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**RSA Lecture Series 2000**  
**“Diagnosis and Treatment of**  
**Alcohol Dependence”**  
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**Allen Zweben**

Allen Zweben, D.S.W.  
Director, Center for Addiction and Behavioral Health Research  
Professor, School of Social Welfare  
University of Wisconsin-Milwaukee

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## **Aims of the Lecture**

- **To acquaint participants with the contemporary state of affairs in diagnosing and treating alcohol dependence.**
- **To provide empirical support for the use of state-of-the-art diagnostic and intervention devices in treating alcohol dependence**

Participants will become familiarized with present state of knowledge regarding screening, assessment, and intervention techniques employed in the treatment of alcohol problems. Participants will become acquainted with studies in which assessment and intervention devices have been validated.

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# Diagnosis of Alcohol Dependence

- **Purpose**
  - **Classification of disorders**
  - **Means of communication between practitioners and researchers**
  - **Clinical utility**
- **Structured Clinical Interview for DSM-IV (SCID)**

A diagnostic system is a mechanism for classifying or categorizing individuals afflicted with a particular disorder based on the kinds and severity of problems/symptoms associated with the disorder. Such a mechanism is used to make important distinctions across a heterogeneous patient population for purposes of obtaining a better understanding of the conditions/circumstances of individuals being seen for help with specific problems or concerns, for improving communication among practitioners about the characteristics of these help-seeking groups and for developing appropriate treatments for these various groups (Maisto & McKay, 1995).

Within the alcoholism treatment field, The Structured Clinical Interview for DSM-IV (SCID) is a popular and widely used diagnostic instrument for determining eligibility in a study and decision making about what kind(s) of treatment(s) might be most suitable for addressing the substance use problems. Based on the construct “alcohol dependence syndrome” developed by the World Health Organization, the SCID has served as a mechanism to classify individuals as alcohol dependent based upon whether or not they (1) exhibit symptoms of physical dependence such as tolerance and withdrawal, (2) continue using the substance despite experiencing recurring problems, (3) take the substance in larger amounts than intended and (4) give up or reduce involvement in social, occupational, or recreational activities because of their drinking practices. Individuals who do not experience the aforementioned physical symptoms or have fewer consequences (but manifest at least one of the consequences) are diagnosed as alcohol abusers.

## Diagnosis and treatment of Alcohol Dependence (Zweben)

There are several limitations of the SCID. These include the following: (1) too much reliance on interviewer discretion in obtaining information for a diagnostic category (2) lack of sensitivity in measuring dependency in certain age groups such as the elderly or adolescents (i.e., having dependence symptoms is not common in the latter group because of the length of time it may take to develop such symptoms) (Miller, Westerberg & Waldron, 1995) and (3) its inherent deficiency as a method for prescribing psychosocial treatment. Concerning the latter, much more needs to be known (i.e., antecedents and consequences) to determine what kinds of treatment strategies will lead to changing harmful drinking practices (see section on assessment and treatment planning). However the SCID is a useful, general measure for program planning in terms of identifying individuals who may need more intensive treatment such as those with more serious alcohol-related disabilities or those with co-occurring disorders. In addition, there are more focused diagnostic measures that determine the varying levels of severity of dependence (in contrast to using discrete categories such as alcohol dependent or alcohol abuse) (e.g., Alcohol Dependence Scale (ADS), the number of withdrawal systems (e.g., Clinical Institute Withdrawal Assessment (CIWA)) and the degree of alcohol-related consequences (e.g., Drinking Inventory of Consequences (DrInC)). These diagnostic measures also serve as aids for addressing inclusion/exclusion criteria, referring patients to specific treatments (e.g., inpatient or outpatient treatment) and/or monitoring their progress throughout treatment and follow-up (Maisto & McKay, 1995).

