is practised by the individual twice a day for periods of 15 to 20 minutes, without further supervision, counselling or advice.

Transcendental meditation is offered as a programme for personal development and not as a specific treatment of substance dependence. It may therefore be more acceptable to those young people who basically condone drug use. It is claimed that alleviation of drug abuse occurs as an "automatic side effect" in the context of overall personality development under transcendental meditation, irrespective of reasons given for substance use or of the particular substance used.

Evaluation: One questionnaire study conducted in the USA in 1972 (Benson & Wallace, 1984) of 1862 young people, practising transcendental meditation, resulted in the majority of subjects who had been using cannabis, hallucinogens, narcotics, amphetamines, barbiturates, and/or high-percentage alcohol prior to starting the transcendental meditation programme showed a significant change in attitude. Proof lay in the decrease in the amount of substance use, or the discontinuance of drug use, decrease or cessation of drug traficking activity, and discouraging others from abusing drugs. A recent review of research studies states that the transcendental meditation programme is associated with significant decreases in the use of a variety of substances (Clements et al., 1988).

Altered states of consciousness

In Hinduist rituals, worshippers of Lord Murugan undergo the piercing of their bodies with miniature spears and with hooks to help them carry sacred objects or pull religious vehicles during the Hindu thaipusam festival celebrated annually in Hindu communities of Malaysia, and to a lesser extent in South India. They take sacred vows of total and ongoing abstinence from alcohol and drug use in continuation of the obligatory period of fasting and abstinence prior to the celebrations. These vows are made in hope of some act of divine mercy and carry supernatural sanction since they are associated with an intense experience of ecstatic trance which affords the supplicant relative analgesia.

Therapeutic approaches based on Japanese buddhist traditions

Danshukai

While Alcoholics Anonymous in Japan, as in most of Asia, has only a limited appeal and mainly consists of westernized persons and expatriates, the **Danshukai** Alcohol Abstinence Society, founded in 1958, has been a notable success. By 1977 the society had 25,000 members attending meetings, the majority abstinent for more than one year. Based on traditional Japanese values, Danshukai encourages positive dependence and reliance on family members. It invites the active cooperation of spouses and children in attending meetings, so the effort to overcome alcohol abuse is a family effort. Unlike AA, Danshukai is not anonymous. Names and addresses of members are not confidential and outside persons, including non-alcoholics, are welcome to join meetings and talk freely in the group. It may be noted here that Danshukai has these features in common with the culture-congenial North American Indian AA groups described below. (Suwaki, 1979, 1980; Takemoto et al., 1979)

Naikan

Naikan "self-observation" therapy is derived from the mishirabe self-examination practice of Shinshu Buddhism. It utilizes the self-disciplinary tendencies in Japanese culture and the repetitive ritual methods of Zen training to achieve concentrated and critical self-observation. It focuses on solitary meditation of a specific theme, namely the client's past and present relationship with a significant family member, beginning with the mother, under the guidance of a therapist who poses relevant questions at regular intervals but is not present all the time. Naikan aims at a critical self-assessment of the alcoholic's past conduct, the recognition of dishonoured obligations toward significant other persons, and instills a feeling of shame together with the motivation to further abstain. A new appreciation for the love of family is promoted and its cooperative support is emphasized. Naikan therapy courses of all-day concentrated self-scrutiny for one week are mainly practised in institutional settings, followed by shorter daily sessions and post-discharge involvement in the Danshukai movement.

Evaluation: One follow-up study of 129 alcoholics treated by Naikan therapy elicited that 53% were totally abstinent six months after discharge and 49% were abstinent after one yearc (Suwaki, 1979, 1980; Takemoto et al., 1979)

Therapeutic approaches based on Arab Islamic traditions

The integration of Islamic spiritual approaches in the therapy of drug addiction has been pioneered in Egypt (Baasher & Abu El Azayem, 1980; Abu El Azayem, 1987) and Saudi Arabia (Al Radi, 1990).

In 1977 a treatment unit for drug addicts was established at the Abu El Azayem Mosque in Cairo, in which the religious leader assumed special functions in the therapeutic team by holding group meetings, providing religious teaching with emphasis on Islamic injunctions regarding dependence-producing substance use, strengthening social ties and encouraging mosque-centred activities, counselling on personal matters and organizing social support. Propagation of anti-drug messages through religious media and during Friday mass prayers served preventive purposes and promoted the rehabilitation of drug addicts in the community.

