
PROGRAMME ON
**SUBSTANCE
ABUSE**

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.

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ACKNOWLEDGEMENTS

The World Health Organization gratefully acknowledges the contributions of the following authors:

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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 comorbidity. 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 care 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

REFERENCES

- Annis HM. A relapse prevention model for treatment of alcoholics. In: Miller WR, Heather N, eds. *Treating Addictive Behaviors: Processes of Change*. New York, Plenum Press, 1986:407-33.
- Anonymous. *AA membership survey*. New York, Alcoholics Anonymous World Services, 1987.
- Babor TF et al. *Manual for the Alcohol Use Disorders Identification Test*. Geneva, World Health Organization, 1989.
- Becker HS. Becoming a marihuana user. *American Journal of Sociology*, 1953, **59**:235-42.
- Bergman RL. Navajo peyote use: its apparent safety. *American Journal of Psychiatry*, 1971, **128**:695-99.
- Brickman P et al. Models of helping and coping. *American Psychologist*, 1982, **37**:368-84.
- Brower KJ, Blow FC, Beresford TP. Treatment implications of chemical dependency models: an integrative approach. *Journal of Substance Abuse Treatment*, 1989, **6**:147-57.
- Caetano R. Public opinion about alcoholism and its treatment. *Journal of Studies on Alcohol*, 1987, **48**:153-60.
- Carkhuff RR. Differential functioning of lay and professional helpers. *Journal of Consulting Psychology*, 1968, **15**:117-26.
- Chein I et al. *The Road to H: Narcotics, Delinquency, and Social Policy*. New York, Basic Books, 1964.
- Cronkhite RC, Moos RH. Determinants of the post-treatment functioning of alcoholic patients: a conceptual framework. *Journal of Consulting and Clinical Psychology*, 1980, **48**:305-16.
- Dole VP. In the course of professional practice. *New York State Journal of Medicine*, 1965, **65**:927-931.
- Dole VP, Nyswander ME. Heroin addiction - a metabolic disease. *Archives of Internal Medicine*, 1967, **120**:19-24.
- Frankl VE. *The Will to Meaning: Foundations and Applications of Logotherapy*. New York, World Publishing Company, 1969.
- Fuller RK et al. Disulfiram treatment of alcoholism: a Veterans Administration cooperative study. *Journal of the American Medical Association*, 1986, **256**:1449-55.
- Glaser FB. Splitting: attrition from a drug-free therapeutic community. *American Journal of Drug and Alcohol Abuse*, 1974, **1**:329-348.

- Glaser FB. Anybody got a match? Treatment research and the matching hypothesis. In: Edwards G and Grant M, eds. *Alcoholism Treatment in Transition*, London, Croom Helm, 1980: 178-96.
- Glaser FB. The origins of the drug-free therapeutic community. *British Journal of Addiction*, 1981, 76:13-25.
- Glaser FB. The nature of primary care. In: Glaser FB et al. *A System of Health Care Delivery*, vol. 2, Toronto, Addiction Research Foundation, 1984:3-34.
- Glaser FB. *Levels of cover for alcohol and drug problems: a sequential model*. Geneva, World Health Organization, 1992. (unpublished document WHO/PSA/91.10).
- Glaser FB, Greenberg SW. Relationship between treatment facilities and prevalence of alcoholism and drug abuse. *Journal of Studies on Alcohol*, 1975, 36:348-58.
- Glaser FB, Greenberg SW, Barrett M. *A Systems Approach to Alcohol Treatment*. Toronto, Addiction Research Foundation, 1978.
- Gomberg ESL. On terms used and abused: the concept of "codependency." *Drugs and Society*, 1989, 3:113-32.
- Gorski TT, Miller M. *Counselling for Relapse Prevention*. Independence, Missouri, Herald House, 1982.
- Haberman PW, Shenberg J. Public attitudes toward alcoholism as an illness. *American Journal of Public Health*, 1969, 59:1209-16.
- Hansen J, Emrick CD. Whom are we calling "alcoholic?" *Bulletin of the Society of Psychologists in Addictive Behaviors*, 1983, 2:164-78.
- Harburg E et al. Familial transmission of alcohol use: II. Imitation of and aversion to parental drinking (1960) by adult offspring (1977) - Tecumseh, Michigan. *Journal of Studies on Alcohol*, 1990, 51:245-56.
- Havens LM. Understanding the trends: a guide to cooperation between treatment centers and managed care providers. *Addiction & Recovery*, 1991, 11:28-32.
- Hoffmann NG, Halikas JA, Mee-Lee D. *The Cleveland Admission, Discharge, and Transfer Criteria: Model for Chemical Dependency Treatment Programs*. Cleveland, Ohio, The Greater Cleveland Hospital Association, 1987.
- Institute of Medicine. *Broadening the Base of Treatment for Alcohol Problems*. Washington, D.C., National Academy Press, 1990.
- Jellinek EM. *The Disease Concept of Alcoholism*. New Brunswick, New Jersey, Hillhouse Press, 1960.

