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Best Practices
Substance Abuse
Treatment and Rehabilitation

Prepared by Gary Roberts and Alan Ogborne
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for the
Office of Alcohol, Drugs and Dependency Issues
Health Canada

canada's drug strategy

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Introduction and Methodology

Substance abuse in Canada was estimated by the Canadian Centre on Substance Abuse to have cost Canadians $18.45 billion in 1992 in terms of health care, social welfare, criminal justice and lost productivity. More than $290 million was spent on attempts to reduce the social and economic costs of substance abuse through the provision of treatment and rehabilitation (Single et al., 1996). In the current economic climate, the substance abuse field is being challenged, along with all parts of the health sector, to give full account of its activities, expenditures and impacts. This call for effectiveness is occurring in the context of a radical reshaping of the delivery systems in much of the country. Health Canada has initiated this project, in collaboration with provinces and territories, to review substance abuse treatment and rehabilitation in Canada, and to offer evidence-based advice on program and system development.

This report is one of two initiated by Health Canada in collaboration with the provinces and territories to provide current baseline information concerning substance abuse treatment and rehabilitation. The purpose of this report is to provide advice on "where we need to go" in substance abuse treatment and rehabilitation in Canada. To complement this report, the other report, *Profile – Substance Abuse – Treatment and Rehabilitation in Canada*, provides current information on the scope and nature of substance abuse services at the federal, provincial, territorial and local levels.

The majority of Canadians support increased treatment efforts specifically for people who have problems with alcohol or other drugs (Single, 1997). Though many people who have problems with alcohol or other drugs overcome these problems without formal treatment, there is reasonably good evidence that those exposed to some types of treatment for substance abuse subsequently reduce their use of psychoactive substances and show improvements in other life areas. Section 1 of this report summarizes the evidence for the effectiveness of a variety of commonly used *treatment approaches* and, as will be seen, some approaches seem to be particularly promising with respect to their influence on substance use and related problems. Where there is reasonable consensus on the effectiveness of an approach among the reviewers referred to, we offer "best practice" guidelines to reflect that consensus.

Because a number of comprehensive reviews of the treatment literature have been undertaken in the past 10 years, we have taken a "review-of-reviews" approach to this work. The major reviews concerning the treatment of alcohol problems (Holder et al., 1991; Finney and Monahan, 1996; and Miller et al., 1995) included only studies with control or comparison groups and a proper procedure to equate the treatment and control groups. Although the literature on the treatment of drugs other than alcohol is more limited, strong reviews by Eliany and Rush (1992), Landry (1995) and Correctional Service of Canada (1996) provide the basis of the information provided

on other drug treatment in this report. We confined our investigation to treatment approaches addressed by these reviews. In areas where more recent literature was available, we took this research into account.

Section 2 examines what is known about the matching of clients to treatment and therapists, including the results of the recent Project MATCH study.

Beyond actual treatment modalities, there are a number of factors that bear on treatment effectiveness and these are discussed in the third section of this report. Reflecting the breadth and complexity of the study of treatment effectiveness, these factors range from *characteristics of the client and therapist* to *duration and setting of treatment*. The issue of mandatory treatment is not new in Canada; however, it has re-emerged in the wake of Bill C-41, passed in 1996, and a Supreme Court case in Manitoba concerning the ability of a government agency to require the treatment of a pregnant woman. The literature on *mandated treatment* and its implications for treatment effectiveness is reviewed in this section.

It is generally accepted that certain populations or subgroups deserve special attention because of their unique characteristics, or because general programming does not adequately meet their needs. For a number of years, treatment programming has been designed for various "*special populations*," based on an understanding of shared characteristics that are thought to have relevance in attracting, motivating and retaining clients in treatment. Section 4 includes a review of what is known about providing effective treatment to *women, adolescents, seniors, those with concurrent mental health problems* and *clients who are living with HIV/AIDS*. At the time of writing, Health Canada was conducting a separate review of the literature on *Aboriginal* treatment issues; therefore, this population is not included in the discussion on special populations in this review.

It is difficult to draw a distinct line between program and systems issues, and the literature on substance abuse treatment systems is, in fact, diffuse. Nevertheless, we felt it was extremely important, in the context of current health system reform, to highlight the best thinking on the *configuration of substance abuse treatment systems*. Included in this review in Section 5 are discussions on *who seeks help for treatment, coordination, case management* and *self-help/mutual aid groups*.

In the current economic climate, there is a need to justify treatment activities from a financial perspective. In Section 6, we briefly review several studies from the United States that investigate the *economic benefits* accruing from treatment.

The challenges involved in conducting outcome research in community settings raise several *issues and limitations concerning research to date*, that call for caution in offering advice.

At the end of the report we list all of the "best practice" statements in the section titled, *General conclusion and summary of best practices*.

We conducted a search of French- and English-language sources using variations of the keywords "substance abuse treatment effectiveness" with the following databases:

- *CCSADOCS* (Database of the National Clearinghouse on Substance Abuse).
- *CANBASE* (Database of the Canadian Substance Abuse Information Network).
- *DrugInfo (*Drug information database produced by the University of Minnesota).
- *IDA* (Information about Drugs and Alcohol produced by the US National Clearinghouse on Alcohol and Drug Information–NCADI).
- *ETOH* (Alcohol database produced by NIAAA).
- *Project Cork Database* (Alcohol and substance abuse information database for clinicians and educators, Dartmouth Medical School, NH).
- *Toxibase* (Réseau national de documentation sur les pharmacodépendences, Lyon, France).

This was supplemented by an Internet search (which located the Correctional Service of Canada review of treatment approaches at: http://www.198.103.138/crd/litrev.htm), and suggestions from committee members, from which the sources used for this project were drawn. These are listed in the *References* section.

A *Glossary* of many of the technical terms used in this review has been compiled and is found at the end of this report.

1. The Effectiveness of Specific Treatment Approaches

While most people who experience substance abuse problems do not receive help, there is good evidence that people exposed to some types of treatment subsequently reduce their use of psychoactive substances and show improvement in other life areas. In general, treatment outcomes are improved when appropriate treatments are also provided for significant life problems (communications problems, lack of assertiveness, unemployment). This section will review in some detail the research available on the effectiveness of a number of the more prevalent and commonly studied treatment modalities.

There have been many hundreds of studies of treatment for people with alcohol and other drug problems and a complete review of all published studies is beyond the scope of this report. However, such a review is not considered necessary given the quality and comprehensiveness of recent published reviews. Much of what follows draws on several of these reviews and especially on two complementary reviews of studies of treatment for alcohol problems by Holder et al. (1991), Miller et al. (1995) and a review of many of the same studies by Finney and Monahan (1996). The present document also draws on the review of treatment studies for dependence on drugs other than alcohol by the National Institute of Drug Abuse (1996), and a review of treatment studies involving adolescents by Smart (1993).

Excellent reviews of studies of treatment for people with alcohol or drug problems by Eliany and Rush (1992), Landry (1995) and the Correctional Service of Canada (CSC)[1] (1996) also provided a wealth of ideas and some useful summary statements. Where appropriate, recent reviews of specific modalities and issues will be cited under the appropriate topic headings.

The Holder et al. (1991) and Miller et al. (1995) reviews of alcoholism treatment encompassed the same 219 studies. Only studies that compared at least one specific type of treatment with some alternative type were included. Studies were excluded if they did not use a proper procedure to equate treatment, if they did not use control groups (randomization or case-control), or if they did not use at least one outcome measure of drinking or drinking problems. Studies without control or comparison groups were not considered because they cannot show how the study subjects in treatment might have fared without treatment or when treated in other ways. However, many of the studies that were reviewed had other shortcomings that limit their interpretation. These shortcomings will be noted at various points in what follows and at the end of Section 7.

1 Available on the Internet at: http://www.csc-scc.gc.ca

Both the Holder et al. and Miller et al. reviews include tables that summarize the cumulative evidence with respect to specific treatment methods and use the same effectiveness index. Weighted Evidence Index scores were computed by counting the number of controlled studies for specific interventions and subtracting the number showing no effects from the number showing positive effects on at least one alcohol-related measure. An extra point was then added for every positive finding greater than 2. Thus, a modality for which there were four studies showing positive results and three with negative results would receive a score of 4-3+2=3. This "box-score" approach has the advantage of simplicity, but it fails to take account of the magnitude of effects and is not sensitive to the number of statistical tests performed.[2] The approach also takes no account of the quality of the studies considered, the types of comparisons made or the characteristics of those involved in different studies.

Parts of two summary tables from the Holder et al. review are reproduced in Table 1. The results differ slightly from those in the Miller et al. review due to differences in the classification of interventions. Further details of these results and notes on more recent studies of alcoholism treatment will be considered below under a variety of headings.

Finney and Monahan (1996) reviewed many of the same studies as Holder et al. (1991) and developed an alternative index to assess treatment effectiveness. Unlike the simple "box score" index used by Holder et al., this index took account of the percentage of studies with positive results, the number of statistical tests performed and the type of comparisons. This report will note where these two reviews draw similar and varied conclusions. Table 2 provides a comparison of the rankings arrived at in the two reviews.

There are far fewer controlled trials of treatment for dependence on drugs other than alcohol and there would be little gained by constructing tables comparable to those in the Holder et al. and Miller et al. reviews of treatment for alcohol problems. Conclusions from the NIDA (1996), Smart (1993), Landry (1995) and CSC (1996) reviews will therefore be considered with respect to specific types of intervention.

The remainder of this section is structured using the classification scheme for treatment modalities proposed by Holder et al. with the addition of a few other modalities (Table 3).

2 By chance alone some treatment vs. control group comparisons will be significantly different. The chances of finding such differences increase with the number of comparisons made.

Table 1. Treatment modalities reviewed by Holder et al., (1991); Number of studies, studies with positive results and Weighted Evidence Index

	n[a]	+[b]	WEIn[c]
Good evidence of effect (+6 or higher)			
Social skills training	10	10	+18
Self-control training	17	12	+17
Brief motivational counselling	9	8	+13
Marital therapy, behavioural	7	7	+12
Community reinforcement approach	4	4	+6
Stress management training	10	6	+6
Fair evidence of effect (+2 to +5)			
Aversion therapy, covert sensitization	7	4	+3
Behaviour contracting	4	3	+3
Disulfiram, oral	10	5	+3
Psychotropic medication, antidepressants	4	3	+3
Disulfiram, implants	5	3	+2
Indeterminate evidence of effect (-1 to +1)			
Marital therapy, other (non-behavioural)	3	1	+1
Psychotropic medication, lithium	6	3	+1
Cognitive therapy	7	3	0
Hypnosis	4	2	0
Insufficient evidence (fewer than 3 studies)			
Acupuncture	1	1	+1
Calcium carbimide	1	1	+1
Residential milieu, Minnesota model	1	1	+1
Residential milieu, halfway house	1	0	-1
Alcoholics Anonymous	2	0	-2
Aversion therapy apnoea	2	0	-2
Psychotropic medication, antipsychotic	2	0	-2
No evidence of effect (-2 or lower)			
Aversion therapy, electrical	15	5	-2
Aversion therapy, chemical (nausea)	5	1	-3
Confrontational interventions	4	0	-4
Psychotherapy (individual)	8	2	-4
Psychotropic medication, psychedelic	8	2	-4
Videotape self-confrontation	4	0	-4
Educational lectures/films	9	2	-5
Psychotropic medication, anti-anxiety	10	2	-6
Counselling, general	9	1	-7
Metronidazole	10	1	-8
Group psychotherapy	13	2	-9
Residential milieu treatment	14	1	-12

[a] Total number of controlled studies
[b] Number with positive results
[c] Weighted Evidence Index (see text)

Table 2. Rankings by effectiveness indices of 24 treatment modalities reviewed by Holder et al. (1991) and by Finney and Monahan (1996)

Holder et al. Index[a]	Modality	Modality	Finney and Monahan Index[b]
18	Social skills training	Community reinforcement approach	59
17	Self-control training	Social skills training	37
13	Brief motivational counselling	Marital therapy, behavioural	36
12	Marital therapy, behavioural	Disulfiram, implants	34
6	Community reinforcement approach	Marital therapy, other (non-behavioural)	21
6	Stress management training	Stress management or other relaxation training	12
3	Disulfiram, oral	Aversion therapy, chemical (nausea)	3
3	Aversion therapy, covert sensitization	Psychotropic medication, antidepressants	2
3	Psychotropic medication, antidepressants	Psychotropic medication, lithium	-2
2	Disulfiram, implants	Brief motivational counselling	-4
1	Marital therapy, other (non-behavioural)	Aversion therapy, covert sensitization	-5
0	Cognitive therapy	Aversion therapy, electrical	-5
0	Hypnosis	Self-control training	-7
1	Psychotropic medication, lithium	Cognitive therapy	-8
-2	Aversion therapy, electrical	Educational films/lectures	-11
-3	Aversion therapy, chemical (nausea)	Group Therapy	-13
-4	Confrontational interventions	Psychotropic medication, LSD	-15
-4	Psychotropic medication, psychedelic	Psychotropic medication, anti-anxiety	-17
-5	Educational lectures/films	Metronidazole	-21
-6	Psychotropic medication, anti-anxiety	Disulfiram, oral	-27
-7	Counselling, general	Residential milieu	-27
-8	Metronidazole	Confrontational interventions	-31
-9	Group psychotherapy	Counselling, general	-32
-12	Residential milieu treatment	Hypnosis	-37

[a] Using a Weighted Evidence Index (see text)
[b] Using a relative effectiveness approach (see text)

It is important to note that most of the studies considered have not used complete abstinence as the sole or even principal measure of success. Rather, they have used multiple and usually continuous outcome measures (e.g., percentage of drinking days, amount consumed per drinking occasion). This reflects a view of substance abuse as a chronic relapsing condition for which goals of either improvement or "cure" may be appropriate. As with other chronic conditions (e.g., asthma, obesity or late onset of diabetes), it may be unrealistic to expect that substance abuse will be completely or permanently eliminated following a single intervention. However, significant improvements may follow appropriate interventions and these will be detected with the use of appropriate measures.

The increasing use of multiple and continuous outcome measures also reflects an emerging consensus about what to expect from treatment. Some reasonable goals have been proposed by McLellan et al. (1996), including the expectation that treatment should be of benefit not only to the person treated, but to those who are affected by this person, such as family members, health care providers and insurers, employers, and those who work in the correctional system. Outcomes of interest should therefore relate to alcohol and drug use, health and social functioning, use of health services and threats to public safety. To be considered successful, treatment should result in some reductions in at least one of these domains – preferably without a corresponding increase in other domains. In some cases, changes in risk behaviours and in harms associated with drug use (e.g., infections due to needle sharing or accidents due to impaired driving) may be a more realistic goal than complete abstinence, or even reduced substance use. In other cases, reduced or "controlled" substance use may be a realistic expectation, especially for those who are not heavily dependent.

Outcome measures used in the studies reviewed below varied considerably. This is a regrettable feature of substance abuse treatment outcome research and seriously limits comparisons of the results from different studies.

Table 3. Classification scheme used for the review of specific treatment modalities according to type

Type of Modality	Specific Modalities
Pharmacotherapies	**Antidipsotropic Drug Therapy for Alcohol:** - disulfiram, implants, oral - metronidazole - calcium carbimide **Anti-craving Drug Therapy for Alcohol:** - fluoxetine, zimelidine, citalopram - buspirone, ritansarin - naltrexone* **Psychotropic Drug Therapy for Alcohol:** - antianxiety drugs - lithium - antipsychotic drugs - antidepressants - psychedelics **Treatment for Other Drugs:** - buprenorphine, naloxone - bupropion - heroin - methadone - clonidine, naltrexone, LAAM, codeine
Behaviour therapies	**Aversion Therapies:** - covert sensitization - electrical aversion - nausea induction **Other Behaviour Therapies:** - behavioural contracting - behavioural relapse prevention - behavioural self- control training - cognitive therapy - community reinforcement approach - cue exposure - marital behavioural therapy - social skills training - stress management - video self-confrontation
Psychotherapeutic approaches	**Counselling, general** **Confrontational Interventions** **Group Psychotherapy** **Individual Insight-Oriented Psychotherapy**
Other approaches	**Brief Motivational Counselling** **Education** **Hypnosis** **Residential Milieu Therapy:** - Minnesota model - therapeutic community* **Alcoholics Anonymous**

* No relevant studies included in Holder et al review.

a) Pharmacotherapies

Included under this heading is any treatment involving the administration of drugs. Four classes of drugs are considered: antidipsotropic drugs that induce an unpleasant reaction when used with alcohol; anti-craving drugs that reduce the craving for alcohol; psychotropic drugs that are prescribed to improve the user's psychological status, on the assumption that this will result in reduced drinking; and pharmacotherapies for drugs other than alcohol. However, only antidipsotropic and psychotropic drugs were considered in the reviews by Holder et al. (1991) and Finney and Monahan (1996).