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# Assessment and Treatment Planning

- **Purposes**
  - **Screening and case finding**
  - **Motivation**
  - **Individualization of treatment**
  - **Evaluation of outcome**

A sequential approach is typically employed in assessing individuals for alcohol problems (Donovan, 1999). Such an approach involves screening procedures for identifying persons with possible alcohol problems and assessment procedures to establish a diagnosis and develop a treatment plan. Merely asking people about their drinking problems may increase their problem awareness which is an important element in motivating them for treatment (DiClemente, Bellino, & Nevins, 1999). The assessment should include a functional analysis, a method of identifying the determinants of alcohol use for purposes of selecting and prioritizing appropriate treatment goals. A functional analysis is followed by a matching process which involves employing a decision tree that triages patients through a menu of options based on their personal or social coping resources, treatment needs and individual preferences. The therapist negotiates a sequence of goals to address the presenting problems. The established goals should (1) reflect the hopes, aspirations and perspectives of the patient (2) be attainable and immediately rewarding, (3) be practical and detailed (i.e., stated in behavioral terms) and (4) expressed in positive terms.

It should be pointed out, that at this juncture, empirical support is lacking for employing a decision tree in referring patients to specific treatment modules based on their expressed problems or needs. Future research will need to test the underlying principles or procedures used in such a matching process.

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## What to Measure

- **A Multidimensional Approach Should Focus on**
  - **Following Domains:**
    - **Physiological**
    - **Behavioral**
    - **Psychological**
    - **Social Factors**



It is important in the assessment phase to understand the etiology, course and severity of the disorder along with level of commitment to treatment. At the same time it is necessary to clarify the interrelationship between everyday life problems and alcohol use. Therefore, the various assessment domains should cover the following areas: (1) the kinds of situations, moods, and behaviors that pose the highest risk for relapse (2) the deficits and strengths in individual and social coping resources needed to address potential or high risk occurrences and (3) the level of readiness to change. In this way, hypotheses can be formed about what action steps will need to be taken to achieve sobriety. Table 1 lists examples of measures for assessing alcohol use problems, high risk situations, personal coping resources and motivational readiness to change.

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## **A Multidimensional Assessment of Alcohol Use Problems (adapted from Donovan, 1999)**

<b>Assessment domain</b>	<b>Example of instruments</b>	<b>References</b>
<b>Alcohol use problems</b>	<b>Serum Chemistry Profile (AST and ALT, GGT, MCV)</b>	<b>Anton, Litten, &amp; Allen, 1995</b>
	<b>Form-90</b>	<b>Miller, 1996</b>
	<b>Time-line Followback</b>	<b>Sobell &amp; Sobell, 1992</b>
	<b>Alcohol Dependence Scale</b>	<b>Skinner &amp; Horn, 1982</b>
	<b>Drinking Inventory of Consequences</b>	<b>Miller et al, 1996</b>

The measures of alcohol use problems deal with quantity/frequency of alcohol use, symptoms of alcohol use, and social, psychological, and physical consequences related to the drinking behavior. These data are used to assess both the dependence syndrome and a variety of negative consequences along a continuum of severity and can be used as feedback to promote patient awareness of the extent and severity of alcohol use problems. Measures of relapse risk situations and coping abilities (i.e., individual's confidence and temptation in handling high risk situations) highlight those areas that pose the greatest threat to sobriety. They include domains dealing with negative emotional states such as depression, interpersonal matters (pressure to drink) and interpersonal situations (boredom). Assessing risk situations and deficits in the individual's coping abilities allows the clinician to work with the patient to develop a treatment package specifically targeted to these areas. There is some evidence suggesting that patients do better when they receive targeted services than when they do not (McLellan et al, 1994). That is to say, the likelihood of improvement may be greater when the special needs or problems or patients are "matched" to particular elements of treatment. For example, individuals with a mood disorder such as depression might be advised to participate in a treatment program that includes mood management training. However, it is important to note that the selection of a treatment package is a negotiated decision based in part, on the patient's recognition of his/her own treatment needs, stated preferences or outcome expectancies about the approach.