Evaluation: In subsequent years, both the number of new cases reporting to the mosque clinic and the compliance rate was found to be significantly higher than at other city clinics without a religious component, while treatment at the mosque clinic was also more cost-effective. A comparative double-blind study showed that substance addicts treated at the mosque clinic realized a significantly higher number of therapeutic objectives than equivalent clients at a "normal" clinic (Abu El Azayem, 1987).

According to information provided by WHO/EMRO, spiritual counselling based on Islamic traditions is currently (1991) provided in several mosques in Cairo where drug addicts, after chemical detoxification, are helped by religious leaders to manage their guilt and return to a healthy lifestyle.

In Saudi Arabia, the addiction unit at Shahar Hospital, Taif, has for several years now integrated a programme of religious therapy in which the mosque is the centre of therapeutic activity. Behavioural changes are engendered in group therapy following prayer sessions with joint worship and recitation of the holy scriptures.

Evaluation: The importance of fostering a religious motivation rather than other motivations for attaining abstinence in Saudi drug addicts was shown in a follow-up study. The comparison of relapse rates in patients of the Shahar Hospital Addiction Unit showed that 75% of probands with "inner religious considerations" maintained abstinence over two years, as compared to 33% of probands motivated by other considerations (Al Radi, 1990).

Alaska Eskimo spirit movement

The Inupiaq Ilitqsat or Eskimo Spirit Movement was initiated in the early 1980s by the Northwest Alaska Native Association is response to the increasing rates of alcohol abuse and related psychosocial problems facing Alaskan native communities. There was the feeling that Eskimos were losing control of their lives by leaving the responsibility for solving these problems to outside agencies. The movement is based on traditional Eskimo values that include sharing, caring for others, responsibility for one's own people, knowledge of language and customs, pride in one's cultural heritage, respect for the elders and their inclusion in family life. The main rehabilitative and preventive instrument of the Eskimo Spirit Movement is the "Spirit Camp" which provides a cultural learning and therapy experience for young Eskimos involved in substance abuse, as well as those at risk. Without modern conveniences, young people in the Spirit Camp acquire knowledge of Eskimo heritage and traditional survival skills from the elders and thus regain their lost cultural identity. Traditional methods of healing employed in the rehabilitation programme include body manipulation and massage, hydrotherapy, herbal remedies and group rituals.

Acceptability and public support: The Eskimo Spirit Movement has the active support of the new Commissioner for Health of the State of Alaska (himself an Eskimo) who encourages the close collaboration of health and social service officers and professionals with indigenous therapeutic and preventive resources. The commissioner has likened the impact of the Eskimo Spirit Movement on indigenous alcoholism problems to that of Alcoholics Anonymous in western societies. The Eskimo Spirit Movement is widely popular among native leaders in Northwest Alaska since it provides a culture-congenial approach to the substance abuse issue by addressing a need for positive cultural identification and

meaningful activity among the young. The Eskimo Spirit Movement is an inspiring example to Inupiaq and Inuit (Eskimo) representatives all parts of the Arctic (Jilek, unpubl.notes; Mala, 1985a, 1985b.).

North American Indian AA style groups

Western-type Alcoholics Anonymous has in general not been successful among North American Indian populations for many reasons (Heath, 1983). However, where North American Indian alcoholics have been inspired by western AA to organize self-help groups which incorporate important indigenous culture elements and omit certain western features of philosophy and practice, such transformed AA style groups in British Columbia and Nevada have been quite successful in attracting and rehabilitating alcohol-abusing persons among native populations.

Amerindian AA-style groups first came into being among the Coast Salish Indians in the 1960s and developed certain features. The concept of anonymity was rejected in favour of the open identification of participants and open meetings to which family members, including children, were invited. Western-type formality in conducting meetings with a defined membership according to set rules of procedure and time frame was abandoned in favour of more traditional ways of congregating, without predetermined times of arrival or departure of the participants who included extended family and community members.

Indian AA-style meetings are often not unlike spiritual ceremonials in which the "higher power" as understood in AA philosophy becomes identified with the personal spirit power as understood in the traditional guardian spirit complex. Meetings may also assume the pattern of traditional exchange feasts (potlatch) whenever there is an occasion to commemorate anniversaries of sobriety, with solemn speeches echoing the traditional mythology theme of death and rebirth into a new and healthier existence. The Indian-White conflict, intimately associated with the history of Amerindian alcohol use and abuse, is resolved in Amerindian AA-style groups by emphasizing cultural identity and self-respect while extending friendship to White members of the general AA.