As can be seen from Table 1, Holder et al. identified 10 controlled studies of oral disulfiram, five studies of disulfiram implants, one study of oral calcium carbimide, 10 studies of metronidazole, four studies of antidepressants, six studies of lithium, two studies of anti-psychotic drugs and eight studies of psychedelics (LSD) and 4 studies of antidepressants.

Finney and Monahan (1996) do not use Holder et al.'s categories to classify these types of drug treatment as having "good," "fair," etc., evidence of effectiveness. However, the rankings given to specific drugs by Holder et al. and Finney and Monahan show some similarities and some differences (see Table 2).

These differences reflect differences in the studies selected for review, the comparisons made and methods of analysis. Landry (1995) points out that various studies may have produced dissimilar results because they involved patients with different characteristics and motivations.

Antidipsotropic Drug Therapy for Alcohol: *Disulfiram implants* are ranked 10th by Holder et al. and are considered to have "fair" evidence of effectiveness. However, Finney and Monahan rank these implants in fourth place and compute an effectiveness index that is similar in size to those computed for social skills training and marital behavioural therapy. The rankings for oral disulfiram are also quite different in the two schemes. Holder et al. rank *oral disulfiram* in seventh place and consider that there is "fair" evidence for its effectiveness. In contrast, Finney and Monahan put oral disulfiram in 20th place with a high negative effectiveness index.

Landry also suggests that disulfiram therapy can be an effective adjunct to a comprehensive treatment program that includes methods to: help patients adhere to the disulfiram regimen; increase motivation for compliance; and promote relapse prevention.

A recent review of studies of disulfiram (Hughes and Cook, 1997) examined 24 outcome studies of oral disulfiram and 14 studies of disulfiram implants. In general, these studies were considered to be methodologically weak and their interpretation was hampered by differences in methods and subjects. Often, subjects in studies of oral disulfiram were coerced into treatment. The reviewers conclude that these studies do not support disulfiram implants and provide mixed support for oral disulfiram. Oral disulfiram seemed to be most useful when used selectively with patients involved in comprehensive programs. Although limited, the evidence suggested socially

stable clients are more likely to benefit from disulfiram than others. A similar conclusion was reached following a review of anti-alcohol medications by Correctional Service of Canada (1996). This review also noted that patients who were highly motivated and compliant also benefit more from anti-alcohol drugs than others.

Metronidazole, another antidipsotropic medication used in the 1960s and 1970s, was not judged to be effective by either Holder et al. or Finney and Monahan. Similarly, the evidence for the use of *calcium carbimide* was too limited to merit definite conclusions.

Anti-craving Drug Therapy for Alcohol: Drugs used for this purpose are *fluoxetine, zimelidine and citalopram*. Placebo controlled double-blind trials using these drugs with non-depressed, mildly/moderately dependent alcoholics have consistently decreased short-term alcohol intake by an average of 10% to 20% (Anton, 1994). Other drugs, for example *5-HT agonist buspirone* and *5-HT antagonist ritansarin*, may reduce craving, but results of controlled trials are inconsistent. More recent studies of controlled clinical trials have found no difference in outcomes in either depressed or non-depressed alcoholics, when compared with use of placebos (Naranjo and Bremner, 1994).

Another drug that has recently been used in studies involving social and heavy drinkers is *naltrexone*. This is an opiate antagonist that also seems to reduce craving for alcohol. In several studies, including those with alcohol-dependent subjects, those receiving naltrexone drank on fewer days and were less likely to relapse to heavy drinking than those given a placebo (Volpicelli et al., 1994). Naltrexone has recently been approved for use in alcohol treatment in both the United States and Canada, and is increasingly recognized as a valuable component of comprehensive treatment.

***Psychotropic Drug Therapy for Alcohol*:** This class of drugs includes anti-anxiety drugs, lithium, anti-psychotic drugs, anti-depressants and psychedelics. Holder et al. (1991) concluded that there was fair evidence to support the use of antidepressants in the treatment of alcohol problems and the evidence for other drugs was either indeterminate (lithium), too limited to merit definite conclusions (antipsychotic medication) or clearly not supportive of their use (psychedelics, antianxiety drugs). Finney and Monahan (1996) also gave antidepressants a similar ranking to Holder et al., and the rankings they gave to other psychotropic drugs indicates insufficient support for their use.

Treatment for Other Drugs: A variety of drugs has been used to treat people dependent on drugs other than alcohol, but there have been few controlled trials. The *NIDA Review* (1996) describes research in progress to determine the effectiveness of various drugs to treat heroin addiction. One such drug is *buprenorphine*. This is a partial opiate agonist that appears to reduce craving for heroin. However, to reduce the abuse potential of this drug, naloxone, an opiate antagonist, is presently being combined with buprenorphine in tablet form. Buprenorphine has not been approved for use in Canada.

The *NIDA Review* also notes several drugs that are currently being researched to reduce craving for cocaine. Also, trials are under way to develop a cocaine-like compound to immunize against cocaine. The review also notes that there is some evidence that *bupropion*, an antidepressant, may reduce cocaine use in moderately depressed clients who use cocaine and crack.

Heroin, has been used as a "maintenance" drug in the United Kingdom and there is evidence of beneficial short-term effects, with some individuals having been successfully stabilized on prescribed heroin for many years (Mitcheson and Hartnoll, 1978; Stimson and Oppenheimer, 1982). However, the prescription of heroin for addiction is currently quite rare in the United Kingdom. An ongoing study in Switzerland has shown that the prescription of heroin for intravenous use, or a prescription for intravenous methadone, is associated with significant improvement in health and lifestyles of heavily dependent socially marginalized narcotic addicts. In some cases, these positive outcomes have been sustained over more than two years (Uchtenhagen et al., 1996).

Methadone, is a synthetic, long-acting opiate-like drug that has been used extensively either to support addicts being withdrawn from opiate use or as a treatment maintenance drug. Methadone substitutes for other opiates and thereby prevents the onset of withdrawal symptoms and blocks the euphoric effects of heroin. Methadone's oral use eliminates the hazards of injection drug use.

There have been many studies of methadone maintenance treatment (Hall, 1996) and it is clear that, in adequate doses and with supportive therapy, methadone reduces illicit opiate use and criminal activity, improves social health and productivity, improves physical health, reduces HIV transmission, and improves pregnancy outcomes for addicted women. Methadone is also safe for long-term use and outcomes are positively associated with retention in treatment (Landry, 1995).

A review of methadone treatment by the Institute of Medicine (1990) in the United States concluded that methadone dosages should be individually tailored. However, the review also noted that patients maintained on higher doses (80 mg) generally do better than those on lower doses.

Research has also shown that methadone maintenance treatment pays for itself in economic terms. Studies by the National Institute on Drug Abuse in the United States have estimated that in 1991, the costs to society of an untreated heroin user on the street was US$43,000 and the cost of keeping the individual in jail or in a drug-free program were US$34,000 and US$11,000, respectively. However, the cost of one year of methadone maintenance treatment was only US $2,400.

Other drugs that can be used in the treatment of heroin addiction are *clonidine* (for the treatment of withdrawal), *naltrexone* (blocks the effects of opiates), *LAAM* (l-alpha- acetylmethadol) and *codeine* . LAAM is like methadone, but its effects last longer and it can be taken only every 72 hours (methadone is usually taken every 24 hours). None of these drugs is used extensively and LAAM has not been approved for use in Canada.

Best Practice Guideline

(No. 1)

There is a definite role for pharmacotherapies, if used in a controlled setting, as an adjunct to other forms of treatment. Those drugs which have addictive potential must be used with caution and monitored on a regular basis.

Selective use of *disulfiram* by socially stable, motivated clients, as an adjunct to comprehensive therapy, is supported by the literature.

Naltrexone can be an effective adjunct to other forms of treatment by reducing craving for alcohol.

Methadone, in adequate doses and with supportive therapy, is effective in reducing illicit opiate use, criminal activity and HIV transmission. Therapy involving methadone can improve social functioning, physical health and productivity and, in certain instances, can lead to cessation of heroin use. Better outcomes are achieved with longer retention in treatment.

b) Behaviour therapies

A broad range of specific treatment strategies fall under this general heading. They are connected by their reliance on principles of learning. As can be seen from Table 3, 13 specific types of behavioural treatments fall into this category. These are grouped under two headings: aversion therapies and other behaviour therapies.

Aversion therapies, when used in the treatment of alcohol problems, are designed to induce a conditioned avoidance of alcohol by pairing the actual or imagined drinking of alcohol with unpleasant experiences. A variety of unpleasant experiences has been used, including electric shocks, nausea and vomiting, respiratory paralysis (apnea) and imagined adverse consequences (covert sensitization).

Covert sensitization. The seven relevant studies located by Holder et al. were judged to provide a fair degree of support for this type of treatment. However, studies of covert sensitization received a negative score (-5) on the index developed by Finney and Monahan. The differences reflect the fact that Finney and Monahan drew different conclusions from two studies judged positive by Holder et al., and included two studies omitted from the Holder et al. review (both showing no benefits for covert sensitization).

Electrical aversion. Holder et al. located 15 controlled studies of electrical aversion therapy and concluded that, overall, the results did not show this to be effective.

Nausea induction was also judged to be ineffective in light of the results of five controlled studies.

Finney and Monahan also gave quite low effectiveness scores for both of these types of treatment (electrical aversion and nausea induction), although nausea induction ranked rather higher on their effectiveness index than on the index used by Holder et al. However, these differences do not appear sufficient to warrant changes to Holder et al.'s overall conclusions.

No controlled evaluations of aversion treatment for drugs other than alcohol could be located.

Other behaviour therapies include those that seek to identify and modify maladaptive thoughts, beliefs, behaviours or, in some cases, emotional states, that contribute to problem drinking or drug use.

Behavioural contracting involves the use of specific environmental contingencies such as behaviour prompts and the reinforcement of behaviours that are incompatible with drinking or drug use. As described by Landry (1995), behavioural contracting might involve an agreement to participate in a urine-monitoring program and to accept aversive consequences for non-participation. Aversive consequences might include additional treatment, ejection from home or spouse-initiated divorce proceedings. Holder et al. identified four relevant studies and concluded that there was a fair amount of support for this type of treatment. Finney and Monahan concluded that only two of

the four studies identified by Holder et al. qualified as controlled studies of behavioural contracting and that both studies showed this type of treatment to be effective. No index score was computed because there were fewer than three relevant studies. Landry considers that behavioural contracting can be effective in the context of a comprehensive treatment program.

Behavioural relapse prevention targets cognitive mediational processes such as expectancies and self-efficacy and are often part of a more comprehensive program. Consistent with the classification scheme used by Holder et al., other strategies typical of "relapse prevention" programs, such as social skills training, are considered under separate headings. However, it is recognized that, in practice, "relapse prevention" programs have a variety of specific components (i.e., identification of high-risk situations, instruction in and rehearsal of strategies for coping with those situations, relaxation training, stress management and efficacy-enhancing imagery, skills training and relapse rehearsal, contracts to limit extent of use and cognitive restructuring to cope with relapse). Relapse prevention can stand alone or be part of a treatment modality.

A full discussion of relapse prevention is to be found in Marlatt and George (1984) and Carroll (1996) who reviewed controlled studies of relapse prevention programs for smokers and people with alcohol and drug problems. Carroll found that 9 out of 12 studies of relapse prevention for smoking cessation had significant positive effects. Three of the 6 studies involving alcohol abusers reported positive effects, but only 1 of 5 studies involving users of other drugs showed positive effects.

There do not appear to have been any peer-reviewed scientific studies of the approach to relapse prevention promoted by the popular speaker Gorski (1989). Although Gorski's approach has features in common with the approach described by Marlatt and Gordon (1984), Gorski's approach differs in being firmly rooted in the AA, 12-step approach.

Behavioural self-control training involves the teaching of specific self-management skills to reduce or avoid alcohol consumption. Of 17 studies of behavioural self-control training (BSCT), 12 showed positive effects while 5 showed no effects; Holder et al. concluded that, overall, these studies provided good evidence for the benefits of this type of treatment. However, Finney and Monahan computed a negative effectiveness score (-7) for BSCT. The most likely explanation for this difference is that some studies included in the Holder et al. review were excluded from the review by Finney and Monahan and vice versa. This also reflects differences in the way in which these two groups of reviewers judged the quality and relevance of particular studies.

Hester (1995) also reviewed 30 studies of self-control training for the treatment of alcohol dependence. Hester concluded that brief interventions and self-directed BSCT are often as effective as more extensive therapist-directed treatments; and, BSCT with a goal of moderation has been found to be less effective than an abstinence-oriented approach for more severely dependent clients.

Best Practice Guideline

(No. 2)

There is some support in the literature for behavioural relapse prevention programs for smokers and people with alcohol problems. The literature also provides support for the effectiveness of behavioural self-control therapy for those with less severe drinking problems, as a cost-effective alternative to extensive therapist-led approaches, and for behavioural contracting in the context of a comprehensive treatment program.

Cognitive therapies include approaches that seek to identify and change maladaptive thoughts or beliefs that contribute to problem drinking. Holder et al. reviewed seven studies of cognitive therapies and concluded that, on aggregate, the evidence for their effects was indeterminate. This is consistent with Finney and Monahan who computed a negative effectiveness score (-8) for cognitive therapy.

Community reinforcement. This approach combines several methods to focus on the social functioning of the client. It has been evaluated only for people with alcohol problems. The approach aims to change the drinker's environment to make abstinence more rewarding than drinking. It involves the use of social, recreational, familial and vocational reinforcers to assist clients in the recovery process. The approach involves the use of a functional analysis to determine antecedents and consequences of drinking, setting goals for sobriety, an option to choose to use disulfiram, and the development of a treatment plan involving basic skills of communication, problem solving and refusing drinks. In some studies, clients could also attend a job-finding club, receive social and recreational counselling, marital therapy and relapse prevention training. Combining the strengths of a number of therapies may explain the effectiveness of this approach. Holder et al. located four studies using this approach, and judged them to provide good evidence of its effectiveness. This approach has been recently reviewed by Smith and Myers (1995) who report that it is also being used with users of other drugs. Community reinforcement also received the highest score on the effectiveness index developed by Finney and Monahan (+59).

One component of the community reinforcement approach is job finding. This was a prominent feature in one recent study involving violent criminal offenders with alcohol problems (Funderburk et al. 1993). The study involved the mobilization of community resources to improve the offenders' job-finding skills. A one-year follow-up showed that employment levels were significantly improved compared to intake.

Cue exposure. Holder et al. did not include any studies of cue exposure in their review because no controlled studies of this method were available at the time. This approach is based on the assumption that craving and withdrawal are conditioned responses that can be extinguished by

exposing drinkers and drug users to drinking or drug use cues without also providing alcohol or drugs. These cues include the sight, taste and smell of alcohol, syringes or pictures of bars or drug-taking environments. In some cases, drinkers have been given small doses of alcohol and then prevented from further drinking. Research results from studies involving heavy drinkers have been mixed, but some experts suggest that they show cue exposure has potential as a treatment intervention (e.g., Drummond, 1990; Rohsenow et al., 1990-91). However, it appears that extinction and habituation to drug-related cues are unstable and dependent on context (Tobena et al., 1993). One recent controlled study involving opiate users showed no differences between those treated with cue exposure and those in a control group when a variety of measures were applied six weeks and six months after treatment (Dawe et al., 1993).

Best Practice Guideline (No. 3)

The community reinforcement approach has consistently been shown to be effective, particularly with clients having fewer social supports and more severe drinking problems.

Marital behavioural therapy seeks to improve communication and problem-solving skills, and to increase the exchange of positive reinforcement between partners. Components of marital therapy can include teaching alcohol-specific communication skills as well as general marital relationship skills. Seven relevant studies were identified by Holder et al. who concluded that, on aggregate, these studies provided good evidence of the effectiveness of marital behaviour therapy. Finney and Monahan also give a high positive score for this type of intervention. Marital therapy has been shown to be equally effective in both brief and more extended formats (Zweben, Pearlman and Li, 1988). The NIDA *Review* (1996) indicates that the benefits of marital therapy may not be immediately apparent, but may become evident only in the long term as new skills become integrated into the partners' repertoire.