- Jones RK. Sectarian characteristics of Alcoholics Anonymous. *Sociology*, 1970, 4:181-95.
- Khantzian EJ. The self-medication hypothesis of addictive disorders: focus on heroin and cocaine dependence. *American Journal of Psychiatry*, 1985, 142:1259-64.
- Korcok M. *Managed Care and Chemical Dependency: A Troubled Relationship*. Providence, Rhode Island, Manisses Communications Group, 1988.
- Leach B. Does Alcoholics Anonymous really work? In: Bourne PG & Fox R, eds. *Alcoholism: Progress in Research and Treatment*. New York, Academic Press, 1973: 245-84.
- Leake CD. The history of self-medication. *Annals of the New York Academy of Medical Science*, 1965, 120:815-22.
- McLachlan JFC. Benefit from group therapy as a function of patient-therapist match on conceptual level. *Psychotherapy: Theory, Research, and Practice*, 1972, 9:317-23.
- McLachlan JFC. Therapy strategies, personality orientation, and recovery from alcoholism. *Canadian Psychiatric Association Journal*, 1974, 19:25-30.
- McLellan AT, Woody GE, O'Brien CP. Development of psychiatric illness in drug abusers: possible role of drug preference. *New England Journal of Medicine*, 1979, 301:1310-14.
- Marco CH, Marco JM. Antabuse: medication in exchange for a limited freedom - is it legal? *American Journal of Law and Medicine*, 1980, 5:295-330.
- Marlatt GA, Gordon JR. *Relapse Prevention*. New York, Guilford Press, 1985.
- Moore JS. Conceptions of alcoholism. *International Journal of the Addictions*, 1972, 27:935-45.
- Mulford HA, Miller DE. Public definitions of the alcoholic. *Quarterly Journal of Studies on Alcohol*, 1961, 22:312-20.
- Peachey JE, Annis HM. New strategies for using the alcohol-sensitizing drugs. In: Naranjo CA, Sellers EM, eds. *Research Advances in New Psychopharmacological Treatments for Alcoholism*. Amsterdam, Excerpta Medica, 1985:199-216.
- Pearlman S. Early experiences with primary care. In: Glaser, FB, et al. *A System of Health Care Delivery*, vol. 2. Toronto, Addiction Research Foundation, 1984:35-48.
- Peterson RE. Legalization - the myth exposed. *The Narc Officer*, December, 1991:27-39.
- Petrakis PL. *Alcoholism: an Inherited Disease*. DHHS Publication No. (ADM) 85-1462. Washington, D.C., U.S. Government Printing Office, 1985.

- Razin AM. A-B variable in psychotherapy: a critical review. *Psychological Bulletin*, 1971, 75:1-21.
- Rodin MB. Alcoholism as a folk disease: the paradox of beliefs and choice of therapy in an urban American community. *Journal of Studies on Alcohol*, 1981, 42:822-35.
- Room R. Sociological aspects of the disease concept of alcoholism. In: Smart RG et al., eds. *Research Advances in Alcohol and Drug Problems*, Vol. 7. New York, Plenum Press, 1983:47-91.
- Sacks O. The lost mariner. In: *The Man Who Mistook His Wife for a Hat and Other Clinical Tales*. New York, Summit Books, 1985:22-41.
- Saunders J, Aasland OG. *WHO Collaborative Project on Identification and Treatment of Persons with Harmful Alcohol Consumption: Report on Phase I Development of a Screening Instrument*. Geneva, World Health Organization, 1987.
- Schafer A. The ethics of research on human beings: a critical review of the issues and arguments. In: Israel et al. eds. *Research Advances in Alcohol and Drug Problems*, Vol. 6, New York, Plenum Press, 1981:471-511.
- Searles JS. The role of genetics in the pathogenesis of alcoholism. *Journal of Abnormal Psychology*, 1988, 97:153-67.
- Selwyn PA. Appendix: Special Issues Concerning Substance Abuse Treatment for Injection Drug Users in the AIDS Era. In: *WHO Consultation Meeting on mapping the treatment response to alcohol and drug abuse*. Moscow, USSR, 28-31 May 1991. Geneva, World Health Organization, Switzerland, 1991. (unpublished document WHO/PSA/91.8).
- Siegler M, Osmond H, Newell S. Models of alcoholism. *Quarterly Journal of Studies on Alcohol*, 1968, 29:571-91.
- Siegler M, Osmond H. Models of drug addiction. *International Journal of the Addictions*, 1968, 3:3-24.
- Thomas EJ et al. Unilateral family therapy with the spouses of alcoholics. *Journal of Social Services Review*, 1987, 10:145-62.
- Tobin JW. Is A.A. "treatment?" You bet. *Addiction & Recovery*, 12 (3):40 (May/June 1992).
- Tourney G. A history of therapeutic fashions in psychiatry, 1800-1966. *American Journal of Psychiatry*, Dec. 1967, 124:784-796.
- Truax CB, Wargo DD. Psychotherapeutic encounters that change behavior: for better or worse. *American Journal of Psychotherapy*, 1966, 20:499-520.

Victor M, Yakovlev PI. SS Korsakoff's psychic disorder in conjunction with peripheral neuritis: a translation of Korsakoff's original article with brief comments on the author and his contribution to clinical medicine. *Neurology*, 1955, 5:394-406.

Wallerstein RS. Comparative study of treatment methods for chronic alcoholism: the alcoholism research project at Winter VA Hospital. *American Journal of Psychiatry*, 1956, 113:228-33.

Wallerstein RS. *Hospital Treatment of Alcoholism: A Comparative, Experimental Study*. New York, Basic Books, 1957.

West MO, Prinz RJ. Parental alcoholism and childhood psychopathology. *Psychological Bulletin*, 1987, 102:204-18.

Wikler A. Conditioning factors in opiate addiction and relapse. In: Willner DM, Kassebaum GE, eds. *Narcotics*. New York, McGraw-Hill, 1965:85-100.

Woititz JG. *Adult Children of Alcoholics*. Deerfield Beach, Florida, Health Communications Inc., 1983.

World Health Organization. *WHO Consultation Meeting on mapping the treatment response to alcohol and drug abuse*. Moscow, USSR, 28-31 May 1991. Geneva, World Health Organization, (unpublished document WHO/PSA/91.8).

Yahr HT. A national comparison of public- and private-sector alcoholism treatment delivery system characteristics. *Journal of Studies on Alcohol*, 1988, 49:233-239.