The success of the culturally transformed Amerindian AA style movement is shown by the fact that there are now such groups not only in most Coast Salish communities but also among other Amerindian populations of British Columbia and neighbouring areas (Jilek-Aall, 1978, 1981, Leland, 1978).

Revived traditional ceremonials of North American Indians

The Sweat Lodge Ceremony

Some ancient North American Indian ceremonials have been revived. Examples relevant to the combat against substance abuse are the cult dance ceremonials and the **Sweat Lodge** ceremony. This latter ceremony is today widely practised throughout the indigenous communities in North America. It offers participation on a regular basis, without seasonal restrictions, both on and off reservations and even to Amerindian inmates in federal prisons of Canada and the USA.

Sweat lodges are easily erected, being merely small, dome-shaped structures made of arched willow poles tied together and tightly covered by blankets. Water is sprinkled on hot rocks placed in the centre to create

steam that, in the enclosed space, produces intense sweating in the small group of users who sit in a circle facing the centre. Beyond the physiotherapeutic effects of intense sweats and the ensuing feeling of serenity, there is a powerful somato-psychosocial experience created both by the religious ritual imbued of the lodge representing archetypal symbols and by the group therapeutic interaction under the guidance of a spiritual leader.

The revived Sweat Lodge ceremony has become a pan-Amerindian symbol of the resurgence of indigenous culture and is a focus for nativistic strivings to regain an Amerindian identity and way of life free from harmful influences of "White" majority society, notably from alcohol and drug abuse. Among Amerindians the Sweat Lodge is considered an antidote for alcohol that has strong physical and mental consequences. Many Sweat Lodge ritual leaders are rehabilitated alcoholics relying on involvement in this and other revived Amerindian ceremonials for their sobriety, and who are role models for young Amerindian people at risk. Participation in the Sweat Lodge ceremony combined with involvement in other revived Amerindian ceremonials (for example in the cult dances, in the Amerindian AA-style groups and in indigenous sport activities) creates a year-round rehabilitation programme and protection against relapse for some Amerindian alcohol and drug abusers.

The Sun Dance

The **Sun Dance** of Amerindian tribes in Wyoming, Idaho, Utah, Colorado and the Dakotas, the **Winter Spirit Dance** of the Coast Salish of British Columbia and Washington, and the Plains Indian **Gourd Dance**, which now has a pan-Indian connotation, were adapted to current psychosocial needs. They were given a therapeutic emphasis geared to the management and prevention of personality problems related to culture change. Alcohol and drug abuse among younger Amerindians is typically associated with the "anomic depression" related to anomie, relative deprivation and cultural identity confusion (cf. Jilek, 1974). Initiation to the Winter Spirit Dance and Sun Dance ceremonials involves the utilization of culture-congenial physiological and psychological techniques to produce altered states of consciousness under the guidance of experienced ritualists. The initiation process is designed to help novices build up their personal and cultural identity in order to establish a healthy new existence. This is achieved in a symbolic process of ritualized death and rebirth through traditional means of personality deprogramming and subsequent resynthesis and reorientation.

The therapeutic effects of traditional group ceremonials involve ritualized altered states of consciousness due on the psychological level to cathartic abreaction, deflection of feelings of guilt and shame, 23-133 gratification of frustrated emotional needs in the supportive group milieu and symbolic expression of otherwise hidden feelings in front of an empathic audience. Some initiates into the Winter Spirit Dance ceremonial have likened their ecstatic experience to the transient "high" previously felt under the influence of mind-changing drugs only without the withdrawal effects.

On the social level, participation in a ceremonial group helps in the resolution of interpersonal, intergenerational and interfamily problems by altering social relationships and creating a new social network. In addition there is the opportunity of graduating to the prestigious position of ritualist leader after converting from a powerless substance dependent into a supernaturally sanctioned help-provider imbued with spirit power. Ritualist leaders exert therapeutic influence through example and advice and, most

importantly, through the manipulation of culturally validated symbols in a setting conducive to collective suggestion and social learning.

Evaluation of signifance for substance use prevention and rehabilitation: The message of leading ritualists in the revived Amerindian cult dance ceremonials is that alcohol (still by far the most prevalent of abused substance among Amerindians) is a poison historically introduced into Amerindian societies by outsiders, often with pernicious motivations. Thus drinking and drug use are "non-Indian" and are signs of alienation from aboriginal culture. Leading ritualists and prominent participants in the ceremonials are total abstainers. New dancers have to abstain during the time of preparation, initiation, and training; active dancers abstain or restrict their alcohol intake during the dancing season.