Best Practice Guideline (No. 4)

Marital therapy, particularly marital behavioural therapy, in both brief and extended formats, is well supported by research.

Social skills training involves teaching clients how to form and maintain satisfying personal relationships. Often, the emphasis is on assertiveness. Holder et al. identified 10 relevant studies and concluded that they provide good evidence for the effectiveness of this approach. The weighting given to these studies was, in fact, the highest of all on the Holder et al. index and second highest on the Finney and Monahan index. Heather (1995) has also assessed this approach to be one of the most effective.

Monti et al., (1995) provide a good description of the specific strategies used in social skills training. These focus on both interpersonal and intrapersonal coping skills. Interpersonal skills include drink-refusal skills, giving positive feedback, giving and receiving criticism, listening and conversation skills, expressing feelings and assertiveness. Intrapersonal skills involve mood management, managing thoughts about drinking, coping with craving, dealing with negative thoughts, coping with urges to drink and decision making. This approach has been used effectively with a variety of substance abuse and psychiatric disorders, and particularly with (early-stage) problem drinkers. It was included as one of the types of treatment studied in Project MATCH (see section 2).

Best Practice Guideline (No. 5)

Social skills training is strongly supported by research, particularly with problem drinkers.

Stress management involves teaching clients how to reduce personal tension and stress. Specific techniques include relaxation training, systematic desensitization and cognitive strategies. The goal is to enable clients to gain control of their reactions to stress by: altering the perception of threat posed by the stressor; altering lifestyle to reduce the severity of external stressors; and, developing coping strategies to inhibit or replace disabling responses to stressors (Stockwell, 1995). This approach is often used as one component of a treatment program, making it difficult to assess its effectiveness in isolation.

Ten controlled studies of stress management were identified by Holder et al. and these were judged to provide good evidence for the effectiveness of this type of treatment for people with alcohol problems. Finney and Monahan computed a relatively low positive score for stress management, but ranked it in the same place as Holder et al. (rank 6 of 24 modalities). Stockwell (1995) suggests that there is a need for more well-designed studies of this type of treatment.

Best Practice Guideline (No. 6)

There is good support for stress management interventions as a component of treatment for alcohol problems.

Video self-confrontation. This strategy involves making a videotape of a drinker while intoxicated and playing it back to the drinker when he/she is sober. Studies of video self-confrontation were judged by Holder et al. to have shown no evidence that this type of treatment is effective, while Finney and Monahan did not include it in their review.

c) Psychotherapeutic approaches

The term "psychotherapy" has come to be used to refer to a wide variety of therapies that variously seek to give clients insight into their behaviours and to help them resolve conflicts originating in childhood experiences. Many of the other approaches currently applied to substance abuse treatment have their origins in psychotherapy (e.g., functional analysis was used by Otto Rank). The various psychotherapies are often complex and the course of therapy unpredictable, rendering them more difficult to evaluate using experimental methods.

Consistent with the scheme developed by Holder et al., four types of treatment will be considered under this heading: general counselling; confrontation; group psychotherapy; and individual insight-oriented psychotherapy.

General counselling refers to a supportive, directive, reality-based treatment, which is not specifically behavioural or confrontational. Holder et al. identified nine controlled studies of general counselling and concluded that, on aggregate, there was no evidence for the effectiveness of this approach. General counselling also received one of the highest negative scores on the Finney-Monahan index (-32).

Confrontational Interventions as defined by Holder et al. are concerned with breaking down defence mechanisms, especially denial. Confrontation often involves forceful feedback aimed at countering "resistance" to change. Holder et al. found four studies of confrontation and none supported its use. It has also been suggested that confrontation might have a negative effect by

increasing resistance or lowering self-esteem (Eliany and Rush, 1992). Finney and Monahan ranked the effectiveness of confrontation near the bottom of all interventions considered (22 of 24).

Group psychotherapy is used extensively in addiction treatment, but the format and focus of groups vary widely. Some are confrontational while others are supportive and client-centred. However, as defined by Holder et al., behavioural and marital therapies fall outside the range of interventions considered under this heading. Holder et al. identified 13 studies of group therapy and found that only two had positive results. It should be noted that these reviews refer to studies of group psychotherapy, and not to the issue of the relative effectiveness of delivering treatment in an individual or group format.

Holder et al. concluded that overall there is no evidence that group psychotherapy works for alcoholics. Finney and Monahan's effectiveness score for group therapy was quite negative (-13), although it ranked somewhat higher on the Finney-Monahan scale than on the index used by Holder et al. (positions 16 vs. 23). This does not seem to seriously challenge Holder et al.'s conclusions about the lack of evidence for the effectiveness of group therapy.

Individual insight-oriented psychotherapy seeks to uncover unconscious conflicts and dynamics that are believed to cause excessive drinking. Major goals are to give clients insight into their problems and to help them work through unresolved conflicts originating in childhood experiences. Holder et al. identified eight studies of this type of therapy and concluded that there was no evidence of its effectiveness for people seeking treatment for alcohol problems. Finney and Monahan reclassified or excluded seven of these studies but noted that the one remaining study showed some benefit from psychotherapy.

d) Other treatment approaches

Brief motivational counselling is based on the work of Carl Rogers (Miller, 1983) and typically involves one to three sessions of motivational feedback and advice based on individualized assessment. The method has been systematically evaluated with drinkers only and Holder et al. identified nine relevant studies. They concluded that there was good evidence for the effectiveness of this approach and it came third when ranked with 23 other modalities. However, Finney and Monahan's index score was negative for this type of treatment (-4) and it came 10th when 24 modalities were ranked on this index. One explanation for these differences is that Finney and Monahan's review took account of the fact that most trials of brief motivational counselling compared this intervention with weak alternatives such as no treatment or waiting list controls, or with treatment for which there was no evidence of effectiveness. Brief motivational counselling appeared less effective when compared with more potent interventions. However, in the large US study, Project MATCH, brief motivational counselling demonstrated a level of effectiveness similar to two more intensive treatments, but the results of Project MATCH were not available at the time that the Finney-Monahan review was published (see section 2).

Education about the effects of alcohol and other drugs is often a component of addiction treatment. However, as indicated by Holder et al., there is no evidence that education per se influences post-treatment behaviours. The Finney-Monahan index score was also quite negative for education (-11). However, education can increase knowledge and change attitudes, and this may be a prerequisite to behaviour change in some types of substance users.

Hypnosis was considered ineffective or unproven by both Holder et al. and by Finney and Monahan.

Residential milieu therapy is defined as an intensive exposure to a therapeutic environment. Under this category, Holder et al. and Finney and Monahan consider halfway house settings, residential treatment using the Minnesota model approach and therapeutic communities. As Holder et al. note, communal residential living is itself a therapeutic milieu, whether or not there is also a structured treatment program. Residential milieu therapy was found to be unproven or ineffective by Holder et al. and by Finney and Monahan.

Minnesota model. As noted by Landry (1995), residential milieu therapy is one component of what has come to be called "traditional" or "Minnesota-model" alcoholism treatment in the United States. Other components of this model include the promotion of a "disease model" of alcoholism and the need for complete abstinence, the 12 steps of AA, use of group therapy and the heavy involvement of "recovering" counsellors. Uncontrolled studies show that participation in these treatment programs is associated with reduced drinking and drug use and other positive outcomes. One controlled study in Finland also showed positive results (Keso and Salaspuro, 1990). However, it has not been convincingly demonstrated that the benefits of this approach are tied to the residential milieu component. Rather, it appears that the residential phase is less important than the provision of a continuum of services, especially continuing care and post-treatment involvement in AA.

Therapeutic community. One form of residential milieu therapy used in the treatment of opiate and other drug users is the therapeutic community. These communities were prevalent in Canada during the 1970s, but many have since been closed. However, there are still several well-established programs in Quebec (Portage and Patriache) and in Ontario (Stonehenge). Many therapeutic communities are rather rigidly run and have a "militaristic" culture that relies heavily on the use of confrontation, but there are many variations (Landry, 1995). Smart (1993) considers evidence for the effectiveness of therapeutic communities to be rather elusive. Although those who complete the required period of residence (one year or more) tend to do well after leaving, dropout rates tend to be very high (up to 90%). Early dropouts usually relapse to drug use, but there is evidence of good outcome for those who stay for at least one third of the required time (Landry, 1995).

Alcoholics Anonymous is not really a treatment for alcoholism but a community resource for those wishing to stop drinking. Uncontrolled studies of AA have shown that people who affiliate with AA tend to stop drinking and find that their lives improve in many respects (Emrick et al. 1993). However, evaluating AA alongside professionally delivered interventions presents problems and perhaps should not be done. AA is not a fixed form of "treatment" and people are free to participate in different ways. Some go a few times and then drop out. Others go more often, but do not actively participate in meetings or "work the program." It is possible that both dropouts and passive participants gain some benefit from the AA experience, but this has not been adequately researched. Only a minority of those ever exposed to AA seem to become full, active members over a long period and consistently "work" all the steps. There is evidence that certain types of people may be more likely to fully affiliate with AA than others (Ogborne and Glaser, 1981; Emrick et al., 1993), but more research is needed and some studies may no longer be relevant given the current range and diversity of AA groups. However, it seems likely that AA would appeal to those who have experienced serious alcohol-related problems and who can accept the need for abstinence and the "alcoholic" label.

When professionals refer clients to AA on the assumption that they will benefit from such referrals, it is reasonable to ask about the outcomes of these referrals and to compare these outcomes with those achieved by other means. Holder et al. identify two studies in which alcoholics were referred to AA by the courts (Ditman et al., 1967 and Brandsma, Maultsby and Walsh, 1980). One study in which subjects in an employee assistance program (EAP) were required to attend AA under threat of job loss has also been reported (Walsh et al., 1991). In no case did the results favour AA and this should discourage courts and employers from mandating AA attendance. However, Project MATCH (1997) included a 12-step facilitation intervention and results showed that those who were encouraged to go to AA did as well as those provided with other interventions. Finney and Monahan did not compute an index score for studies of AA.

There appears to have been no significant research studies of Narcotics Anonymous or other self-help groups for people with substance abuse problems.

2. Matching Clients with Treatments and Therapists

The notion that some clients may do better in some treatment and with some therapists than others has been of concern for some time. The Institute of Medicine report (1990) and a variety of studies have suggested that this is the case.

One relevant study was done at the Donwood Institute in Toronto by Dr. John McLachlan (McLachlan, 1972). It involved alcoholics who had been treated by therapists who were more or less "directive" in their treatment styles. The most directive therapists tended to have clear rules, to be very consistent and to run highly structured treatment sessions. Less directive therapists were more "laid back" and encouraged more self-expression and autonomy. By chance, some patients assigned to different types of therapists differed in what McLachlan called "conceptual level". Basically, this referred to differences in personality and thinking styles resulting in differences in the need for structure and guidance.

McLachlan followed up patients treated by different therapists and found that those whose conceptual levels matched therapists' styles did better than others. Thus, patients with a need for structure did best with directive therapists and vice versa. On the other hand, "mismatched" patients did less well with both types of therapists.

A variety of other positive matches has been found involving different therapies and the following client characteristics: gender, ability to recognize problem drinking situations, beliefs about alcoholism, family history of alcoholism, sociopathy, locus of control and self-image (see Mattson, 1994 for a review). However, most of these matches have not been consistently replicated.

The only large-scale study of client-treatment matching was Project MATCH (1997). This multi-site United States study was designed to test whether different types of alcoholics respond differently to different type of treatment. The treatment types selected for study were: 12-step facilitation where clients were encouraged to join AA; cognitive behavioural therapy, based on social learning theory; and motivational enhancement therapy, based on motivational psychology. Patients were randomly assigned to treatment and, in ex post analyses a variety of hypotheses was tested concerning interactions between treatment types and severity of alcohol involvement, cognitive impairment, psychiatric severity, conceptual level, gender, meaning-seeking, motivational readiness to change, social support for drinking versus abstinence, sociopathy and type of alcoholism.

The Project MATCH Research Group (1997) reported that only one hypothetical "match" was clearly supported by the data. This proposed that clients with low psychiatric severity would do best in the 12-step facilitation condition. The results showed that these clients had more abstinent days during six and twelve months of follow-up than those treated with cognitive behavioural therapy. However, the extent to which clients in either condition became involved in AA during the follow-up period has not been reported.

One explanation for the failure of Project MATCH to find more interactions is that there were "ceiling" effects due to client selection and the use of three quite powerful interventions. The overall results of the study were quite impressive and the majority of clients in each condition showed significant and sustained reductions in alcohol use over the follow-up period. The selection of socially stable and research-compliant clients, together with the high quality of the three types of treatment, certainly contributed to these results and may have left little room for matching effects to show up.

Project MATCH is considered by some to have laid the matching hypothesis to rest, but others remain unconvinced (e.g. Glaser, 1997). Among other concerns, the study has been criticized for not really "matching" clients to treatment because clients had no say in the treatment they received. Also, important matches involving therapist characteristics, or pharmacological treatment, were not tested. Of course, the study focused only on people with drinking problems and not on those with other drug problems.

Large-scale studies that addressed the issue were conducted during the 1970s by Sells and Simpson (Sells, 1974; Sells and Simpson, 1976), and in the 1980s by Hubbard et al. (1984). In general, these do not provide strong evidence for the benefits of matching drug users to treatment, but suggest that, controlling for client characteristics, treatment types in common use in the United States (methadone, therapeutic community, drug-free outpatient) may be equally effective.

Overall, the evidence in favour of matching clients to treatment methods is currently rather weak. However, this does not mean that one treatment will suit all. Clients require an individualized, flexible approach to address a variety of needs. Some clients need services for mental health problems, others require help with employment and other social problems, and some will need temporary or longer-term shelter. Attention to these problems is essential if those involved are to achieve and maintain improvements in substance use behaviours.

Guidelines for the selection of appropriate types and levels of care should therefore be developed and evaluated. As indicated in Profile – Substance Abuse – Treatment and Rehabilitation in Canada, such guidelines are being developed in a number of provinces/territories.

Best Practice Guideline

(No. 7)

Although the literature does not yet provide strong evidence by which to match clients to specific treatment interventions, it does not mean that all clients require the same types of services. A variety of flexible and individualized services is required and guidelines for the selection of appropriate services are needed.

3. The Influence of Other Factors on Treatment Effectiveness

a) Individual versus group treatment

Although ***group therapy*** per se has not received much support from empirical studies, many therapists share the view that other treatments can be effective when offered in group format. Groups have the advantage of economy, since a number of individuals seeking treatment can be accommodated at one time. They also have the benefit of facilitating identification with others having similar problems, thus overcoming feelings of isolation. Groups provide clients with an opportunity to learn from, and give support to, each other. They can instill hope, encourage information sharing and provide role models. The group allows participants to find new ways to express themselves, or to review old conflicts in a supportive environment.

Two Canadian studies directly address the issue of group versus individual treatment for a behaviourally oriented treatment. The first study showed that a structured relapse prevention treatment was equally effective when delivered in individual or group formats (Graham, Annis, Brett and Venesoen, 1996). The second study by Sobell and colleagues (Sobell et al., 1995) also found that the group format was as effective as the individual format. However, the group format was also 40% cheaper.

Best Practice Guideline (No. 8)

Consideration should be given to providing treatment in a group format unless otherwise contraindicated.

b) The influence of setting[3]

Addiction service providers are divided in their views on the benefits of providing treatment on a residential versus outpatient basis, and the benefits of long-term over shorter treatment. With respect to alcohol problems, there is very little evidence that providing treatment on a residential basis is superior to treatment provided on an outpatient or day basis (Annis, 1986). Although Finney, Hahn and Moos (1996) proposed that some studies have shown the superiority of residential over outpatient treatment, these conclusions were not clearly supported when the relevant studies were re-analyzed using more appropriate methods (Finney and Moos, 1996).

3 This section was written by Dr. Garth Martin of the Addiction Research Foundation Division of the Centre for Addiction and Mental Health.