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## **A Multidimensional Assessment of Alcohol Use Problems (adapted from Donovan, 1999)**

Assessment domain	Example of instruments	References
<b>Relapse risk situations</b>	<b>Inventory of Drinking Situations</b>	<b>Annis et al, 1987</b>
	<b>Desired Effects of Drinking</b>	<b>Simpson et al, 1999</b>
	<b>Profile of Mood States</b>	

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## **A Multidimensional Assessment of Alcohol Use Problems (adapted from Donovan, 1999)**

Assessment domain	Example of instruments	References
<b>Coping resources</b>	<b>Alcohol Abstinence Self-Efficacy Scale</b>	<b>DiClemente et al, 1994</b>
	<b>Situational Confidence Questionnaire</b>	<b>Annis &amp; Graham, 1988</b>
	<b>Coping Responses Inventory</b>	<b>Moos, 1995</b>

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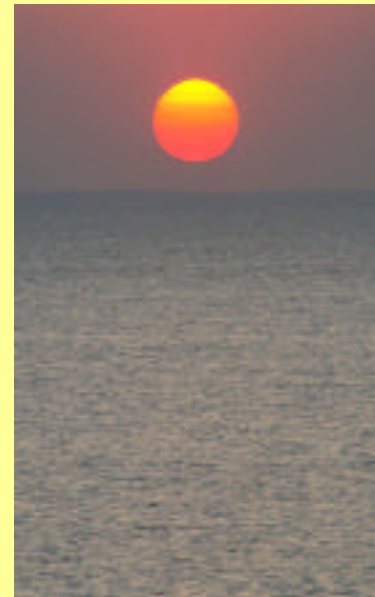
## **A Multidimensional Assessment of Alcohol Use Problems (adapted from Donovan, 1999)**

Assessment domain	Example of instruments	References
<b>Motivational resources</b>	<b>Stages of Change Readiness and Treatment Eagerness Scale</b>	<b>Miller &amp; Tonigan, 1996</b>
	<b>University of Rhode Island Readiness to Change Assessment</b>	<b>McConaughy et al, 1983</b>
	<b>Readiness to Change Questionnaire</b>	<b>Rollnick et al, 1992</b>

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## Promising Treatment Approaches

- **Brief Motivational Counseling**
- **Cognitive Behavioral Therapy (CBT)**
- **Significant Other (SO)-Involved Therapy**



Research in the past twenty years has documented the importance of motivational readiness in continuance or cessation of problem drinking. In Project MATCH motivational readiness proved to be strong predictor of client-therapeutic alliance and improved drinking behavior (in the outpatient sample only) across all MATCH treatments (Project MATCH Research Group, 1997). Motivational readiness also has been shown to be positively related to treatment attendance, a factor which has predicted more favorable drinking outcomes (DiClemente, et al, in press; Donovan & Rosengren, 1999).

Studies have documented the efficacy of relatively brief counseling approaches in the treatment of alcohol problems (Bien, Miller & Tonigan, 1993). This has led the addiction field to search for the active ingredients of brief interventions (i.e., what components of brief treatment modalities may induce change in an alcohol patient population). Six elements employed in brief treatments have demonstrated efficacy with alcohol patients. These elements are known by the acronym FRAMES (Miller & Sanchez, 1994) and are summarized in the slide.

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**Motivation:  
A Critical Element in  
Treatment Compliance  
and Drinking Outcome**

Studies have documented the efficacy of relatively brief motivational counseling approaches in the treatment of alcohol problems (Bien, Miller & Tonigan, 1993). This has led the addiction field to search for the active ingredients of motivational interviewing (MI) - i.e., what components of MI induce change in an alcohol patient population. Six elements employed separately and in combination have demonstrated efficacy with alcohol patients. These elements are known by the acronym FRAMES (Miller & Sanchez, 1994) and are summarized below:

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**Feedback about personal risk or impairment**

**Responsibility for change lies with patient**

**Advice on how to change the drinking behavior**

**Menu of alternatives for change**

**Empathy on the part of the therapist**

**Self-efficacy on the part of the patient toward  
change**

The findings of these elements have had an important impact on the development of motivational counseling approaches with alcohol patients.

## **Motivational Counseling vs. More Intensive or Conventional Treatment Approaches**

- **Project MATCH (1988-98)**
  - **TSF=CBT=MET**
- **Cost Evaluation Study (1992-97)**
  - **MET>CBT or TSF**

There is now strong evidence that motivational approaches are at least as effective as more intensive or conventional strategies. In Project MATCH there were few clinically significant differences between Motivational Enhancement Therapy (MET) and the more intensive Cognitive Behavioral Therapy (CBT) or Twelve-Step Facilitation (TSF). While TSF and CBT treatments yielded slightly greater (2 days/month or 5% reduction in alcohol consumption, posttreatment follow-up drinking rates did not differ significantly among the three treatment groups (Project MATCH Research Group, 1997).