The contemporary Sun Dance is usually conducted over three days and nights in summer but requires months of preparation along with total abstinence. To show their commitment, dancers often take a sacred vow to "dance with pierced flesh", or hooked to the centre pole, in consecutive annual ceremonies. The Winter Spirit dancing season in the Coast Salish region lasts about five months from late fall to spring. Persons under the influence of alcohol are not supposed to attend the ceremonies even as spectators. This has a discouraging effect on alcohol consumption in the area where ceremonies are held, as intake without intoxication is unappealing and major ceremonial occasions draw many spectators and conflict with weekend drinking parties.

Alcohol-related problems have significantly decreased in some Coast Salish reservations where community leaders promoted the revival of ceremonial activity and the creation of Indian AA-style groups and where educated younger persons participate actively in ceremonies to demonstrate their "Indianness". In a follow-up study of 24 young Coast Salish Indians with alcohol and/or drug abuse problems who were initiated into the Winter Spirit Dance between 1967 and 1972, 10 were fully rehabilitated and abstinent in 1973 for one or more years after their initiation, 11 showed significant improvement, two showed no change and one deteriorated (Jilek, 1982).

In the Upper Stalo population surveyed by the author, there were about 50 active spirit dancers among some 2000 Amerindian people in 1972, five years after revival of the ceremonial had started. New initiates have since been entering the ceremonial every year in Coast Salish communities of southern British Columbia and northern Washington. It can be said that the revival of the Winter Spirit Dance has created an annual therapeutic programme in which not only the initiated dancers but also relatives and friends participate in a group enterprise, providing mutual support, acceptance and stimulation. The effectiveness of the Winter Spirit Dance ceremony in motivating substance abusers to sobriety was confirmed independently by two investigators (Anderson, 1986).

The Sun Dance ceremony has been growing steadily in popularity since the 1960s. It involves teams of singer-drummers in addition to the active dancers, with crowds of spectators to encourage them. The "pan-Indian" Gourd Dance is performed nowadays on many festive occasions by Amerindians throughout North America and has been credited in rehabilitating alcoholics (Howard, 1976), although its impact is limited owing to the absence of a rigorous and formal initiation process comparable to that of the other two cult dances.

Acceptability and risks: The cult dance ceremonials appealed to those among the younger generation who were reached by the pan-Amerindian culture propaganda which emerged in the 1960s and emphasized the re-attainment of an aboriginal identity in opposition to the overwhelming influence of majority society. The ceremonies are opposed by society and some Amerindians who perceive them as outdated, "primitive" or "pagan". Opposition is based on Christian fundamentalism, modern Western views on young individuals' rights to chose an lifestyle irrespective of group concerns and traditions, and concern about the risks involved in arduous training and practices that may cause pain, injury and, in extreme cases, the death of individuals with pre-existing organic damage due to chronic alcoholism. In the majority, society there have been calls for legal measures instituting public supervision of the ceremonials and official screening of candidates for initiation, but today's government authorities in North America have categorically refused any legal infringement that would in the end uppress these revived ceremonies that have a valuable psychohygienic and sociotherapeutic function.

One of the most important aspects of all revived traditional Amerindian ceremonies is that they turn participants away from egocentric and hedonistic preoccupations towards constructive community concerns (Anderson, 1986; Hall, 1986; Howard, 1976; Jilek, 1974, 1978, 1981, 1982a, 1982b, 1989a; Jorgensen, 1972).

Syncretistic religious cults of North American Indians

Native American Church (Peyote Cult)

The original pre-Columbian worship of the divine cactus called *peyote* by the Aztecs survives among the Mexican Huichol Indians. The Peyote Cult spread northward toward the end of the 19th century. Through syncretic amalgamation of Christian forms with the religious symbolism of many Amerindian tribes the cult became the Native American Church, today one of the most important pan-Amerindian religious movements between the Rocky Mountains and the Mississippi with a membership number in the thousands.

The avowed purpose of participation in the Peyote Cult is to allay physical and mental distress and to combat alcoholism by enhancing health and strength through communication with supernatural powers made accessible in an arduous ritual. Collective goals are to create positive feelings among fellow-peyotists, their relatives and friends, and in general to promote pan-Amerindian ideals by "walking the peyote road" in strict adherence to the principles of temperance ("alcohol and peyote do not mix"), honesty and social reliability.