There have been few controlled studies comparing the effectiveness of treatment provided on a residential basis with less intensive alternatives for abusers of drugs other than alcohol. Alterman et al. (1994) randomly assigned 111 inner city, cocaine-dependent males (mainly African American) to either day or inpatient treatment. Study exclusion criteria included: "psychosis, dementia and general psychiatric instability"; meeting DSM-III-R criteria for abuse of any drug other than alcohol, marijuana, cocaine and nicotine; and having a stable residence. Subjects had an average age of 34, a three-year history of cocaine use, had used cocaine on about 13 days in the past 30 and had spent $700 on drugs during this period. Smoking was the primary route of administration of cocaine for almost all subjects. There were no significant pre-treatment differences between the groups, although those in the inpatient group were more likely to have received previous drug treatment and experienced more days of family conflict in the preceding 30 days. A comparison of the study sample with a randomly selected non-study sample from the same program revealed few baseline differences. Inpatients were significantly more likely to complete treatment, but at seven month follow-up there was "little evidence of differential improvement between the groups." There was a trend to a higher rate of abstinence from cocaine favouring the day patients, while inpatients were more likely to abstain from alcohol. Day patients reported less serious conflicts with family and others, and were more likely to be on social assistance.

Wilkinson and Martin (1983) randomly assigned young multiple drug users (age 16-30, M=22) to either four to six weeks of residential treatment or a brief outpatient treatment consisting of three sessions spaced over a period of four weeks. Each treatment involved six aftercare sessions over a 70-week period. All young multiple drug users presenting for treatment were eligible to participate in the study provided they were not psychotic, in need of psychoactive medication or seriously cognitively impaired, and were willing to accept either inpatient or outpatient treatment. Clients were initially screened as to their willingness to accept outpatient, day treatment and residential treatment. Two thirds of eligible subjects screened out on this criterion, 90% of whom did so because they were unwilling to accept inpatient treatment. At assessment, subjects reported use of a mean of six drug classes and a mean of two drug classes which were rated by the client as "a problem" (for a detailed description of the extent and pattern of drug use, see Wilkinson et al., 1987). Overall, there was no difference between the groups on a composite measure of drug use at one- and two-year follow-up.

The results of this study were, however, rather more complicated. Subjects were randomly assigned to inpatient or outpatient treatment in two consecutive comparisons. The outpatient treatment was identical in both comparisons. The two inpatient treatment programs were identical in content and duration to those in the first study, but differed in the way a credit system was used to promote therapeutic progress and compliance with program rules and expectations. In one, the "group credit reinforcement" (GCR) clients exchanged credits for "reinforcers" based on the average number of credits earned by the group. In the other, "individual credit reinforcement" (ICR) clients could exchange all of the credits they earned independent of what others earned. At one- and two-year follow-up, there was a significant difference among the groups on the

composite drug use measure favouring the GCR condition. Thus, one inpatient treatment appeared to be more effective than either the other inpatient treatment or the outpatient treatment. However, when the two inpatient conditions were combined and compared to the outpatient conditions, the inpatient and outpatient treatment appeared to be equally effective. Given that the GCR and ICR inpatient treatment did not differ in therapeutic activities or duration, there did not appear to be an advantage to the inpatient treatment per se, but rather to the influence of group-contingent reinforcement procedures used in one of the inpatient conditions.

Thus, two studies involving poly-substance abuse have produced results that are consistent with the results of studies of alcohol dependence. In addition, poly-substance use has not emerged as a reliable predictor of outcome (Pekarik and Zimmer, 1992; McLellan et al., 1983; McLellan, Luborsky and O'Brien, 1986). Overall, this evidence does not support the contention that poly-substance abusers are more likely to require longer residential treatment.

The lack of evidence in favour of residential treatment does not, of course, obviate the need to provide residential care for people without social stability or who are in extreme crisis. Nor does it deny the feelings of relief that may be experienced by families when a member with serious alcohol or drug problems enters a residential program. However, in these cases the "crisis" or "socially stabilizing" intervention goals of providing residential service should not be confused with the longer-term "curative" goals of treatment. Generally, these goals can be achieved more cost-effectively by providing outpatient treatment services, even for clients who may also need a short- or long-term "supportive" place to stay.

Best Practice Guideline

(No. 9)

Research continues to support the relative cost-effectiveness of treatment provided on an outpatient basis to that provided on a residential basis, but this does not deny that some people with substance use problems need short- or longer-term supportive accommodation. However, those who are provided with this type of accommodation could still benefit from participating in outpatient or day programs for help with substance abuse and other problems.

c) The effect of treatment duration

For some interventions such as methadone maintenance treatment, retention in treatment is associated with positive outcomes. However, there is good evidence that intentionally brief interventions, such as motivational counselling and many of the behaviourally orientated interventions described earlier, are helpful for some people with alcohol problems and especially

those who are socially stable and not severely alcohol dependent. These interventions typically involve up to eight face-to-face sessions. They are low cost and could be provided in a range of situations by professionals without special training in substance abuse (e.g. general practitioners, probation/parole officers, guidance counsellors). This will increase accessibility to these interventions and could also increase the chances of early intervention.

It would, however, be wrong to conclude that the research supports the view that most substance abusers will benefit from fairly brief interventions. Dennis et al. (1996) consider that the literature shows that treatment needs to be more than minimal to be effective and, together with Drummond (1997), they challenge the idea that many brief intervention studies can be generalized to all clients seeking help with substance abuse problems. Dennis et al. are also especially concerned that a misreading of the results of brief intervention studies will result in unwarranted limitation to the amount of services provided to some substance abusers and argue that any short-term savings resulting from these limitations may be offset by longer-term large increases in other costs. Dennis et al. and Drummond are especially concerned about the fate of multi-problem clients whose needs extend beyond those that are addressed by most intentionally brief interventions. Landry (1995) also expressed concerns about the effectiveness of brief interventions for substance abusers who also have mental health problems.

Several controlled studies comparing outcomes of short- versus long-term residential or outpatient treatment have shown these to be equally effective for people with alcohol or drug problems (Page and Schaub, 1979; McCuster et al., 1995; Smart and Gray, 1978; Walker et al., 1983). However, these studies have not clearly established any upper boundaries for the duration of cost-effective delivery of substance abuse interventions or shown the minimal duration of treatment necessary to produce positive results.

In practice, of course, clients control the duration and intensity of treatment because they are usually free to drop out at any time or otherwise fail to comply with the expectations of their therapists (e.g. keep appointments, take medication, practise skills). Dropout and non-compliance rates are typically quite high (Baekeland and Lundwall, 1975) and, in many programs, the amount and duration of treatment actually received by clients is well below that set for intentionally brief interventions. Dropouts and non-compliers typically do less well than those who complete programs to the satisfaction of therapists. But this should not be construed as evidence in favour of the view that more treatment is better than less treatment, because those who satisfactorily complete treatment may be more motivated than those who do not. This at least partially accounts for the results of uncontrolled studies showing positive relationships between length of treatment for alcoholism or drug addiction and treatment outcome (Moos, Finney and Cronkite, 1990; De Leon and Jainchill, 1986; Simpson and Savage, 1980; Hubbard et al., 1989).

Best Practice Guideline

(No. 10)

Intentionally brief interventions (up to eight sessions) appear to benefit socially stable, low to moderately dependent people with alcohol problems. Other people with alcohol problems may need longer-term treatment but the lower and upper limits for cost-effective treatment have not been established. Several studies have shown treatment of shorter duration is as effective as that of longer duration.

d) The influence of continuing care

Continuing care is usually understood as a phase of treatment that follows completion of a well-defined, often residential program. The objective is to prevent relapse. Continuing care may range from the occasional telephone contacts with a therapist or case manager to regular individual or group meetings. In many programs with a 12-step orientation, AA groups are considered as aftercare groups.

Some correlational, quasi-experimental and controlled studies have shown positive relationships between involvement in continuing care and improved post-treatment functioning (Costello, 1980; Ito and Donavan, 1986; Ahles et al, 1983; Bullock et al., 1987). However, other studies failed to show any benefits (Gilbert, 1988; Fitzgerald and Mulford, 1985; Braunstein et al., 1983; Ito, Donovan and Hall, 1988). Methodological differences among these various studies make it difficult to reconcile the different results. It is possible that the effectiveness of different continuing care strategies will vary with the characteristics of clients, but this has not been established. It should also be noted that one aspect of Project MATCH was essentially outpatient continuing care to inpatient treatment (though with a selected population) and demonstrated good results (Project MATCH, 1997).

e) Client factors

Many studies have found differences between the intake characteristics of clients who do well or poorly following treatment of various kinds (Ogborne, 1978; Ogborne, 1995b; Moos, Finney and Cronkite, 1990, Gerstein and Harwood, 1990; Institute of Medicine, 1990). Better outcomes have been associated with higher education and social class, higher social stability and social support, lower severity of drinking/drug problems, higher motivation, less psychopathology and a variety of specific psychological traits. Gender and age have been shown to be associated with both better and worse outcomes in some studies and as unrelated to outcome in others.

Landry (1995) considers that of all client characteristics, psychiatric severity, employment and legal problems have the greatest influence on treatment outcomes, while severity and duration of alcohol and drug use have the least influence.

Best Practice Guideline (No. 11)

Better treatment outcomes have been achieved for clients with fewer problems and more resources. This indicates the need to research and develop effective interventions for those who currently have a poorer prognosis.

f) Therapist and other program factors

Patterns and consequences of alcohol and other drug use are influenced by personal and environmental factors. These factors also influence changes in alcohol and other drug use behaviours among people who develop alcohol- and drug-related problems. It is therefore likely that these factors will also influence the outcomes of treatment for alcohol and other drug problems. Non-specific factors in the treatment environment, such as therapist characteristics, might also be expected to influence progress in treatment and treatment outcomes. The possibility also arises that clients could do better with some types of treatment or some types of therapists than with others, and that outcomes will be best when clients, treatment and therapists are "matched."

There are also indications that the therapist is a significant factor in determining treatment outcome. The relevant literature has been reviewed by Najavits and Weiss (1994) who note a consistent finding that treatment outcomes are best for therapists who have strong interpersonal skills such as "empathy" and "ability to forge a therapeutic alliance" with clients. This is consistent with Hester's (1995) conclusions based on the results of studies of behavioural self-control treatment. Hester concluded that clients seen by therapists with low levels of empathy fare worse than those in self-directed groups, while clients seen by therapists with high levels of empathy do better than in self-directed groups. Therapists' experience and training have not been shown to be consistently related to improved client outcomes (cf. Miller, Taylor and West, 1980;

Sanchez-Craig et al., 1991). In this context, it is of note that studies of psychotherapy raise doubts about the relationship between therapist training and effectiveness (Rocheleau, 1995; Christensen and Jacobson, 1994).

Best Practice Guideline

(No. 12)

Appropriate therapy by competent counsellors with strong interpersonal skills, such as empathy and the ability to forge a therapeutic alliance with the client, is associated with an increase in positive treatment outcomes.

In practice, treatment programs with similar objectives may differ significantly in other important respects. They may have staff with different experiences and competencies, and may provide a different range and quality of services. Differences in organizational features, staff morale and general "atmosphere" are also common among addiction treatment services.

The *Institute of Medicine* report (1990) noted that an empathetic approach that fosters self-efficacy and perceived choice as well as clear advice or guidelines for change and motivational feedback may contribute to the success of brief treatment.

More recently, Landry (1995) reviewed research relevant to the impact of different program features on client outcomes and concluded that the most successful programs had certain features in common: flexibility; an individualized case-management approach to client needs; adequate funding; and, built-in program performance measures and prompt attention to deficiencies. In contrast, programs with poor outcomes tend to be impersonal and inflexible.

Waltman (1995) has proposed that the key elements of effective treatment are easy accessibility to care, treatment flexibility, the involvement of family, good therapists, matching to salient client variables, client accountability for sobriety, focused treatment approaches and the follow-up of program graduates. Waltman also considers that effective treatment depends on motivated clients.

g) Mandated treatment[4]

As a result of recent federal legislation (Bill C-41) and general concern over the efficacy of incarcerating alcohol and drug-abusing offenders, mandatory treatment has become an issue of renewed interest in this country and the United States. Proponents of mandated treatment use recidivism, cost, public health and harm reduction arguments to support their position. Gostin (1991), for example, suggests that treatment, as opposed to incarceration, may represent a cost-effective and rehabilitative way to reduce individual and societal harms associated with substance abuse.

The vast majority of scholarship on the topic of mandated substance abuse treatment is non-empirical in nature. The best support for the efficacy of mandated treatment from the existing empirical literature comes from a series of evaluations of the California Civil Addict Program for heroin abusers. These studies indicate that civil commitment orders (i.e. forced treatment), in conjunction with methadone maintenance treatment, can reduce drug use and criminal recidivism rates (Anglin, 1988; Anglin, Brecht and Maddanian, 1989). However, these effects appear to be limited to the time period in which supervision of the clients' behaviour was enacted. Several reviews of existing empirical studies (Miller, 1985; Rotgers, 1992; Weisner, 1990; Wild et al., 1995) point out that there is no clear-cut relationship between mandated treatment and outcome.

Much of the literature in this area assumes that coercion and referral source are interchangeable concepts, or alternatively, that coercion can be directly inferred from referral source. This corresponds to an institutional or administrative definition of coercion. With this view, coerced clients have referral sources such as the courts, families, other agencies and so on, while non-coerced clients are "self-referred." In fact, virtually all of the empirical studies examining the efficacy of coerced substance abuse treatment have adopted this administrative definition of coerced treatment. Consequently, studies in the area have simply compared "court-referrals" with "self-referrals" to infer the efficacy of mandated treatment. Unfortunately, referral source does not precisely correspond to psychological processes implicated by coerced treatment, such as motivation, interest, compliance and so forth. Thus, Wild, Newton-Taylor and Alletto (1998) argue that in order to truly understand the impact of coerced substance abuse treatment, referral source and client perceptions of coercion must be independently measured, and in a demonstration study, Wild et al. (1998) showed that 37% of clients entering a substance abuse treatment program as "self-referrals" reported being coerced and 35% of "court referrals" reported no perceptions of coercion.

4 This section was written by Dr. Cameron Wild of the Addiction Research Foundation Division of the Centre for Addiction and Mental Health.

These data indicate that referral source does not exhibit any precise or unique correspondence with client perceptions that treatment is a coercive imposition. Moreover, these results highlight two important limitations of existing studies in the literature. First, studies attempting to infer the prevalence of coerced treatment by tabulating the number of clients referred from different sources (see research reviewed in Weisner, 1990) have probably yielded inaccurate estimates, since there is no guarantee that, for example, all court referrals perceive treatment to be a coercive imposition. Second, studies of the efficacy of coerced substance abuse treatment (reviewed in Miller, 1985; Rotgers, 1992; Weisner, 1990) may have been seriously compromised. Specifically, because the vast majority of these studies compared outcomes among clients grouped according to referral source and did not directly measure clients' perceptions of coercion, it is possible that coercion was never adequately assessed. If so, tests of the efficacy of coerced substance abuse treatment may have been compromised, and claims made about the legitimacy of coerced treatment may rest on a shaky empirical foundation.

However, it is also worth noting that the drinking-driving remediation literature does show some small but significant positive effects of a mixed education/treatment model (Wells-Parker et al (1995).

Best Practice Guideline

(No. 13)

There is some evidence of the efficacy of mandated treatment in the context of civil commitment for heroin abuse and also for drinking-driving remedial programs. However, the broader literature on efficacy of mandated treatment is equivocal. Thus, it would be improper to conclude that legally mandated clients are necessarily less suitable candidates for treatment than others.

4. Special Populations

a) General considerations

While the evidence for client-therapy matching is currently still weak, it is possible that certain populations or subgroups benefit from special attention because of their unique characteristics or because general programming does not adequately meet their needs. So, for a number of years, treatment programming has been designed for various "special populations," based on an understanding of shared characteristics that are thought to have relevance in attracting, motivating and retaining clients in treatment. However, as yet, there is little scientific research to show that clients from special populations experience improved treatment outcomes as a result of specially designed treatment interventions.

To define special populations, the Institute of Medicine (1990) distinguishes between structural and functional characteristics. Structural characteristics are those that define a population on a demographic basis, either by a fixed characteristic (i.e. gender, race or ethnicity) or a developmental characteristic (age). Functional characteristics are those social, clinical or legal conditions which are shared by a group of people, even if those individuals do not see themselves as a group (e.g. being homeless, having a co-occurring psychiatric disorder, being incarcerated, being an impaired driver or sharing a common diagnosis such as AIDS). A problem in defining special populations is that individuals may possess several structural or functional characteristics that need to be accounted for in planning treatment (e.g. an adolescent female who may also have a psychiatric diagnosis).