In the Cost Evaluation Study (Holder, et al, in press), a project separately funded from Project MATCH, there were no significant differences in total health care costs following exposure to the three MATCH treatments. The mean estimated monthly posttreatment costs for the three treatment conditions ranged from \$359 for MET to a high of \$433 for CBT and \$407 for TSF. However, MET had a clear cost advantage over CBT and TSF since it was the least expensive of the three treatments to implement (Cisler, et al, 1999). The cost savings associated with MET may place pressure on health care or managed care providers to adopt such methods in settings where alcohol patients are typically seen.

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## Treatment Compliance and the Therapeutic Alliance



- **Rates of Early Drop-out from Alcoholism Treatment (less than four sessions)**
- **from 44 - 75%**

Failure to adhere to a treatment regime by not showing for appointments, maintaining regular attendance or continuing therapy has been a troublesome issue in the alcoholism treatment field. Research has shown that treatment benefits are positively related to the length of time a patient remains in a treatment program (Westerberg, 1998). Similar findings have been found in regard to medication compliance. Alcoholism treatment studies clearly show that medication adherence is strongly associated with better outcomes. Volpicelli et al, 1997, in a pharmacotherapy trial, demonstrated that high medication adherent subjects fared better than low medication adherent subjects on the drinking outcome measure.

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# **Client Choice is Critical to Facilitating Compliance**

An important ingredient of the motivational model is to arrive at a consensus about the aforementioned matters such as severity of drinking problems and the kinds of strategies to be used in changing the drinking behavior. A patient may leave treatment prematurely when there is a disparity between the therapist and patient concerning such matters as the level of harm associated with the drinking, beliefs about the etiology of the problems, and methods for addressing the problems (Zweben et al, 1988). To this end patients are offered a variety of options (including "doing nothing") for dealing with the alcohol problems. The extent to which the individual freely chooses the course of action and is optimistic about the prospects for their success (i.e., outcome expectancies) has been associated with better outcomes (Donovan & Rosengren, 1999). Enhancing commitment can be achieved by facilitating the belief that there is "a way out" of the problem and enabling the patient to do "something" about it (Donovan & Rosengren, 1999).

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## **Motivational Enhancement Therapy (MET) and Matching**

- **Patient Characteristic**
  - **High Anger**
- **Clinical effectiveness**
  - **MET > CBT & TSF**

With regard to matching results for MET, outpatients high in anger fared better in MET than in the other two MATCH treatments (CBT and TSF) (Project MATCH Research Group, 1998). Among subjects in the highest third of the anger variable, those treated in MET had an average 76.4% abstinent days, whereas their counterparts in the other two treatments had an average 66% abstinent days. For these angry clients, a nonconfrontational approach such as MET, might have worked more effectively in defusing the anger or perhaps resistance than CBT or TSF, modalities which are typically more directive.

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## **Cognitive Behavioral Therapy (CBT): How Does It Work?**

- **Targets A Wide Range of Objectives**
  - **Social skills training**
  - **Reduced psychiatric symptoms**
  - **Anger reduction**
  - **Social support**
  - **Job finding**



Based upon social learning principles which state that problem behaviors are determined by social environmental factors and can be unlearned, individuals are requested to identify high risk situations and to learn alternative or more effective coping strategies rather than alcohol or drug use. A functional analysis is conducted to determine target areas for intervention. Goal areas are prioritized and a sequence of interventions is employed to achieve them. Interventions might include assertiveness training, mood management, job seeking skills, anger control, communication training, and planning of leisure-time activities. Opportunities are provided to practice skills inside and outside the sessions (i.e., homework). To build up the confidence of the individual, goals that are more easily attainable are given priority in the treatment plan.