Evaluation: Most active members of the Native American Church are total abstainers from alcohol and other chemical substances. The success of the Native American Church in rehabilitating Amerindians from alcohol and opiate dependence and the safety of ritual peyote use have been confirmed by experienced clinicians such as Professor Karl Menninger. Therapeutic efficacy is sometimes attributed to the bioactive and psychoactive ingredients of the ritually consumed peyote buttons of the cactus *Lophophora williamsi Lemaire*, which are strychnine-like and hallucinogenic alkaloids (notably mescaline) as well as neuroactive isoquinolines. There is evidence, however, that the therapeutically important altered state of consciousness experienced during the night-long cult sessions may be induced by exposure to continuous rhythmic drumming and agglutinative chanting alone, without any ingestion of peyote buttons. The altered state of

consciousness facilitates the often cathartic expression of personal problems and pent-up emotions in front of an empathic audience. The ritual leader's message of sobriety and responsibility for one's own health and the welfare of one's people, repeatedly perceived in a suggestible state, has a good chance to become incorporated in the person's lifestyle (Aberle, 1966; Albaugh & Anderson, 1974; Bergman, 1971; Blum et al., 1977; Jilek, 1978; Pascarosa & Futterman, 1976; Pascarosa et al., 1976; Roy, 1973).

Gaiwiio (Handsome Lake Movement)

The "new" Iroquois religion of Handsome Lake, the native prophet of the early 1800s, is still a vital force among the "Six Nations" Amerindians of New York and Ontario. Handsome Lake's revelation depicted gruesome eternal punishments for those drinking "fire-water". The Handsome Lake movement became established as an Amerindian church after his death, combining elements of pre-contact Iroquois culture with the prophet's original vision and Christian principles. The prophet's demand for temperance led to the first aboriginal anti-alcohol movement and was enshrined in the *Code of Handsome Lake* in the 1840s. It is still the doctrine of the followers of Gaiwiio who combine a desire for personal spiritual salvation with identification as true Iroquois. The opposition to vices introduced by majority society, such as alcohol and drug abuse is seen as affirming the Indianness of the Amerindians who now practise the revived indigenous ceremonials on the plains and on the Pacific coast (Heath 1983; Jilek-Aall, 1978; Wallace, 1972).

Indian Shaker Church

Founded by the ex-alcoholic John Slocum in 1881, this messianic cult with Catholic form and nativistic content had followers on many Indian reservations in the Pacific Northwest and reached its peak in the 1920s. Slocum taught that those who had received the Shaker spirit ("shake") obtained the power to heal others and to lead a wholesome life themselves, but that they would die if they resumed drinking alcohol, even one drop. The Shaker Church has been consistent in its insistence on total sobriety of its members. In recent decades, some Shakers have merged with "White" fundamentalist Christian groups. Those more conscious of Indianness are now actively participating in the revived Winter Spirit Dance ceremonial and in the Amerindian AA-style groups. Nowadays there is no strict delimitation in the Pacific Northwest between these indigenous movements which all emphasize freedom from alcohol and drug use as part of traditional values. They also share the archetypal birth and rebirth myth. The prophets Handsome Lake and John Slocum both "died" of alcohol abuse and were reborn to a new life, just as the faulty old self "dies" in the Spirit Dance initiation ordeal and the alcoholic "nearly died" before reaching sobriety through Amerindian AA-style groups (Barnett, 1957; Collins, 1950; Gunther, 1949; Jilek-Aall, 1978).

Folk healing in Latin America

Latin American folk healing is influenced by aboriginal Amerindian beliefs and traditional medicine, by populist Catholicism and by modern spiritism.

Unfortunately for the campaign against the prevalent alcohol abuse in Latin America, the possession-trance cults which are derived from West African religions and which have developed into religious-therapeutic enterprises never acquired an anti-alcohol emphasis. There are millions of participants in the Caribbean

(Vodun, Santeria, Shango) and in Brazil (Umbanda, absorbing Candomble and Macumba) whose ritualist leaders still resort to the ceremonial use of rum.