According to Landry (1995), there are few studies that show significant effect from treatment based on either structural or functional characteristics. Nevertheless, in Canada, special provisions for treatment or for ancillary services are often made for women, adolescents, seniors, clients diagnosed with HIV and those with mental health problems. Measures proposed for these populations generally have the effect of increasing their opportunity for access to help through some combination of: creating greater awareness of and access to informal help such as self-help/mutual aid groups and self-instructional material, greater involvement of general community services in identifying and supporting clients with substance abuse problems, and bringing specialized services to these populations through outreach efforts. Effective case management is particularly important to ensure that the unique and often multiple needs of clients from these populations are met.

b) Women

The Institute of Medicine (1990), reporting on studies conducted over the previous decade, supported the conclusions reached by previous systematic reviews of the treatment outcome literature. These reviews found that there is relatively little information on which specific interventions might be based to increase the probability of successful outcomes of treatment for women with alcohol problems. Landry (1995) states that the few available studies have generally concluded that adult men and women, treated together for alcohol problems in the same program, do equally well. There is less agreement regarding treatment for drugs other than alcohol. There appears to have been little research on the differential effectiveness of different types of treatment designed specifically for women.

Lightfoot et al. (1996) conducted a review of substance abuse treatment for women, with particular reference to the previous five years. The majority of the 211 studies were descriptive, with 7 (2%) specifically examining treatment effects for women using randomized trials, and 7 using non-random assignment or comparative treatments. Three of the randomized trials involved smoking cessation, with mixed results. Two studies compared men and women in three brief cognitive behavioural treatments, concluding that women fared better than men with a manual or brief guidelines, but found no difference in the therapist-based treatment.(Sanchez-Craig et al., 1989; Sanchez-Craig, Spivak and Davila, 1991). The other two studies involved women only, the first, testing approaches to reducing relapse among chronic alcohol abusers and revealing few differences among approaches (Watzl et al., 1988). The final study compared 100 women attending a specialized clinic for women with 100 women in a regular program, with the clinic group showing fewer social and alcohol problems at follow-up (Dahlgren and Willander, 1989).

The non-random or comparative studies were designed to answer questions regarding the needs of women in treatment. Four of the studies addressed drugs other than alcohol. The two largest addressed the cost of poly-drug abuse (Anderson, 1986) and consequences of terminating methadone maintenance treatment (Anglin et al., 1989). The first study found that female emergency hospital registrants given personalized nursing that included home visits had lower drug use and lower estimated economic and social costs compared with those with no home visits. In the second study, Anglin, Brecht and Maddanian (1989) found that the women coped better than the men when methadone maintenance treatment was discontinued.

Most of the literature on women's treatment comprises clinical and descriptive studies that focus on the following approaches: family therapy, group therapy, separate rather than combined treatment with men, and female rather than male therapists (Institute of Medicine, 1990). These options have not been examined using controlled clinical trials, so there is no indication of their particular effectiveness. However, clinicians continue to assert that women's treatment needs differ from men's, and the following observations are well documented (Lightfoot et al., 1996):

- A greater stigma is attached to a woman's substance abuse problem; there is greater resistance on the part of family and friends; there are more negative consequences attached to treatment entry (family responsibilities, lack of child care facilities, job loss, anger from spouse, loss of friends, etc.).
- A small proportion of both men and women use specialized services. It appears that women may be less likely to use specialized treatment facilities than men. However, as previously noted, women problem drinkers are more likely than men to view their symptoms as anxiety or depression and to seek help from mental health professionals. This is especially so for women problem drinkers who also have psychiatric problems.
- Women also prefer to use informal support networks when they have a large number of problems.
- Employee assistance programs are less likely to identify and refer them.
- Women prefer treatment which provides a range of related additional programs and services, such as treatment for children and the provision of continuing care.
- Women prefer outpatient to inpatient services.
- Women prefer treatment where there is provision of child care services.
- Increased utilization occurs when other specialized services are available, such as pregnancy and postpartum care; prescription drug use counselling; and legal, vocational, child and sexual abuse counselling.
- Women like to be offered vocational skills training, as well as training in assertiveness and parenting skills.
- Support services, including transportation and outreach, are helpful.
- The factors which create barriers to treatment often lead to premature termination of treatment as well.

More research is needed into the relationship between life events and substance abuse for women, in order to provide appropriate treatment. There is considerable evidence that victimization, particularly sexual abuse, may be a causal factor in the development of substance abuse in women. Canadian researchers Groeneveld and Shain (1989) found that women who had been sexually abused as children or adults were at least twice as likely as non-abused women to use medication to help them calm down or to sleep.

Best Practice Guideline

(No. 14)

There is insufficient research evidence to support the provision of specific types of interventions for women. However, it is clearly important to consider barriers to treatment and provide a range of modifications and support services (e.g. scheduling sessions while children are in school, the use of

self-help materials, provision of child care, transportation), and to provide specific ancillary services (e.g. related to pregnancy, sexual abuse counselling, parenting skills training and vocational assistance).

c) Youth

The adolescent years can be marked by anxiety and confusion. Rapid changes in physical and intellectual development occur while the young person is seeking a sense of personal identity and values. Adolescents are heavier users of drugs such as cannabis, cocaine and crack than adults, although they may smoke fewer cigarettes and drink less alcohol (Smart, 1993). Research indicates that problems in other life areas are common for adolescents with substance abuse problems (Harvey-Jansen, 1995). These include the major life areas of family, school or job, medical, emotional, social relationships and leisure. Problems may exist prior to involvement with substance use or they may arise from the substance abuse. Additionally, substance abuse and problems in these other life areas may be mutually reinforcing.

Consistently, research also indicates that peer association and family factors are most important in contributing to substance use in adolescence. There is growing support for the view that inadequate social conditions, stressful life events, societal pressures and physical or sexual abuse are also major factors in the development of heavy substance use by adolescents, particularly young women (Lundy, Carver and Pederson, 1996).

Despite a large amount of literature about this population, there is little firm information on how best to treat young people for alcohol and drug problems. Overall, the research does suggest, however, that receiving treatment is better than not receiving it (Landry, 1997).

There are few controlled outcome evaluation studies which compare different treatment modalities for youth. In a review by Wilkinson and Martin (1991), only three Canadian studies on treatment effectiveness were found. These reviewers concluded that treatment content was more important than duration and location. In one of the few studies comparing inpatient with outpatient treatment using the same pre-post outcome measures, Wilkinson and LeBreton (1986) found peer group pressure to be a strong factor in successful treatment outcome, with no difference between outpatient and a more costly residential treatment option.

A review of the literature between 1980 and 1993 by Harvey-Jansen (1995) concluded that about 30% of clients (including those not completing treatment) were found abstinent at follow-up. Longer-term outcome is less certain, with high relapse rates generally recorded. When the outcome measure is determined to be a decrease in substance use, rather than abstinence, the

improvement rate is estimated to be about 65%, over a longer follow-up period. The studies have found that those who do best in treatment tend to: be female, report shorter length (in years) of substance use; choose to enter treatment; and, be in school.

Clinicians' experience suggests that adolescents benefit most from programs which offer flexible approaches that adjust to individual adolescent needs, provision of family therapy and behavioural skills counselling, the availability of school for dropouts, vocational counselling, recreation services, sexuality counselling, involvement of family or non-abusing support person and continuing care.

An adolescent treatment system was developed in 1988 in Alberta for young people 12 to17 years of age. The service provides treatment for about 1500 adolescents a year through 25 treatment facilities across the province. Treatment goals were to assist in achieving abstinence, to provide education about drug use and skills in decision making, to increase the quality of family and social relationships and to support families through the process of treatment and continuing care. A recent evaluation of this program observed that adolescents who entered treatment had multiple drug use problems over an extended period of time, were experiencing harmful consequences of their use and had difficulties in many areas of their life. Their estimates of outcome were similar to those found in other evaluations, with 69% abstaining or decreasing consumption at three month follow-up and 56% experiencing decreased life problems (Harvey-Jansen, 1995).

Outcome is less favourable when the young person attends treatment designed for adults. Since general treatment programs are usually designed for male adults with relatively serious problems, the program requires considerable modification to meet the needs of youth. Upfold (1997) cautions that assessment strategies, treatment methods and goals must be relevant to the age and stage of development of the client (e.g. early, middle or late adolescence), and include a good knowledge of the physical, emotional and cognitive changes of the adolescent.

A subset of this age group is street youth. The size of this population in Canada is constantly changing and difficult to determine. There are no reliable estimates of the size of the street youth population because of the transitory nature of these young people (Zdanowicz, Adlaf, Smart, 1993).

This population is seen to be at high risk for a number of reasons, including their way of life. For street youth, substance use is one of a number of characteristics of this way of life. Although not a homogeneous group, they share patterns of heavy drug use and serious risk of HIV and Hepatitis C infection. Several studies have found that almost all street youth have used cannabis at some time, and their rates for other drug use, such as cocaine, crack and LSD, are 5 to 15 times higher than for mainstream youth (Smart, 1993). Effective treatment for street youth is likely to be unstructured, held together by case management services, and comprising outreach, low-structured interventions and support services. For this population, case management is

critical because of their reluctance to utilize services and their multiple problems (Martin, 1990). However, for this population, it is often a change in lifestyle (e.g. obtaining adequate long-term living arrangements) rather than treatment that marks the end of substance abuse.

Smart (1993) describes a number of changes which had occurred in the types of treatment offered for young drug abusers over the previous 10 years:

- There are more alcohol- and drug-dependent youth participating in all types of treatment.
- There are indications that the percentage of females in treatment is increasing, and the average age is decreasing.
- Cases of cocaine and narcotic abuse requiring treatment have increased, while cases involving alcohol, cannabis[5] and tranquillizers are decreasing. There is essentially no change in cases involving hallucinogens or solvents.
- Use of therapeutic communities is changing to include clients with problems other than substance abuse.
- There is a trend away from hospital and inpatient programs to community-based outpatient programs.

5 Since this review, a number of Canadian studies have shown cannabis use and resulting problems increasing in this country (Adlaf et al. 1995; Poulin, 1996), though in Ontario use of cannabis has levelled off (Adlaf et al. 1997).

In reviewing the literature, the Institute of Medicine (1990) concluded that a number of issues need to be addressed to improve youth treatment:

- the lack of precision in and agreement on the definition of alcohol abuse for youth;
- design of clinical studies comparing the variety of treatment approaches recommended as a result of clinical experiences;
- concern for overuse of inpatient rehabilitation programs;
- disagreement over the need to provide combined substance abuse or alcohol-focused treatment; and
- controversy over the need for age-segregated facilities.

Best Practice Guideline (No. 15)

Adolescents may respond best to flexible approaches which adjust to individual needs. Important program elements include family therapy, behavioural skills counselling, family and peer support and continuing care. Ancillary services, such as the availability of school for dropouts, vocational counselling, recreation services, psycho-social development, crisis counselling and sexuality counselling, are also important.

d) Seniors

Alcohol is the most commonly used psychoactive substance for seniors aged 65 years or older. Although their level of alcohol and tobacco use is lower than younger age groups, their prescription drug use is higher, particularly women's use. Canada's Alcohol and Other Drugs Survey (Health Canada, 1994) reports that use of prescribed tranquillizers, sleeping pills and antidepressants by Canadians increases with age, with 27.4% of those 65 or over using one or more medications. This may arise from the acceptability of using these drugs, where social controls and perception of appropriateness reduce women's use of alcohol (Graham, Carver and Brett, 1996).

In addition to substance abuse problems, seniors may experience many difficulties in daily living, such as home skills, self-care, transportation and shopping. In addition, older adults may be isolated and have experienced multiple losses, financial problems or abuse from family members. They may be more reluctant to admit to having a substance abuse problem and seldom ask for help. Therefore, individuals in need of help rarely enrol for substance abuse treatment, but are more often identified through other health or social services.

Compared with adults under 65 years of age, seniors with alcohol problems have been found to have a higher rate of cognitive deficits, lower maximum alcohol consumption, a greater need to drink before breakfast, a higher likelihood of being unable to stop drinking and more acute medical problems (Graham et al., 1989). Due to the effects of the aging process, older adults are more likely to experience problems at lower levels of alcohol and drug use, because they are in general more sensitive to drug effects and experience more adverse reactions to drugs than younger populations. Alcohol and drug problems are most commonly accompanied by multiple or severe medical problems, either caused or aggravated by the substance use.

Two major subgroups have been identified with alcohol problems, with different etiology and prognosis. Early onset clients comprise about two thirds of seniors with problem drinking. They generally have a long-term history of problem drinking, may have serious physical complications and are likely to have poor prognoses. Late onset problem drinkers typically start drinking in response to a serious life event, with better prognoses (Institute of Medicine, 1990). Graham et al. (1989) have found the term "late onset problem drinkers" rather ambiguous, particularly since such drinkers may start drinking in their 40s. They identify another subgroup which comprises clients who have dangerous alcohol use because of drug interactions. In addition, Baron and Carver (1997) describe four phases in the drinking history of seniors: early, as the senior begins to move from moderate social drinking to using alcohol to cope with the stresses of life; acute, experiencing symptoms associated with present consumption or withdrawal from alcohol or other drugs; chronic, in which the senior experiences ongoing physical, psychological or social symptoms associated with alcohol or other drugs; and, recovering, as the senior decreases consumption to non-hazardous levels.

It is generally conceded that in many cases traditional treatment programs are not appropriate for seniors. Seniors may have difficulty leaving their homes and accessing treatment programs, they may not be ready to identify a goal of abstinence or reduced use, and the pace and content of programs may not be appropriate for them. For these reasons, treatment is better offered in a community-based setting, and substance use problems addressed within the broader context of health and activities of daily living (Martin, 1990; Baron and Carver, 1997). Characteristics associated with poorer prognosis are chronic physical problems, psychiatric co-morbidity, family drinking practices and isolation (Institute of Medicine, 1990).

Supporting the contention that non-traditional treatment approaches hold more promise, the Community Older Person's Assistance (COPA) project (Graham et al., 1995) positively evaluated treatment for seniors with the following features:

- outreach – counsellors went to the client's home;
- lack of confrontation – admitting to having a problem was not a necessary part of treatment; and
- holistic – the overall focus of COPA was on quality of life and maintaining independent living.

The approach was flexible and client-centred, involving any or all of the following: counselling and crisis intervention for the older substance abuser, advice and counselling for the family, and advocacy and coordination with other agencies on the client's behalf.

The evaluation indicated this approach to be very effective in engaging clients in treatment. About three quarters of the participants experienced at least some improvement and this tended to be stable over time.

Best Practice Guideline

(No. 16)

Seniors are often reluctant to acknowledge a substance use problem or to seek help from specialized services. Community-based treatment provided in the broader context of support for health and the activities of daily living, using a client-centred, flexible and holistic approach, is more effective.

e) Clients with concurrent mental health problems

Clients in mental health treatment consistently show higher rates of alcohol and other drug consumption and related problems than the general population. Persons with severe mental illness are particularly at risk for substance abuse. According to the Epidemiological Catchment Area Study in the United States (Regier et al., 1990) which assessed psychiatric and substance abuse disorders in over 20 000 people in the community and various institutional settings, those with schizophrenia and bipolar disorder were respectively four times and greater than five times more likely to have had a substance abuse disorder in their lifetimes than persons in the general population.

In a review on treatment for co-occurring substance abuse and mental illness, Meuser, Drake and Miles (1996) found those with severe mental illness and co-occurring substance abuse to be more likely to exhibit:

- increase in relapse and rehospitalization rates;
- increase in depression, suicide and violence;

- greater housing instability and homelessness;
- non-compliance with medications and other treatments;
- increased vulnerability to HIV infection;
- increased family burden; and
- higher service utilization and costs.

Substance abuse problems among persons who are mentally ill are more likely to be associated with such issues as money management and stable housing, and less likely to be issues that show up on standard assessments for substance abuse. Even when they are well engaged with mental health treatment, dually diagnosed clients tend to be in a pre-motivated state regarding their substance abuse (Meuser, Drake and Miles, 1996).

Follow-up studies of clients treated in either addictions or mental health treatment show uneven results. Remission of untreated co-occurring disorders appears to be common, but there are instances where rates of co-occurring problems remain unchanged despite a positive effect on the treated disorder. There is currently little empirical basis for predicting one result or the other (ARF, 1997).

At the same time, substance abuse can influence the course of treatment for mental health problems, while co-occurring psychiatric problems can have an impact on addictions treatment. In some studies, patients in addictions treatment with less severe psychiatric problems showed greater improvement than those with more severe psychiatric symptoms. Clients with mental health problems that remain unaddressed may also be more prone to dropping out of treatment (ARF, 1997).