## **Cognitive Behavioral Therapy (CBT): What the Data Say**



- **Project MATCH**
  - **CBT = TSF or MET**
- **Other Studies**
  - **CBT more effective as an additive approach**

Longabaugh and Morgenstern (1998) reviewed the outcome literature on coping skills approaches (termed Cognitive Behavioral Therapy (CBT) in Project MATCH) and found that CBT did not differ in effectiveness from other approaches when delivered as stand-alone treatment. In Project MATCH CBT patients fared as well as TSF or MET patients on drinking outcome measures (except on total abstinence) during the posttreatment period (Project MATCH Research Group, 1997). Similar findings were observed in Finney and his colleagues (1998) in the VA comparative treatment outcome study where CBT patients fared as well as TSF patients (and again, except for total abstinence). Longabaugh (1999) points out that there may be common ingredients between TSF and CBT that may help explain these comparable findings. Both treatment approaches employ mechanisms to help individuals cope with negative mood states while promoting environmental changes (job seeking skills and planning of leisure-time activities, and increasing social support for abstinence) that are incompatible with drinking.

CBT performed better than other approaches when it was included as part of a comprehensive treatment program (Longabaugh, 1999). Patients who received CBT as one component of a broad spectrum approach fared better than those patients who received a comparison treatment (e.g., interactional therapy) also delivered as part of a comprehensive program. Similarly, CBT did better as an additive treatment in a comprehensive program when compared to broad spectrum approaches where no additional therapy was offered beyond what was already offered in the program (Longabaugh, 1999). Similar results have been reported in pharmacotherapy trials

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where CBT has been added onto the pharmacotherapy and compared with other approaches also delivered as an add-on to the medication (O'Malley, et al, 1992).

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## **CBT and Matching: Limited Findings**

### **Patient Characteristic**

**- Low alcohol dependence**

**- High psychiatric severity**

**- High support for drinking**

### **Clinical Effectiveness**

**CBT > TSF**

**CBT > Interactional therapy\***

**CBT > Relationship enhanced  
therapy\***

**\*Unconfirmed findings**

In Project MATCH aftercare patients having low dependence symptoms fared better in CBT than TSF while those with more dependence symptoms did better in TSF. These differences were found across number of outcomes pertaining to drinking and health care costs (Project MATCH Research Group, 1997; Holder et al, in press). Other studies found that patients having a higher degree of psychiatric severity (Kadden et al, 1989) did better in CBT than in interactional therapy but these findings have not been confirmed in subsequent research. One study showed that patients with high support for drinking performed better in CBT than in a relationship enhanced therapy (Longabaugh, et al, 1995). Again, this finding has not been confirmed in subsequent research.

## **Significant Other (SO) - Involved Approaches: How Does It Work?**

- **Facilitate Medication and Treatment Compliance**
- **Buttress Motivation**
- **Increase Interaction Patterns that Promote and Reinforce Sobriety**
- **Strengthen Emotional Ties**



There is strong support for involving the significant (SO) in alcoholism treatment. The SO could be a child, parent, friend or clergyman. With notable exceptions, the Soss have usually been spouses or live-in partners. (In the Miller et al study (in press) most of the Soss were not spouses. In fact, they found that parents were more successful than spouses in engaging the patient in treatment. In this approach, the Soss play a valuable role by (1) providing ongoing emotional support, (2) identifying obstacles that might interfere with sustaining abstinence, (3) sharing in activities that are compatible with drinking, and (4) helping facilitate medication and treatment compliance.

Much effort is devoted to reducing interaction patterns that inadvertently reinforce problem drinking. Here the therapist helps the nondrinking spouse to identify behaviors that trigger or reward problem drinking. The therapist teaches the spouse about withdrawing positive reinforcement when the patient is using and providing positive reinforcement for nonuse. Examples of the former include *not* making excuses to the patient's employer for the alcohol use problems (i.e., showing up late for work), cleaning up after him/her after a drinking episode and avoiding drinking-related events such as bowling, ball games and parties. Examples of the latter include verbally acknowledging nonusing behavior and sharing in activities associated with nonusing behavior such as attending church services together.

Much effort is devoted to establishing and maintaining positive family ties. Having a strong interpersonal relationship is considered to be an active ingredient of the model. To this end

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methods are used to resolve interpersonal conflicts by enhancing communication and problem solving skills of participants. The therapist uses modeling, role playing and assigning homework tasks to strengthen ties between SO and patient.