Espiritismo

The example of Espiritismo, a healing religion which developed from amalgamation of the Afro-Caribbean possession cult Santeria with Christian and spiritist elements, demonstrates that group therapeutic movements involving altered states of consciousness have considerable potential for the rehabilitation of alcohol and drug dependents among Latin Americans. This is exemplified by Puerto Rican Espiritismo centres in the eastern USA (Singer & Borrero, 1984). Spiritual consultations are provided by Espiritistas, usually themselves rehabilitated substance abusers. They interpret problem causation within the magico-religious and sociocultural belief system of their patients and employ individual and family counselling techniques of confrontation, suggestion and manipulation. They also use "spiritual treatment" involving symbolic rituals of cleansing with herbal baths, plus prayer sessions, exorcism and magical protection. Spiritual treatment is designed to break the grip of malevolent spirits causing the patient's alcoholism, thus relieving guilt and changing the family's attitude towards him.

Evaluation: In one typical Espiritismo centre, more than 1,000 problem drinkers were treated in a three-year period. Although complete abstinence was the declared therapeutic goal, only reduced consumption and improved personal and family function could be achieved in the majority of cases. Costs were minimal.

Mexican Folk Medicine

In Mexican Folk Medicine (Arredondo et al., 1987; Trotter & Chavira, 1978; Trotter, 1979) alcoholics are treated by involving the family. Counselling is through religious exercises, magical rituals and symbolic acts removing supernatural causes, as well as through the social engineering of charismatic Curanderos. Sedative herbal teas are administered to control nervous symptoms after the cessation of drinking. Nausea-inducing substances such as powderized old eggs or rat urine may be put into the alcoholic's drink surreptitiously to diminish his desire to drink. Of interest is the Antabuse-like (disulfiram) **aversion therapy** employed by some Mexican healers and herbalists using toasted and ground seeds of *haba de San Ignacio (Hura polyandra L.* and *Hura crepitans L.*), containing toxalbumines that induce nausea and vomiting in conjunction with subsequent intake of alcohol. A similar example in Ecuador is the Pavlovian-type deconditioning with emetic herbal teas prepared from the *nepe* root, to be taken by the alcoholic together with beer, or in a healing compound of the Colorados Indians (the latter is mostly frequented by urban patients) (Jilek-Aall & Jilek, 1983).

Peruvian Folk Healing

In Peruvian Folk Healing chronic alcoholics are treated by curanderos especially in the northern Coast area (Chiappe Costa, 1970; Chiappe Costa et al., 1972; Chiappe et al., 1985; Seguin, 1974). The folk-etiological theory of causation of alcoholism and other afflictions by a *dano*, a harmful magical substance slipped into the patient's drink or food by a malvolent person, is utilized by the *curandero* to turn the alcoholic from a social offender into that of a victim who can count on the sympathy of family and friends facilitating his rehabilitation. In a diagnostic session, the healer enters an altered state of consciousness

induced by ingesting the sacred San Pedro cactus (*Trichocereus pachanoi*), which contains mescaline and other psychoactive substances. In this state the healer signals the person(s) responsible for the *dano* by means of a supernaturally-sanctioned authority. Through this **naming process**, the divining healer is able to modify the patient's and the family's attitude and can manipulate social relationships, e.g. by making the patient avoid undesirable drinking companions.

In order to qualify for the actual treatment, the patient has to submit to severe restrictions on alcohol consumption for about one month while following a special diet and drinking herbal tonics for physical strengthening. The subsequent treatment starts with common curing rites of Peruvian folk medicine. The patient then undergoes an intensive aversion therapy in which herbal emetics and laxatives induce vomiting and diarrhoea while he is offered alcoholic drinks. For this arduous treatment the patient is often admitted to the healing compound of the *curandero*, usually together with his mother or spouse and sometimes even the entire family. After discharge, the patient is given a protective charm and is supposed to make regular visits to the healer for several months.

Evaluation: In one follow-up study by the Instituto de Psiquiatria Social, Universidad Nacional Mayor de San Marco (Chiappe Costa, 1972), 39 of 57 chronic alcoholics treated by *curanderos* were found to be fully rehabilitated, 77% with post-therapy abstinence periods of over one year and 44% over six years. Eighteen of the 57 probands relapsed since receiving treatment, 56% of them within eight months, 78% within 16 months and 89% within two years.

Syncretistic religious cults in Southern Africa

The independent Black-African churches of southern Africa, also known as Zionist, Ethiopian or Apostolic, combine messianic Christianity and pan-African consciousness with traditional elements of Bantu culture and a mandate to heal spiritually, mentally and physically. In the Republic of South Africa, Malawi and Namibia, these churches, often led by charismatic prophet-healers, have a numerous though rapidly changing membership and considerable socio-political influence. Members are subject to proscriptions which usually nclude an injunction against the consumption of alcoholic beverages and, in many cases, against the use of other drugs.