Because clients with concurrent disorders have a range of other social and physical problems, those who do receive care tend to use multiple services (Wooghe, 1990). The available epidemiological data on service utilization suggest that those reporting co-occurring disorders are more likely to receive services from the general health care system, and from the social services and criminal justice systems, than from specialized addiction or mental health services. Thus, these systems should be brought into any strategy intended to effectively address this issue (ARF, 1997).

Systems level concerns, such as fragmentation of services, inadequate or inappropriate referrals and a lack of service coordination, are often cited in relation to these co-occurring disorders. Traditionally, substance abuse and mental health problems have been treated in separate facilities, and this has resulted in clients with concurrent disorders "falling between the cracks" or bouncing back and forth between treatment facilities which do not adequately meet their complex and multiple needs. So, much of the literature on dual diagnosis is concerned with the coordination of identification, assessment and treatment services to best manage both the mental health and substance use problems. Clinical issues include which disorder should be regarded as primary, the

role of psychotherapy, which disorder should be treated first, whether it is possible to treat both disorders at once, the role of medications and whether one disorder produces symptoms of the other (ARF, 1997; el-Guebaly, 1993).

These challenges have led service providers to recommend a range of different treatment options, from the provision of specialized programs to the coordination or amalgamation of existing services. Three basic models for treating dual substance abuse and mental disorders are mentioned in the literature: sequential treatment, parallel treatment and integrated treatment (Ries, 1993). While research is limited, outcomes for clients treated sequentially or in parallel have been poor. Recent efforts to address co-occurring disorders have focused on integrating the services and providing them simultaneously. Integrated models of service typically share the following features:

- assertive outreach to engage people in treatment and to address pressing social or clinical concerns;
- case management;
- group interventions (e.g. social skills training);
- focus on increasing motivation for treatment;
- promote a long-term perspective recognizing the chronic nature of conditions; and
- often use behavioural strategies, work with families and time interventions according to readiness to change.

While integrated treatment needs to be further studied, preliminary studies on a range of different integrated treatment models are suggesting better outcomes than those produced by parallel approaches. The New Hampshire Dual Disorders Study compared the effects of two different integrated case management methods for providing treatment to 240 clients. Preliminary analysis indicates that both approaches were effective in reducing substance abuse and improving other outcomes (Meuser, Drake and Miles, 1996).

The Addiction Research Foundation (1997) proposed, among other recommendations, the following measures to improve services for people with co-occurring disorders:

- Initiatives to improve referral and coordination between existing specialized services should be undertaken and evaluated for their effects and cost-effectiveness. These should include models of case management between existing addictions and mental health agencies.
- Agency exclusion criteria (i.e. excluding people with mental health problems from addictions treatment or those with alcohol or drug problems from mental health treatment) should in general be disallowed, except where a compelling knowledge-based or practical rationale can be shown.

- Training in proven methods for assessing, referring and treating co-occurring disorders should be a priority for professionals in both the specialized addictions and mental health treatment systems.
- Primary health care providers and staff in disability, social support and criminal justice agencies should also receive training in assessing, referring and treating both addictions and mental health problems.

Both of the above-mentioned reports note that this approach should not serve to de-emphasize the specialized services, which they see as essential, particularly in the treatment of more advanced and complex problems. Rather, the intent is that this combination of addiction-specific services and those within the generic settings would together form an accessible "continuum of care."

Best Practice Guideline

(No. 17)

While evidence is limited, it appears that providing integrated services for people with co-occurring substance use and mental health problems holds more promise than offering services in sequence or parallel. Close liaison and coordination to enhance referral and case management need to occur among the respective specialized services and informal street-level agencies in a community. Training appears crucial, not only for staff of respective specialized services, but also for social services and correctional staff where these clients often present themselves. Excluding people with mental health problems from addictions treatment and excluding those with alcohol or drug problems from mental health treatment should, in general, be discouraged.

f) Clients living with HIV/AIDS

Injection Drug Use (IDU) has been an increasingly important route of transmission of HIV in Canada, with 19.9% of adult cases diagnosed with AIDS in 1997 attributed to IDU transmission (Health Canada, 1998). At the time of writing, Vancouver has the highest rate of HIV infection among injection drug users in North America. Populations at particular risk of AIDS attributable to IDU are Aboriginal people and women. Aboriginal people are over-represented among urban injection drug users and in correctional institutions which are understood to be high-risk settings for injection drug use and HIV/AIDS.

Although several reports have been released in Canada on this issue, there exists little research examining the issue of substance abuse treatment for people living with HIV/AIDS (PLWAs).

The results of one study were released in April 1996 by "The Point Project" (Archibald et al., 1996), a project designed to examine the risk factors for HIV infection among IDUs living in Vancouver. This study's sample included a total of 89 HIV-positive and 192 HIV-negative persons. Results indicated an increased severity of drug problems (cocaine and heroin) among HIV-infected persons arising from decreased control over their living environments and a relative inability to make positive decisions regarding their health. Resulting recommendations included the implementation of an accessible substance abuse treatment program for injection drug users; research into the effectiveness of methadone maintenance treatment programs among injection drug users living in Vancouver; and the provision of more treatment options, emphasizing harm reduction.

A substantial barrier to the use of drug treatment and rehabilitation services by PLWAs is the fact that services often do not know how to deal with these two problems together. The approach of substance abuse treatment services can conflict with the perspective of street-involved injection drug users. Substance abuse professionals tend to possess inadequate knowledge of the treatment of PLWAs, just as professionals trained in counselling PLWAs tend to lack sufficient knowledge in the area of substance abuse.

Improvements to substance abuse treatment for persons with AIDS were recommended by British Columbia's Medical Health Officer in a report entitled *Health Impact of Injection Drug Use and HIV in Vancouver* (Whynot, 1996). This report recommended the following treatment measures for PLWAs:

- the implementation of regional substance abuse programs for IDUs within the Vancouver area, emphasizing both addiction management and drug abstinence alternatives;
- the development of partnerships by the College of Physicians and Surgeons toward the implementation of a more accessible system of methadone maintenance treatment in Vancouver and the implementation of other methods of addiction symptom management;
- the development of mental health services and counselling for injection drug users;

- the development of a working group within British Columbia to investigate methods of addiction symptom management for cocaine users and to develop alternatives to methadone maintenance treatment;
- that university teaching hospitals within the Vancouver area develop an addiction management strategy.

In 1991, the Addiction Research Foundation (ARF) prepared a document entitled *Best Advice: Prevention Strategies – Injection Drug Users and AIDS* (ARF, 1991). This paper stresses the importance of increased access to drug addiction treatment services for PLWAs, including increasing the number of methadone maintenance treatment programs available in Canada.

Also, through the Canadian Strategy on HIV/AIDS, Health Canada has developed a resource entitled *Care, Treatment and Support for Injection Drug Users Living with HIV/AIDS* (1997). Suggested support services recommended by this report for IDUs infected with HIV/AIDS include needle exchange programs; the use of street clinics and nurses in the provision of primary care, counselling and support; social support systems to supplement basic needs such as food and clothing; and increased access to substance abuse treatment and rehabilitation programs and supportive housing establishments.

Many IDUs spend time in prison settings. Injection drug use in prisons has contributed to a critical situation in Canada's prisons where the rate of HIV infection has increased dramatically in recent years. Unfortunately, responses by federal, provincial and territorial correctional services to deter the spread of HIV within this population have been sporadic. Some prisons now distribute bleach to disinfect needles; however, the use of this safeguard in Canadian prisons is uneven. Similarly, there also seems to be few resources allowing HIV-infected drug users to access appropriate treatment for their substance use.

A Task Force on HIV/AIDS and Injection Drug Use released a national action plan which contains 15 key recommendations addressing the multiple difficulties of a drug user with HIV or AIDS obtaining appropriate, accessible treatment (Canadian Centre on Substance Abuse and Canadian Public Health Association, 1997). A central theme is the Task Force's call to increase access to care and treatment options by reducing the stigma attached to this issue. Examples include eliminating the requirement for total abstinence from drug use before receiving drug or HIV treatment, and ensuring each individual is offered antiretro viral medication, even if currently using illegal drugs. Reflecting a harm reduction priority, the task force recommended that the availability of methadone maintenance treatment be increased dramatically and that clinical trials of prescription morphine, heroin and cocaine be conducted in this country.

Best Practice Guideline

(No. 18)

Injection drug users with HIV/AIDS tend to be very marginalized in their communities, and it is difficult for them to access appropriate care and treatment. The very considerable health risks facing this population call for better coordination of services and more innovative treatment measures to reduce this harm, particularly among Aboriginal people, women and those in prison settings.

Best Practice Guideline

(No. 19)

Special populations need improved access to treatment through some combination of: greater awareness of and access to informal help such as self-help/mutual aid groups and self-instructional material; greater involvement of general community services in identifying and supporting clients with substance abuse problems; and, provision of specialized services through outreach efforts. Effective case management is particularly important to meet the unique and often multiple needs of these clients.

5. Perspectives on Service Delivery Systems

A review of the literature on substance abuse treatment delivery systems does not produce "landmark" reports on systems issues. Rather, there exists a patchwork of information from unpublished policy planning documents from various jurisdictions, limited discussion in the major reviews of treatment effectiveness and a few published articles. This mirrors the current state of substance abuse treatment "systems" which comprise a range of services, varied in type, scope and focus, and which are generally not well coordinated. There are a number of challenges to the research and development of treatment systems, not the least of which is an ongoing lack of clarity and agreement in the terms used to describe the components of treatment.

A great deal of research can be subsumed under systems research arising from disciplines as varied as social ecology, general systems theory and the study of public policy process (Rush, 1996). This discussion will be necessarily selective, focusing on broader issues that have particular application to the Canadian treatment context.

In Canada, most of the formal treatment of alcohol and drug problems occurs within specialized, "addiction-specific" services. However, over the past decade, there has been an increasing appreciation for the role that "non-specialized" services in the health, social and correctional fields can play in reducing alcohol and other drug problems. This appreciation has grown out of a view that substance abuse and other living problems are interrelated and accentuate each other, and that there can be an underlying basic problem of which substance abuse is a symptom. A significant proportion of these problems are less severe and respond well to minimal intervention provided by a non-specialist. These practitioners are also being seen as playing an important identification and referral function for more severe problems.

However, only a small proportion of people who experience problems with alcohol or other drugs intentionally seek help to deal with alcohol or drug use per se and fewer still seek help from services that specialize in the treatment of substance abuse.

So, a recurrent theme in systems discussions is the need to draw general human services more fully into substance abuse identification, counselling and referral activity. The Ontario Advisory Committee on Drug Treatment (Martin et al., 1990) envisioned a system in which practitioners within generic service contexts would be mandated, funded and trained to identify and address emerging drug and alcohol problems in the individuals they serve. Similarly, the US Institute of Medicine (1990) advocated a system wherein non-specialized services would help to broaden the base of treatment by serving those who would not otherwise come into contact with substance abuse services. The roles outlined in this report for the non-specialized sector were to: identify those individuals within the sector who have alcohol problems; provide a brief intervention for

persons who have mild or moderate problems; and refer to specialized treatment those persons with substantial or severe alcohol problems or those for whom brief intervention was not successful.

a) Elements of a substance abuse treatment system

To assist in clarifying the roles that might be played by various agencies, both specialized and non-specialized, Martin and colleagues outlined the range of discrete functions required in a comprehensive response to drug and alcohol problems:

- information and referral
- outreach service
- case finding
- brief intervention
- walk-in and crisis service
- detoxification
- comprehensive assessment
- case management
- outpatient treatment
- day/evening treatment
- short-term residential treatment
- long-term residential treatment
- after-care/continuing care

These functions can be located in a variety of specialized and non-specialized settings, spanning health care, social service and criminal justice fields, but also including schools, workplaces and religious organizations.

At the centre of the envisioned systems is a comprehensive assessment that would match the individual with the most appropriate service. Eliany and Rush (1992) acknowledged that while treatment matching is a reasonable approach, the research in this area is very complex from a conceptual and methodological point of view. A distinction should be made between client matching to the most appropriate substance abuse intervention (e.g. social skills training or psychotherapy) and matching a client – who often presents a range of other problems – to related services (e.g. financial counselling or job training). While matching clients to other services is relatively straightforward, evidence on which to base client matching to the most effective intervention remains elusive. The recent large investigation into client/treatment matching reported by the US National Institute on Alcohol Abuse and Alcoholism (NIAAA) largely failed to identify matching criteria among three treatments and a large sample of clients (see Project MATCH in Section 2).

Perhaps anticipating this, a World Health Organization (1991) report suggests that matching guidelines will likely need to be developed at the local level based on local treatment outcome information. Recognizing that different people will be delivering treatment in differing circumstances, matching guidelines may need to vary from district to district. The report

underscores the importance of programs and systems creating a feedback loop between outcomes and comprehensive assessment that will enable services to know how best to match their own people to local interventions.

A theory that has contributed to thinking around substance abuse treatment is Prochaska and DiClemente's (1983) transtheoretical model of change. First postulated as a tobacco cessation model, it organizes the treatment of addiction problems within a bio-psycho-social framework (Marlatt et al., 1988). This "stages-of-change" model describes a common pattern of behaviour change based on motivation or readiness to change:

- Precontemplation: not thinking about quitting
- Contemplation: seriously thinking about quitting
- Preparation: planning to stop in the next 30 days
- Action: having quit for less than 6 months
- Maintenance: the stage beginning 6 months after treatment
- Relapse: having re-adopted the problem behaviour

While clearly providing clinical guidance, this model also supports the configuration of a system suggested by Abrams et al., (1993) that incorporates stepped care and matching features. This model proposes that services be organized according to minimum, moderate and high levels of intensity.

In this model, clients are assessed according to level of motivation, self-efficacy, level of dependence, co-morbity and socio-cultural factors, and triaged into one of the three treatment levels. A guiding principle of this model is the use of the least intensive (and least expensive) level first and "stepping up" a client when a less intensive treatment has not been effective. Overarching the clinical process is a public health approach which would focus on enhancing motivation levels through community action and public policy.

The scheme proposed by the World Health Organization (1991) outlines six "levels of cover" that form a logical implementation sequence, and together constitute a full system of substance abuse services:

- *Level One:* a systematic attempt is made to provide appropriate service to those who are intoxicated with alcohol or drugs, and to those who need assistance with detoxification.
- *Level Two:* provision is made for a period of generalized and non-specific rehabilitation (e.g. nutritional, medical, psychiatric) following the period of intoxication or detoxification.
- *Level Three:* all persons seeking basic human services in various areas (e.g. health care, criminal justice, welfare, educational and workplace services) are systematically evaluated for alcohol and other drug problems and an appropriate brief intervention is provided when evaluation is positive.
- *Level Four:* a case management function that provides continuity of care for all individuals with alcohol and drug problems is implemented.
- *Level Five:* one or more brief therapies is made available, to be utilized in selected cases in which follow-up through the continuity of care for all individuals with alcohol and drug problems is implemented.
- *Level Six:* multiple alternative complex interventions are made available, contingent on a thorough pre-treatment assessment function that gathers and evaluates data enabling the matching of specific individuals to the most suitable of these interventions.

More recently, wishing to promote further research and systems development, Rush (1996) identified components of a substance abuse treatment system at two levels: a clinical level and community level.

At the clinical level, components of the system would be organized along a continuum similar to that proposed by Martin et al. (1990) and the Institute of Medicine (1990):

> *community membership → problem definition and help-seeking → entry and retention in the system → assessment, triage and case management → detoxification, stabilization and crisis intervention → treatment planning and goal selection → treatment, rehabilitation and relapse prevention → continuing care and evaluative follow-up.*

At the community level, a series of steps is proposed in the development of a community treatment system, each of which might be the subject of investigation:

> *historical and contextual analysis → system description → need assessment → community development → coordination of services → system monitoring → system evaluation.*

Rush goes on to suggest a number of ways a system could be characterized:

- the extent to which the components cover the "continuum of care";
- whether assessments are centralized or decentralized across the system;
- the extent to which, and the manner in which, case management occurs;
- role and contribution of self-help programs;
- the labour and other resources devoted to the system;
- training level of practitioners in the system;
- cost of the system and financing mechanisms;
- the role of coercive, mandatory measures in the system; and
- the relative coverage of different insurance plans.

b) Who seeks help for alcohol and other drug problems

How likely is it that someone who experiences problems involving alcohol or other drugs will intentionally seek help *specifically* for drinking or drug use, and how likely is it that they will seek help from a specialized treatment service? Estimates of the prevalence of such help-seeking vary with definitions of "help" and "problems." However, using broad definitions it appears that in North America most people who experience problems associated with their use of alcohol or other drugs do not intentionally seek help for drinking or drug use from either general or specialized services. Recent Canadian and US studies suggest that, among adults reporting ever having had alcohol problems, only 5%-28% say they have sought help for drinking from either informal sources (friends, family members, self-help groups) or from professionals, and only 1.2% to 9% report seeking help from specialized addiction services (Weisner, Greenfield and Room, 1995; Rush and Tyas, 1994). Of those who do seek help for alcohol problems, the majority (70%) report doing so from Alcoholics Anonymous or other mutual-aid groups. This may be due to addictions agencies having a relatively low profile within the general population, whereas more people are aware of AA.