## **Spouse-Involved (SO) Approaches: What the Data Say**

- **Circumstances that Support SO-Involvement**
  - **SOs supportive of patient's sobriety**
  - **SOs whose support is highly valued by the patient**
  
- **Circumstances that Preclude SO-Involvement**
  - **SOs experiencing severe alcohol-related hardships**

There is some evidence suggesting that SOs who have a strong investment in the patient's abstinence and whose support for abstinence is highly valued by the patient are prime candidates for relationship enhancement approaches (Longabaugh, et al, 1995; Longabaugh, et al, 1992; Zweben, Pearlman, & Li, 1988). Alcohol specific support by SOs appears to be an important ingredient in treatments that are geared to facilitating such involvement (Longabaugh, et al, 1993). Moreover, SO involved studies typically exclude SOs who are mentally impaired, are physically or mentally abusive to the patient, have a serious drug or alcohol problem and are continually undermining the patient's progress (O'Farrell & Fals-Stewart, 1999).

## **SO Involved Approaches: Outcome Studies**

- **11 out of 14 Studies Showed Superior Results for SO Approaches over a Control Group on a Number of Outcome Measures:**
  - **Drinking**
  - **Marital stability**
  - **Motivation**
  - **Compliance**

Studies on SO involved approaches have report favorable outcomes regardless of theoretical orientation (systems theory vs. social learning theory) especially if positive ties have existed between partners prior to the initiation of treatment (O'Farrell, 1995; Sisson & Azrin, 1986; Zweben, Pearlman, & Li, 1988; Longabaugh, Beattie, Noel, Stout, & Malloy, 1995; Miller, et al, in press). Evidence has shown that individuals exposed to a SO involved intervention are likely to stay longer in treatment than those who received an individually-focused approach (Zweben, Pearlman, & Li, 1983). SO-involved approaches have been used effectively to enhance the patients' motivation particularly when the drinking partners are unwilling to seek help themselves (Miller, et al, in press). Long-term results demonstrate the advantages of SO involved approaches over individual-focused alcohol therapy in terms of improving the interpersonal relationship and sustaining sobriety (O'Farrell & Fals-Stewart, 1999).

It is important to note that effective SO involved therapy requires that both drinking and relationship issues be addressed during the course of treatment. Interventions which have minimal SO-involvement (i.e., the SO is merely a "witness" or is not actively engaged in the sessions) do not perform as well as approaches that actively involve SOs in all phase of treatment (McCrary et al, 1991).

## **Alternative Approaches: Mutual Help: How Does it Work?**



- **Focus Placed on:**
  - **Increasing social support network for abstinence**
  - **Enhancing motivation for change**
  - **Improving coping capacities**
  - **Facilitating spirituality (AA Fellowship)**

There are a number of goals associated with having a patient participate in mutual help groups (Tonigan & Toscova, 1998). First, attending and participating in such programs (e.g., working the 12 steps) along with having an AA sponsor may help to increase the individual's level of awareness of the alcohol problem and enable him/her to accept responsibility for changing the problem, and in general, enhance the individual's readiness for changing the problem, and in general, enhance the individuals readiness to change. Second, facilitating a spiritual experience can become a source of emotional comfort for individuals struggling with the decision about initiating and sustaining abstinence. Third, providing ongoing social support for abstinence is an important ingredient of mutual help especially for those whose social networks are not supportive of abstinence. Fourth, mechanisms for improving coping capacities of patients are provided in the form of slogans such as "one step at a time" "let go and let God" and "avoid stinking thinking".

## **Mutual Help: What the Data Say**

- **Improved Outcomes Associated with AA Attendance for Participation**
- **AA Attendance Linked with Better Outcomes for Patients with High Network Support for Drinking (Project MATCH Research Group, 1998)**

In general, individuals who are able to maintain the positive gains of treatment are typically those who have good social support for abstinence (Westerberg, 1998). That is why some researchers suggest that all clients be routinely encouraged (not required) to attend mutual help groups especially those who are lacking a support system for abstinence. It is unclear whether AA attendance or AA participation (e.g., having a sponsor, reading the Big Book, practicing of 12 steps, etc.) is more salient in contributing to improved drinking outcomes (Tonigan & Toscova, 1998). Some researchers (Emrick et al, 1993) have proposed that active participation in AA (i.e., reaching out for help, having an AA sponsor, and doing the first step) is more important for sustaining abstinence than AA attendance. However, in Project MATCH we were unable to determine whether AA attendance or AA involvement was more important for achieving sobriety. Both were found to be positively related to abstinence (Tonigan, et al, in press). The latter finding was replicated in the VA comparison alcohol treatment outcome study (Ouimette, et al, 1997).