The religious prohibition is, however, associated with a readiness to rehabilitate the repentent substance dependent as a patient in the context of the church's healing mandate, usually with no charge beyond the general tithing. A confession is expected with free admission of personal problems. In many congregations this confession is combined with purification rites for the "elimination of all evil", both spiritual and material, by ritual vomiting and body cleansing. Counselling is conducted by faith healers and ex-alcoholic church members. There is often dream interpretation by authorized leaders as well.

In Malawi the alcohol and drug (cannabis) rehabilitation programme of Zionist church groups is divided into spiritual therapy (purification by sprinkling with blessed water, songs and prayers, spiritual rebirth through river baptism), a common practice in most congregations, and body therapy. The latter is seen as a kind of detoxification treatment of withdrawal symptoms and consists of two elements - first the oral administration of exactly dosed fluids (concentrated salt solution, tea, lake water, milk, coffee, oil) distributed over a course of 28 days and then body stimulation at specified asymmetric points of head, trunk

and extremities, performed at 70 points with a wooden stick and at 60 different points with a needle. Some of these points appear identical to acupuncture points also used in the treatment of alcoholics, but there is no known historical or contemporary connection.

Evaluation: A study conducted in Malawi (Peltzer, 1987) indicated that the average time of alcohol abstinence after joining a healing church was 2.8 years. A follow-up investigation of 11 men with alcohol and cannabis related disorders treated in a Zionist church showed that after six months, five were regular church attenders and abstinent, two were drinking again, one had died after relapse and three could not be followed. Thus the therapy can be considered relatively successful. In the alcohol rehabilitation programme of another church which does not feature physical treatment (body therapy), the results were less successful: after six months only one of five men remained abstinent, two had relapsed and two could not be found (Benz, 1965; Peltzer, 1987; Sundkler, 1961).

EFFICACY OF TRADITIONAL HEALING

On the basis of the data presented in the above geographical overview, it can be stated that the many general observations and the few investigations reported by scientific observers allow the following overall conclusion: in the rehabilitation and prevention of chemical substance dependence, therapeutic modalities based on indigenous cultural and religious traditions are found in general to be as successful as, and in some instances more successful than, "official" treatment and rehabilitation programmes.

ADVANTAGES OF TRADITIONAL HEALING APPROACHES IN COMPARISON WITH THE MEDICAL HEALTH CARE SYSTEM

Culture-Congeniality

Traditional healers and ritualists share the socio-cultural value system of their clientele.

Personality of the healer

Traditional healing recognizes the importance of the personality characteristics of the therapist who achieves and maintains a confidence-inspiring charisma. In modern medicine the therapeutic technique, rather than the personality of the therapist, is assumed to be the most important variable.

Holistic approach

Traditional healing practices usually integrate physical, psychological, spiritual and social methods as opposed to modern medicine which is becoming increasingly fragmented through over-specializing and technologizing.

Accessibility and availability

Traditional healers are the first resort in most developing areas due more to their geographical permanence and accessibility than their therapeutic merits. Modern health staff tend to be urban located, highly mobile and changing.

Affectivity therapy and altered states of consciousness

Traditional healing utilizes suggestive methods and the manipulation of culturally validated images and symbols, working on the patient's affectivity to achieve the therapeutic goal rather than relying on rational understanding and "insight" in order to correct faulty behaviour. The effective utilization of altered states of consciousness, induced by physiological and psychological means in the ritual therapy of substance dependence, is of special interest in view of the assumed interrelationship of such states with opiate receptors and the neuroendocrine opioid system (cf. Lex & Schor, 1977; Prince, 1982).

Collective therapy management

Traditional healing in most cases also involves the patient's kinspeople and other community members who may join forces with healer and patient to define the underlying problem and remedial action. Traditional therapies therefore tend to be relational; they tend to foster kinship and community cohesion to facilitate the patient's re-integration.

Social engineering

The traditional healer's advice carries weight through his prestige and charisma and may in some cases also be sanctioned by supernatural authority. The healer is therefore in a position to manipulate directly or indirectly the patient's immediate human environment to favour the achieving of the therapeutic goal.