Studies from the United States indicate a 3% to 6% increase in the number of problem drinkers seeking help during the 1980s, but it is not known if the percentage of problem drinkers in Canada who sought help also increased during this period.

In Canada, few (3%) users of illicit drugs, identified in a population survey, reported seeking any kind of help for drug problems (Rush and Tyas, 1994). No studies from the United States have generated estimates of the percentage of illicit drug users who seek help for drug problems.

Hingson et al. (1980) conducted the first large-scale population survey comparing problem drinkers who had sought help from a treatment agency or professional with those who had not. The study was conducted in the Boston area. Among those reporting problems at the time of the survey, those who had recently sought help tended to drink more, to be older, less educated and were more likely to have a religious affiliation. However, there were no differences with respect to gender, employment status, income, race and several other socio-demographic characteristics. Among those who reported ever having alcohol problems, those who had sought help did not differ from those who had not, based on most of the socio-demographic characteristics considered. However, those who ever sought help were less likely to be separated or divorced and more likely to be unemployed, retired or disabled at the time of the interview. Given the cross-sectional design of this study, it is not possible to determine the influence of these differences on lifetime help seeking. However, a follow-up study (Hingson et al., 1982) showed that the decision to seek treatment was related to increased negative social and personal consequences rather than demographic characteristics or levels of drinking.

Weisner, Greenfield and Room (1995) used results from three national surveys in the United States to compare those who: ever sought help from an agency or professional for drinking problems; ever went to AA; and went to an alcoholism program, with those who had not sought help. Trends in help seeking and in the characteristics of those seeking help were also considered. Within the general population, and across all three surveys, help seeking, going to AA and going to alcoholism treatment programs were more common among males, and especially males between 18 and 49 years of age. Lifetime help-seeking was also related to lifetime levels of alcohol dependence and adverse social consequences. A measure of negative social consequences of drinking was the best predictor of help seeking. However, when lifetime social consequences and alcohol dependence were controlled, lifetime help seeking for alcohol problems was still more common among males, those who were not married and those in their middle years.

Rush and Tyas (1994) used data from Health Canada's 1989 National Alcohol and Other Drugs Survey to compare those seeking help for alcohol or other drug problems with others. In the general drinking population, those seeking help for alcohol problems were more likely than members of the general population to be male, aged 35 to 54, not to have completed high school, earning less than $20,000 a year, separated or divorced, living in the Prairies (Alberta, Saskatchewan, Manitoba) and not working. Among those using illegal drugs, help seekers were more likely than members of the general population to earn less than $20,000, not to have completed high school and to be divorced or separated.

Unpublished analyses using data from the mental health supplement of the 1990 Ontario Health Survey showed that help seeking was far more common among those with both a substance abuse and other mental health disorder (co-morbidity) than among those with only a substance abuse disorder. Among males with a substance abuse disorder, 10% had sought professional help in the past year, and 3.7% had sought help from hot-lines, self-help groups or vocational programs

during the same period. The equivalent figures for co-morbid males were 29.2% and 15%. The same pattern of differences held for females. However, females with or without co-morbidities were almost twice as likely as males to have sought help from a professional.

Bardsley and Beckman (1988) compared alcoholics in treatment with others not in treatment who were recruited by the treated group and through publicity efforts. The results showed that the decision to enter treatment was predicted by perceptions of the severity of the drinking problem and by the number of "unusual" events in the previous month (e.g. conflicts with spouse, new physical symptoms, car accidents).

Only one study has compared opiate users in treatment with those not in treatment. This involved users treated at the Yale University Drug Dependency Unit in New Haven, Connecticut, and a companion sample constructed through "snow-ball" sampling, starting with untreated users known to those in treatment and ex-user therapists (Rounsaville and Kleber, 1985). Those in the treatment sample were similar to those in the non-treatment sample with respect to age, education and marital status. However, those in treatment were more likely to be non-white and female. Controlling for gender and race, Rounsaville and Kleber found that opiate users in treatment were similar to those in the community with respect to length and severity of opiate use and current intoxication-seeking behaviours. However, those not in treatment reported more adequate social functioning, fewer drug-related problems and lower rates of depression. Those who did not seek treatment seemed to underestimate the seriousness of their drug problems and the benefits of treatment.

Who seeks help from specialized services?

Room (1977) has characterized those seeking treatment from publicly funded alcoholism treatment services and those in the general population as inhabiting two different worlds. Those in publicly funded treatment agencies tend to be in the 35 to 60-year-old age group, to be unemployed and living outside a nuclear family. In contrast, those in the general population experiencing drinking problems are more likely to be 18 to 25 years old, employed and living in families (Armour, Polich and Stanbul, 1978).

Many studies have indicated that after controlling for gender-related differences in rates of drinking and drinking problems, women are less likely than men to use specialized services (Weisner and Schmidt, 1993). This has been attributed to a lack of services tailored to the needs of women and to female-specific barriers to treatment (e.g. financial, need to provide child care). However, there are differences in the ways men and women interpret symptoms of illness and this may influence help-seeking behaviour. Compared with men, female problem drinkers are more likely to see themselves as suffering from depression or anxiety and less likely to describe their problems as explicitly related to alcohol (Fillmore, 1984; Beckman and Amaro, 1986; Blume, 1982). This may be due to the greater stigmatization of women's abuse of alcohol and a tendency for women problem drinkers to seek help from services that do not specialize in alcoholism

treatment. This was confirmed in the study by Weisner and Schmidt (1993). This study showed that women with drinking problems were more likely than men to use non-alcohol-specific health care services, particularly mental health services, and also to report greater symptom severity. This latter result indicates that women may delay seeking help until their problems become quite serious. Weisner, Greenfield and Room (1995) also found that women with drinking problems in the general population, unlike men, reported more use of health and mental health programs than alcohol treatment programs.

In addition to many descriptive studies of those seeking help from specific sources, a few studies have compared those seeking help from different sources. Pattison, Coe and Rhodes (1969) compared clients of an aversion-conditioning hospital, a halfway house and an outpatient psychotherapy clinic. Compared with those in the halfway house, clients in the other programs had, on intake, significantly lower scores on a scale of drinking problems and higher scores on a scale of interpersonal health. Those attending the aversion hospital also had significantly higher scores than those in both other programs on a scale of vocational health.

Beckman and Kocel (1982) studied structural characteristics of 53 alcohol treatment facilities in California and found that women were more likely found in agencies that hire more professionals, provide treatment for children and provide after-care services.

Ogborne (1995a) found that in a sample of young people (aged 12-25) seeking help for substance use, those preferring residential treatment had more mental health and addiction problems than those preferring non-residential treatment. Those seeking residential treatment were also more likely to have had previous treatment experience. This suggests that clients do not seek residential treatment capriciously or because they are unaware of alternatives, and it reinforces the need to consider client preferences in treatment planning.

Early studies indicated that alcoholics who affiliated with AA were mostly males who differed from others with respect to drinking experiences, socio-demographic and personality characteristics, and belief systems (Ogborne and Glaser, 1981). However, AA groups are now quite diverse and seem to attract a more heterogeneous population (Montgomery, Miller and Tonigan, 1993). AA has also become an important resource for women (Weisner, Greenfield and Room, 1995).

Best Practice Guideline

(No. 20)

The majority of those who have problems with alcohol or other drugs do not seek help, especially not from specialized addictions services. More efforts may therefore be required to increase awareness of specialized services among the general population and among social and health service providers.

c) Coordination issues in a substance abuse treatment system

Coordination, an issue for all human services, has been defined as the degree to which collaboration and exchange exist within an aggregation of service providers (Baker, 1991). Coordination is seen as reducing the fragmentation, discontinuity, inaccessibility and lack of accountability of specialized services, with the result that clients will be less likely to fall through the gaps between services (Anderson, Frieden and Murphy, 1977).

A number of particular challenges to coordination in the context of Canadian substance abuse treatment have been identified (Ogborne and Rush, 1983):

- The unsystematic manner in which services have been planned and funded.
- Conflicting ideologies and perspectives on the nature of alcohol and other drug problems, and the optimal assessment and treatment approaches.
- Lack of a common framework or language to describe clients and their problems, coupled with diverse and non-standardized training requirements in addictions, for personnel working in specialized agencies as well as professionals in more general health and social services.
- The wide network of health, social and correctional services with which clients may be involved and the potential for poor communication across such a diverse network.
- The complex, multi-dimensional nature of alcohol and other drug problems and the difficulty of matching clients to appropriate services when the full range of required services is not available and the criteria for matching to existing resources lack a strong empirical base.
- The referral process itself, when it involves only a "passive" recommendation to seek assistance rather than the active provision of assistance and advocacy that may be required to link clients with the various services that are needed.
- Record keeping and other dimensions of quality assurance that are non-standardized and/or of poor quality, and therefore impede the accountability and evaluation of community-wide treatment systems issues.

The current reforms within health and social services systems are compounding these issues by requiring providers to sustain and perhaps redefine their present relationships, while forging new ones in the community. Though no standardized measures of coordination among services have been developed, Ogborne et al. (1997), in a review of the literature, suggested that coordination among service providers could be characterized in the following ways:

- *Mutual awareness:* do staff know about each other and their respective programs?
- *Frequency of interaction:* do key staff meet to discuss work-related issues?

- *Frequency and direction of referrals:* how often or how many clients are referred to and from different services in the network?
- *Frequency and direction of information exchange:* do services exchange information about programs, services and clients?
- *Frequency and direction of staff sharing or exchange:* are staff of different services permanently or temporarily shared or loaned?
- *Frequency and direction of other resource exchanges:* do services share funds, meeting rooms, materials or other resources?
- *Joint activities:* are there jointly held consultations, case conferences, staff training, intake and assessment, data collection, program design and operations, program evaluation or mergers?
- *Overlapping boards:* are there members in common to community boards from different services?
- *Formalization of agreements:* have services developed formal agreements to coordinate their activities?

Martin et al. (1990) suggest that formal, organized methods of networking should be considered to enhance informal activities. While noting regular workshops, newsletters or formal associations of service providers as mechanisms for networking, they also recommend that funding bodies formally include a certain percentage of time for participation in a local planning or coordinating committee in the job description of a program manager.

d) Case management

With the size and complexity of current treatment services, an arrangement for case management is viewed as a crucial element in a treatment system. While the other elements of a system, such as assessment, matching and treatment, occur in more or less sequential order, case management needs to cut across these other elements, providing a coherent experience for the individual (Institute of Medicine, 1990). Martin et al., (1990) define case management as a process involving:

- Ongoing assessment of current strengths, weaknesses and needs.
- Ongoing planning to identify services appropriate to the particular needs of the client.
- Linking clients to needed services and ensuring that these linkages are maintained.
- Continuous monitoring and evaluation of progress.
- Interceding on behalf of the client to ensure that the treatment system responds equitably and effectively to the needs of the client.

A variety of case management mechanisms exists, such as creating highly structured relationships among components of a system, or having some clients take responsibility for their continuity of care, or most often, assigning the function to an individual within a service agency (Institute of Medicine, 1990). Martin et al., (1990) emphasize that, regardless of who is responsible or how it is handled, all organizations need to regard case management as a discrete function based on policy and procedures. The Institute of Medicine (1990) suggests that the lay public may be able to play a role, because the literature on case management emphasizes the importance of personal traits such as perseverance, flexibility and thoroughness.

Best Practice Guideline

(No. 21)

Research on effective configurations for service systems is limited. However, there is consensus in the literature that clients are better served when they can access a range of flexible and individualized services spanning the specialized and non-specialized sectors, linked through some form of coordination and case management, and accounting for the needs of special populations.

e) The role of self-help/mutual aid groups

Although they do not consider themselves formal treatment programs, self-help/mutual aid groups such as AA and Narcotics Anonymous (NA) play a vital role in many substance abuse treatment systems. Particularly in large urban areas, a wide range of different AA groups is available to address specific needs e.g. women only, non-smokers, gay men and lesbians. In addition, there are now a wide range of self-help/mutual aid groups beyond AA and NA addressing different needs and philosophies. These include Women for Sobriety, Moderation Management, Rational Recovery, Secular Organizations for Sobriety, and Self Management and Recovery Training, though AA and NA still remain the most widely available, particularly in Canada (Youngson, 1997).

Over the years, the philosophy of the AA/NA fellowships has guided the design of programs and for many treatment programs the groups constitute the continuing care component. As well, many programs make participation at AA or NA a requirement. As sponsors, members often play a crucial role in supporting and advocating for an individual through detoxification and treatment and in maintaining recovery. Many individuals utilize only these fellowships, without becoming involved with the formal treatment system.

While many people benefit from involvement with self-help groups, others do not and the issue is not "does self-help work?," but rather "for whom and under what conditions might a referral to self-help be most beneficial?" While more research is needed to answer this question, some attempts to link substance users with self-help groups may be appropriate unless clearly contraindicated by personal preference or local conditions. Self-help groups, and especially AA, are low cost, and readily available in both the short and long term.

Professionals need to be aware of local self-help groups and to provide relevant information to their clients and, where appropriate, seek to ensure that client concerns about attending self-help groups are addressed, but also to recognize that such groups are not suitable for all clients. Mandatory attendance at AA or other self-help groups seems contrary to the nature of self-help and is not supported by research.

Best Practice Guideline

(No 22)

Though by its nature it is difficult to evaluate the efficacy of attendance at AA or other mutual aid groups, many people find such groups of benefit, and clinicians should make themselves familiar with AA and other mutual aid groups and provide information and support to their clients in the use of these resources.

6. Economic Benefits of Substance Abuse Treatment

There is fairly good evidence that people exposed to some types of treatment subsequently reduce their use of psychoactive substances and show improvement in other life areas. Beyond benefits to individuals and families, there are economic benefits for society as a whole, or at least for some sectors, and this has been demonstrated in some United States studies. It should be noted, however, that because the studies discussed below are based on the US health care financing system, the findings may not be easily generalizable to the very different Canadian health and social care system.

For alcoholism treatment, the best evidence for economic benefits within the health system comes from record-linkage studies involving health insurance claims from treated and untreated alcoholics. The largest study of this kind was reported by Holder and Blose (1992). This study focused on the costs of insurance claims to the health plan of a large manufacturing company in the mid-western United States by 3068 treated and 661 untreated alcoholics over the 14-year period 1974 to 1987. Alcoholics were identified from diagnoses on medical claim forms. Time series analysis showed that following treatment for alcoholism, the total cost of claims, including those for alcoholism treatment, declined by 23% to 55% from their highest pre-treatment levels. The cost of claims from untreated cases increased following identification. Analysis of variance controlling for pre-treatment health status and age also showed that post-treatment costs were reduced by 24%. The authors interpret these results as "providing considerable evidence that alcoholism treatment can reduce overall medical costs in a heterogeneous alcoholic population."

Other smaller-scale studies by Holder and colleagues (Holder and Blose, 1986; Holder and Hallan, 1986) and some earlier studies (reviewed by Holder, 1987) point to the same conclusions. Similar conclusions can be drawn from studies of pre- and post-treatment use of health services by clients of mental health services (Holder and Blose, 1987; Mumford et al., 1984).

Although these studies suggest that the positive effects of alcoholism treatment on the use of health care services apply to the entire populations in treatment, there is also evidence that these effects are greater for some groups than others. Holder and Blose (1986) found that age influenced pre-post-treatment differences in health care utilization among treated alcoholics. The youngest group (under 45 years) had the greatest drop in total costs following the onset of treatment and the post-treatment costs for this group declined to the lowest levels that existed prior to treatment. However, for those over 65, health care costs remained relatively stable after treatment and did not decline to pre-treatment levels. These results were replicated and extended by Blose and Holder (1991). However, Booth et al., 1990 found that in a sample of patients treated for alcoholism at a rural Veterans Administration Medical Center, alcohol-related hospital

admissions were more frequent and for longer periods after alcoholism treatment than before. The authors speculate that the low socio-economic status of most cases in their study may account for the differences between their results and those of Holder and others.