Concerning patient-matching, a major finding in Project MATCH dealt with network support for drinking and AA attendance (Longabaugh, Wirtz, Zweben, & Stout, 1998). Individuals whose social networks were supportive of drinking fared better in TSF than MET. Because AA attendance was encouraged or promoted, TSF patients were more likely to attend AA meetings than their counterparts in MET. This was fortunate because involvement in AA seemed to "immunize" those TSF patients (i.e., those whose networks were supportive of drinking) from

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experiencing relapse. At the 3-year follow-up, among patients with higher scores on the network support for drinking variable, there was a 16% difference in the number of abstinent days (74% vs. 58%) between TSF and MET conditions.

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## Future Directions

- **Limitations of Project MATCH Treatments**
- **Maintaining the purity of the treatment models**



In accordance with the design of the study, the distinctiveness of the three MATCH treatments was maintained in the study. Unlike "real world" clinical settings, no attempt was made to combine particular elements of the three different approaches to address the different needs or special capacities or problems of patients. Thus, motivational issues were emphasized only in MET, AA involvement was promoted mainly in TSF, and coping skills training was provided primarily in CBT. This means that clients might have had the ability to improve their coping capacities in CBT but did not have the requisite motivation to use them. Others might have needed the support of AA Fellowship following exposure to MET but were not encouraged to participate in AA. In short, the MATCH treatments were limited by the need to reduce similarities across the three modalities.

## Developing a More Comprehensive Theory of Matching



▪ **Matching Effects May be Short-lived Unless the Therapeutic Ingredients Interact with Contextual Variables**

**- Need to specify circumstances and conditions for patient-treatment matching**

One of the inferences drawn from Project MATCH was that the apriori primary hypotheses were simplistic (Project MATCH Research Group, 1998). The fact that few matching hypotheses were supported and that some contrasts were in the direction opposite of what was predicted suggests that current matching theory is under specified. A more adequate theory would need to specify the circumstances and conditions under which matching effects might appear. Thus, higher order apriori matching hypotheses await to be tested. Based on the findings emerging from Project MATCH, it is conceivable that patients with a profile of high self-efficacy, high motivational readiness for change and high social support for drinking would benefit most from CBT whereas those patients with low-self-efficacy, low motivational readiness for change and high support for drinking would benefit most from TSF.

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## **Developing a More Comprehensive Theory of Matching**



- **Change is a Dynamic Contextual Process Which Continues After the Completion of Treatment**
- **Phase Model - How to deliver treatments over time**

Evidence has shown that individuals vary in patterns of alcohol use and related consequences over the course of relapse and recovery (Babor et al, 1994). Some individuals are able to sustain long periods of abstinence while others may move in and out of sobriety over a lifetime. Some may continue to experience serious negative consequences despite achieving abstinence while others may demonstrate major improvements in various areas of life following abstinence.

Traditional alcoholism treatment programs have not been responsive to the diverse needs and capacities of the broad spectrum of patients seen in these clinical settings (Tucker, 1999). The "one size fits all" approach has not been suitable for the range of patients seen in these settings. What the data might suggest is that, in order to effectively treat a heterogeneous alcohol patient population, a repertoire of interventions is required tailored to the differential needs and capacities of heterogeneous alcohol patient population (Tucker, 1999). These intervention strategies need to be delivered in a manner that is responsive to the complex problems or issues confronting these patients.

# Developing a More Comprehensive Theory of Matching

## Use of Decision Trees

- **Link specific modules to stated preferences and assessed needs and capacities of patients**
- **Flexible model in order to be applicable to “real world” treatment settings**
- **Clinical research to test the underlying principles associated with different decision trees**

A phase model of intervention (Howard, et al, 1993) offers a heuristic model on how to enhance treatment effectiveness. In this model, a broad array of assessment measures is employed dealing with individual, interactional, and situational factors. These measures might deal with various domains such as motivational readiness and areas of life functioning, vocational functioning, spirituality, social/family/marital functioning, physical functioning, emotional adjustment, and residential status. These measures are examined in terms of how alcohol use might be associated directly or indirectly with these different events. For example, is marital conflict a precipitant or consequence of excessive alcohol use? Can we expect an improvement in the marital relationship to be followed by a reduction of alcohol use or vice versa? Decisions about the kinds of strategies to be employed are based upon an understanding of how these individual, interactional, and contextual variables interact with the treatment variables to produce good treatment outcomes.