Cost effectiveness

There is no doubt that utilization of traditional therapeutic resources is considerably more cost-effective for the public than utilization of the official health service since public funds need not be invested beyond occasional grants to deserving non-profit treatment operations. Consumer costs of utilizing traditional healing vary and are usually individualized; often there is no obligatory fee, but instead an expectation of donations, often in kind. It is worth noting that cost considerations have not impeded utilization of traditional healing resources in many of the countries where health care services, including substance abuse rehabilitation, are free or covered by state insurance schemes.

DISADVANTAGES OF TRADITIONAL HEALING APPROACHES

Difficulties of supervision and control

The secrecy surrounding some traditional procedures along with the religious aspects of many healing ceremonials make effective supervision by health authorities difficult. Attempts by unsympathetic health professionals at imposing controls could have a discouraging effect. However, traditional healers respond positively to professionals who seek their collaboration in an attitude of respect and genuine understanding. Traditional healers are willing to share information and take advice in a collaborative relationship that entails mutual referrals of patients.

Potentially harmful treatments

Certain procedures and remedies used by traditional healers, usually with imprecise dosage, may cause physical harm. This can be due to toxic effects, especially when "purgation" or aversion therapies are applied, or it may occur when the patient's reduced physical condition places him or her at special risk, e.g. if the patient has alcohol or drug-induced organic damage. However, many medications used in modern medical treatments may also have unintended harmful effects (such as habituation) and that the risk of ongoing substance abuse in most cases outweighs the risks of even the most drastic intervention.

GEOGRAPHICAL OVERVIEW OF LEGAL REGULATIONS PERTAINING TO THE PRACTICE OF HEALTH CARE

Prohibitive restrictions

Countries with prohibitive legislation reserving the right to provide health care exclusively to physicians, dentists, midwives and nurses trained at recognized schools and licensed by state-authorized bodies are: Austria, Belgium, France, Luxembourg, the former Soviet Union, and the former socialist countries of Eastern Europe. In Algeria and Mongolia policy changes in this direction are under consideration.

De facto toleration of non-professional health care

Prohibitive restrictions of non-professional health care which were introduced by European colonial authorities are no longer enforced in those countries formerly under Belgian, Dutch, French and Spanish colonial jurisdiction that have not yet issued new legal regulations. The current situation is one of de facto toleration, and in some countries even official promotion, of traditional healing despite the fact that old laws have not yet been formally repealed.

De iure toleration of non-professional health care

Countries where the official health care system is based on licensed professionals with recognized academic qualifications and degrees who also enjoy certain exclusive privileges, but where healing by "non-scientific" methods is nevertheless not legally prohibited are: Germany, Netherlands, the Scandinavian countries,

United Kingdom and the USA (regulations differ according to state but tolerance is assured nationwide by the constitutional "right to privacy").

Legalization of traditional healing practices

Developing countries with legalization legalizing the practice of traditional medicine or exempting such practice from the prohibition of unauthorized health care under various defined conditions are: Burkina Faso, Fiji, Ghana, Kiribati, Lesotho, Malaysia, Mali, Papua New Guinea, Sierra Leone, Singapore, South Africa, Tanzania, Tonga and Uganda.

It is noted that in many developing countries legal obstacles to close collaboration between health professionals and traditional healers are still in existence due to unchanged regulations of professional conduct. This is the case notwithstanding either implemented or planned legalization of traditional medicine practices, or policy statements in national health plans or the efforts made by WHO since the 1978 conference of Alma Ata to promote the integrated cooperation of modern and traditional health care resources (Akerele, 1987).

Legally sanctioned coexistence

Countries with legally sanctioned coexistence of recognized traditional medicine systems and modern medical health care are: Bangladesh (recognized: Ayurveda, Unani), Burma (recognized: "Indigenous Burmese Medicine"), India (recognized: Ayurveda, Siddha, Unani), Pakistan (recognized: Ayurveda, Unani), Sri Lanka (recognized: Ayurveda), Thailand (recognized: "Old-fashioned Art of healing").

Official integration

Countries with an official policy of integrating recognized traditional medicine systems and modern medical health care are: Democratic People's Republic of Korea (recognized: Traditional Korean and Chinese Medicine), Nepal (recognized: Ayurveda) and People's Republic of China (recognized: Traditional Chinese Medicine).

Note: In the countries listed as having policies of legally sanctioned coexistence or official integration of traditional medicine systems, other forms of traditional healing, such as shamanic folk healing, are not legally recognized, and may actually be discouraged (Jilek, unpubl.notes; Stepan, 1983).

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