Evidence for the economic benefits of treatment for problems with drugs other than alcohol comes from a large study of drug treatment in the United States (Hubbard et al., 1989). This study involved more than 10 000 drug users and 37 treatment programs that represented three main treatment modalities: methadone maintenance treatment, drug-free outpatient counselling and therapeutic community. Extensive intake, treatment and follow-up data were collected. The economic component of the study focused on the costs of drug-related crime. Two summary measures of these costs were developed: costs to law-abiding citizens, and costs to society. The cost to law-abiding citizens included those associated with crime-related property loss or damage, reduced productivity because of injury or inconvenience occasioned by drug-related crime, and the costs of criminal justice proceedings. Costs to society included cost to victims of drug-related crime, criminal justice costs and "crime/career/productivity costs" incurred when drug users are not involved in earning a legitimate income. The results showed that, in the population studied, both types of costs were lower after treatment than before and that pre-post differences in costs exceeded the costs of treatment. The pre-post differences in favour of law-abiding citizens were greatest for methadone maintenance treatment, while those for society as a whole were greatest for outpatient drug-free counselling.

Best Practice Guideline

(No. 23)

There is good evidence that substance abuse treatment results in economic benefits for society as a whole, or at least for some sectors. Several studies indicate that the economic benefits resulting from some types of treatment exceed treatment costs.

7. Issues and Limitations Concerning Research to Date

At various points in the previous material, attention was drawn to reasons why the results of particular studies or sets of studies should be interpreted with caution. In general, caution is required when generalizing results to typical treatment settings because many studies have been conducted in university-affiliated clinics and have involved highly trained therapists and selected clients. Generally, multi-problem and socially unstable clients are excluded from controlled research studies and those selected have to agree to comply with conditions imposed by the research. This includes the agreement to randomization, so this will exclude clients who have strong feelings about particular treatments and those who want to have a say in treatment planning.

The goal of improving treatment outcomes can, in fact, present a dilemma for researchers, practitioners and policy makers. There is a danger that, with the aim of improving treatment outcomes, a service may employ high entry requirements which will likely increase success rates, but deny service to those in most need of help. By maximizing outreach to those who need treatment most, a service may be working with poor candidates for success in terms of outcome measures.

With the exception of methadone maintenance treatment, there has been little research on alternatives for heroin addiction and injection drug use in general. This seems to be somewhat of a priority given the high rates of injection drug use in Vancouver and other urban centres, and the high rates of HIV, Hepatitis C, and overdose deaths among injection drug users.

Some research reports give adequate details of client selection and report essential characteristics of those involved, but others do not. This limits comparisons between studies (Finney and Monahan, 1996).

Other shortcomings of published research include a failure to use standardized outcome measures, and a lack of statistical power due to small sample sizes. This means that there is a good chance of concluding that a treatment does not work when in fact it does.

Current treatment evaluation practice may not be able to fully account for the effects of various therapies, which are in some cases quite complex. It is recognized, for example, that some treatments, such as behaviorally oriented modalities, are inherently easier to study as "goals-based" treatments than are other therapies that are more "needs-based."

Miller (1995) attempted to determine the extent to which reported treatment outcomes in controlled studies varied with the quality of research. A variety of research quality measures was developed. Contrary to expectations that poor quality research would be more likely to show that the treatment studies were effective, Miller and Hester found no relationship between research quality and treatment outcomes.

Dennis et al. (1996) are especially concerned that many published research studies, including those that have used experimental designs, have low statistical power, use unrepresentative samples and fail to evaluate the psychometric properties of their measuring instruments. They also note that the literature includes many studies that failed to control for variability within treated samples and did not use multi-variate analyses to control for the setting effects of many different outcomes. Dennis et al. call for more health service research to correct these deficiencies. This involves the development of monitoring systems to understand and evaluate clients, interventions, and organizational and financial issues as they occur in practice. This differs from experimental research, addressing effectiveness in practice rather than efficacy in controlled settings.

8. General Conclusions and Summary of Best Practices

Despite the limitations of research to date, there are a number of conclusions that appear to be warranted that have been referred to in this report as best practices.

There is fairly good evidence that people exposed to some types of treatment subsequently reduce their use of psychoactive substances and show improvement in other life areas. While improvements in substance use behaviours are generally associated with improvements in other life areas, this is not always the case; nor are improvements in other areas (e.g. health, social functioning, criminality) necessarily contingent on abstinence. Different stakeholders may value some outcomes more than others and judgments of the success of treatment need to be made against multiple criteria assessed along a continuum. Dichotomous outcome measures (e.g. abstinent vs. relapsed) mask incremental benefits of treatment and disregard functioning in other life areas.

Some types of treatment seem particularly promising with respect to their influence on substance use and related problems (see below) and, in general, treatment outcomes are improved when appropriate treatments are provided for significant life problems (communication problems, lack of assertiveness, unemployment). However, treatment outcomes are influenced by pre- and post-treatment characteristics of clients and their social environments. Clients with severe psychiatric disorders and also those lacking social supports for abstinence or reduced substance use generally do less well than others.

Following is a listing of best practice guidelines arising from this review:

Best Practice Guideline (No. 1, p. 13)

> There is a definite role for pharmacotherapies, if used in a controlled setting, as an adjunct to other forms of treatment. Those drugs which have addictive potential must be used with caution and monitored on a regular basis.
>
> Selective use of **disulfiram** by socially stable, motivated clients, as an adjunct to comprehensive therapy, is supported by the literature.
>
> **Naltrexone** can be an effective adjunct to other forms of treatment by reducing craving for alcohol.

Methadone, in adequate doses and with supportive therapy, is effective in reducing illicit opiate use, criminal activity and HIV transmission. Therapy involving methadone can improve social functioning, physical health and productivity and, in certain instances, can lead to cessation of heroin use. Better outcomes are achieved with longer retention in treatment.

Best Practice Guideline (No. 2, p. 16)

There is some support in the literature for behavioural relapse prevention programs for smokers and people with alcohol problems. The literature also provides support for the effectiveness of behavioural self-control therapy for those with less severe drinking problems, as a cost-effective alternative to extensive therapist-led approaches, and for behavioural contracting in the context of a comprehensive treatment program.

Best Practice Guideline (No. 3, p. 17)

The community reinforcement approach has consistently been shown to be effective, particularly with clients having fewer social supports and more severe drinking problems.

Best Practice Guideline (No. 4, p. 18)

Marital therapy, particularly marital behavioural therapy, in both brief and extended formats, is well supported by research.

Best Practice Guideline (No. 5, p. 18)

Social skills training is strongly supported by research, particularly with problem drinkers.

Best Practice Guideline (No. 6, p. 19)

There is good support for stress management interventions as a component of treatment for alcohol problems.

Best Practice Guideline (No. 7, p. 25)

Although the literature does not yet provide strong evidence by which to match clients to specific treatment interventions, it does not mean that all clients require the same types of services. A variety of flexible and individualized services is required and guidelines for the selection of appropriate services are needed.

Best Practice Guideline (No. 8, p. 26)

Considerations should be given to providing treatment in a group format unless otherwise contraindicated.

Best Practice Guideline (No. 9, p. 28)

Research continues to support the relative cost-effectiveness of treatment provided on an outpatient basis to that provided on a residential basis, but this does not deny that some people with substance use problems need short- or longer-term supportive accommodation. However, those who are provided this type of accommodation could still benefit from participating in outpatient or day programs for help with substance abuse and other problems.

Best Practice Guideline (No. 10, p. 30)

Intentionally brief interventions (up to eight sessions) appear to benefit socially stable, low to moderately dependent people with alcohol problems. Other people with alcohol problems may need longer-term treatment but the lower and upper limits for cost-effective treatment have not been established. Several studies have shown that treatment of shorter duration is as effective as that of longer duration.

Best Practice Guideline (No. 11, p. 31)

Better treatment outcomes have been achieved for clients with fewer problems and more resources. This indicates the need to research and develop effective interventions for those who currently have a poorer prognosis.

Best Practice Guideline (No. 12, p. 32)

Appropriate therapy by competent counsellors with strong interpersonal skills, such as empathy and the ability to forge a therapeutic alliance with the client, is associated with an increase in positive treatment outcomes.

Best Practice Guideline (No. 13, p. 34)

There is some evidence of the efficacy of mandated treatment in the context of civil commitment for heroin abuse and also for drinking-driving remedial programs. However, the broader literature on efficacy of mandated treatment is equivocal. Thus, it would be improper to conclude that legally mandated clients are necessarily less suitable candidates for treatment than others.

Best Practice Guideline (No. 14, p. 38)

There is insufficient research evidence to support the provision of specific types of interventions for women. However, it is clearly important to consider barriers to treatment and provide a range of modifications and support services (e.g. scheduling sessions while children are in school, the use of self-help materials, provision of child care services, transportation), and to provide specific ancillary services (e.g. services related to pregnancy, sexual abuse counselling, parenting skills training and vocational assistance).

Best Practice Guideline (No. 15, p. 41)

Adolescents may respond best to flexible approaches which adjust to individual needs. Important program elements include family therapy, behavioural skills counselling, family and peer support and continuing care. Ancillary services, such as the availability of school for dropouts, vocational counselling, recreation services, psycho-social development, crises counselling and sexuality counselling, are also important.

Best Practice Guideline (No. 16, p. 43)

Seniors are often reluctant to acknowledge a substance use problem or to seek help from specialized services. Community-based treatment provided in the broader context of support for health and activities of daily living, using a client-centred, flexible and holistic approach, is more effective.

Best Practice Guideline (No. 17, p. 46)

While evidence is limited, it appears that providing integrated services for people with co-occurring substance use and mental health problems holds more promise than offering services in sequence or parallel. Close liaison and coordination to enhance referral and case management need to occur among the respective specialized services in a community. Training appears crucial, not only for staff of respective specialized services, but also for social services and correctional staff where these clients often present themselves. Excluding people with mental health problems from addictions treatment and excluding those with alcohol or drug problems from mental health treatment should, in general, be discouraged.

Best Practice Guideline (No. 18, p. 49)

Injection drug users with HIV/AIDS tend to be very marginalized in their communities, and it is difficult for them to access appropriate care and treatment. The very considerable health risks facing this population call for better coordination of services and more innovative treatment measures to reduce this harm, particularly among Aboriginal people, women and those in prison settings.

Best Practice Guideline (No. 19, p. 49)

Special populations need improved access to treatment through some combination of: greater awareness of and access to informal help such as self-help/mutual aid groups and self-instructional material; greater involvement of general community services in identifying and supporting clients with substance abuse problems; and provision of specialized services through outreach efforts. Effective case management is particularly important to meet the unique and often multiple needs of these clients.

Best Practice Guideline (No. 20, p. 58)

The majority of those who have problems with alcohol or other drugs do not seek help, and especially not from specialized addiction services. More efforts may therefore be required to increase awareness of specialized services among the general population and among social and health service providers.

Best Practice Guideline (No. 21, p. 60)

Research on effective configurations for service systems is quite limited. However, there is consensus in the literature that clients are better served when they can access a range of flexible and individualized services spanning the specialized and non-specialized sectors, linked through some form of coordination and case management, and accounting for the needs of special populations.

Best Practice Guideline (No. 22, p. 61)

Though by its nature it is difficult to evaluate the efficacy of attendance at AA or other mutual aid groups, many people find such groups of benefit, and clinicians should make themselves familiar with AA and other mutual aid groups and provide information and support to their clients in the use of these resources.

Best Practice Guideline (No. 23, p. 63)

There is good evidence that substance abuse treatment results in economic benefits for society as a whole, or at least for some sectors. Several studies indicate that the economic benefits resulting from some types of treatment exceed treatment costs.

9. Glossary of Treatment Definitions

Alcohol/Drug Education: Provision and discussion of factual information on alcohol (alcoholism, problem drinking) and other drugs (addiction, drug abuse) through, for example, lectures, films or readings, in order to stimulate attitudinal and behavioural change.

Anticraving Drug Therapy: The use of drugs to reduce the craving for alcohol.

Antidipsoptropic Drug Therapy: The use of drugs such as disulfiram (Antabuse) or citrated calcium carbimide (Temposil) to produce an aversive reaction when alcohol is consumed.

Aversion Therapy: Therapy designed to induce a conditioned avoidance of alcohol by pairing either images or consumption of alcohol with unpleasant experiences, such as electric shocks, nausea or vomiting, or imagined adverse consequences.

Behavioural Contracting: The use of specific environmental contingencies such as behaviour prompts, and the reinforcement of behaviours that are incompatible with drinking or drug use.

Behavioural Self-control Training: Activities aimed at teaching the client methods to modify his or her use of alcohol, usually with a moderate drinking goal. Among other things, it teaches strategies for dealing with high-risk situations. The approach may involve self-help manuals and is sometimes referred to as self-management training.

Brief Treatment: Brief motivational counselling generally targeted to people with low to moderate problems and up to eight sessions of behavioural treatment.

Cognitive Therapy: The identification and modification of maladaptive thoughts or beliefs that contribute to problem substance use.

Community Reinforcement: A broad spectrum approach which attempts to change the individual's drinking or drug use environment by providing interventions such as pharmacotherapies, help with job finding, relationship and leisure counselling, etc.

Confrontational Intervention: A very intensive and challenging approach to individual and group activities aimed at questioning current behaviour and motivating the client toward attitudinal and behavioural changes.

Continuing Care (after-care): Resources or services that provide continuing encouragement and additional services as needed following a client's completion of a treatment plan.

Cue Exposure: Exposure of drinkers or drug users to cues (e.g. sight, taste, smell) to alcohol or drug use without providing the substance with the assumption that such exposure will extinguish the craving or withdrawal.

Day/Evening Treatment: Intensive, structured non-residential treatment, typically provided five days a week (e.g. 3-4 hours per day). Such programs may also be provided in institutional settings (e.g. Corrections).

Family/Marital Therapy: Involvement of spouse, family members and/or significant others in the therapeutic process in order to improve communication, problem solving and other skills in the family, thereby modifying alcohol and other drug use by the client and providing support to the family. In some cases, family members may be clients in their own right.

Group Therapy: Provision of treatment in a group format. It may include group psychotherapy, as well as other types of groups such as support groups and counselling groups.

Hypnosis: Putting the person in a hypnotic trance and then giving specific instructions in order to change future substance use.

Insight-oriented Psychotherapy: Individual or group activities which view alcohol or other drug problems as a symptom of underlying psychopathology and which seek to resolve underlying conflicts through the use of interpretations and the development of insight. It is sometimes referred to as insight-oriented therapy, as distinct from the more present-oriented, problem-solving, counselling approach.

Methadone Maintenance Treatment: The use of methadone in a prescribed and systematic fashion as a substitute for opiates in order to stabilize the user while lifestyle and interpersonal changes are attempted.

Methadone Maintenance Treatment – high dose: Average dosage of 60 to100 mg/day.

Methadone Maintenance Treatment – low dose: Average dosage of 30 to 50 mg/day.

Outpatient Treatment: Treatment provided on a non-residential basis, usually in regularly scheduled sessions (e.g. 1-2 hours per week).

Relapse Prevention: Activities aimed specifically at teaching clients skills to cope with high-risk situations for relapse and to increase the clients' confidence (i.e. self-efficacy) so that they can successfully cope with these situations.

Residential Treatment (long-term): Treatment and/or rehabilitation services provided for a period of time typically longer than 40 days. These programs include recovery homes, halfway houses, three-quarter-way houses and therapeutic communities.

Residential Treatment (short-term): Treatment provided for an intensive, structured period of time while the client resides in-house. The length of stay is typically less than 40 days.

Social Skills Training: This refers to training in behavioural skills to build and maintain interpersonal relationships.

Stress Management: Activities aimed at improving the client's ability to relax and cope with stress. This may involve progressive relaxation training, biofeedback, meditation, systematic desensitization and other techniques.

Therapeutic Community: Long-term, highly structured, intensive residential milieu therapy program for those with severe problems, often including involvement with the criminal justice system. It is modelled after the original US programs such as Synanon.

Twelve-Step Self-help: Treatment activities based on the disease perspective of alcoholism and other chemical dependencies, and the 12-step approach of AA or similar self-help groups.

Video Self-Confrontation: Videotaping a drinker while intoxicated and playing it back when he or she is sober in order to confront the person with his or her behaviour while drinking.

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