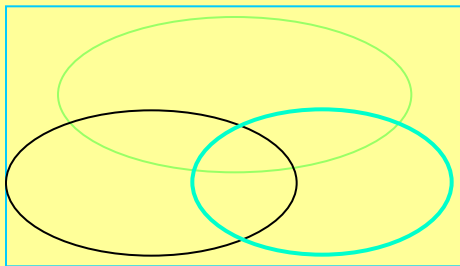
For example, in Project MATCH, the causal chain analysis for the social support hypotheses suggested the following: That for those patients whose environments were highly supportive of drinking, positive change in treatment was predicated upon consequent changes occurring outside of treatment - namely, AA involvement. MATCH treatments may have helped to initiate change but AA participation was necessary to maintain or consolidate its benefits (Longabaugh, Wirtz, Zweben & Stout, 1998). Thus, in “phase model” terminology, symptom improvement

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(i.e., reduction in drinking) was followed by a change in the social environment (AA attendance) in order to achieve sobriety. In sum, a phase model might offer us some guidance in determining what kinds of strategies might be offered to address special problems linked with the drinking and how to deliver these strategies to maximize the benefits of treatment.

## Project COMBINE

### COMBINE Behavioral Intervention (CBI): An Illustration



- **Incorporates the Putative Strengths of the MATCH Treatments**
- **Motivational interviewing (MET)**
- **Mutual help (TSF)**
- **Coping skill plus (Community Reinforcement Approach (CRA))**
- **Additive component**
- **Supportive other involvement**

Project COMBINE is a nationwide, multi-site, project investigating the efficacy of combining medications and psychotherapies for the treatment of alcohol problems. Project COMBINE has developed an innovative treatment approach termed COMBINE Behavioral Intervention (CBI) which integrates several elements of treatments previously tested in Project MATCH: MET, CBT, and TSF. Supportive Other (SO) involvement has been added to enhance the potency of the intervention. MET has been tested in Project MATCH and found to have equivalent efficacy to the other two treatment approaches. In at least 16 controlled trials MET methods have been found to improve compliance rates and treatment outcomes. Such an approach has been effective not only as a stand-alone approach (Project MATCH Research Group, 1997) but in combination with other approaches as well (Brown & Miller, 1993).

There is modest evidence suggesting that TSF or mutual help involvement might be an important element in facilitating positive treatment outcomes in alcohol treatment (Emrick et al, 1993). In Project MATCH, AA attendance was found to have a main effect when drinking was used as the outcome criterion. AA participation was found to be mediating factor in explaining the matching contrasts between MET and CBT in relation to the network support for drinking variable. Attendance in AA appeared to "immunize" these TSF patients from the negative effects of residing in environments highly supportive of drinking. (Longabaugh, Wirtz, Zweben, & Stout, 1998). As in Project MATCH, procedures have been developed to facilitate patient involvement in AA or other mutual help organizations.

## Diagnosis and treatment of Alcohol Dependence (Zweben)

CBI has corrected the deficiencies found in CBT as employed in Project MATCH. CBI addresses deficit areas that were not dealt with in Project MATCH such as job training, mood management, communication problems, and other life problem areas. In Project MATCH, the average number of sessions received in CBT was only eight (out of twelve) and most clients received training in relapse prevention skills but not in other matters related to coping with high risk situations (e.g., family dysfunction) (Gulliver and Longabaugh, 1997). CBI employs a functional analysis to detect skill deficit areas and has incorporated various skill training components to deal with these identified deficit areas. Such a comprehensive approach has been found to have demonstrated efficacy in a variety of alcohol treatment outcome studies (Miller, 1999).

SO involvement has been added on to CBI. Evidence has suggested that SO can become valuable adjunct to alcoholism treatment by mobilizing or motivating an individual to achieve and sustain abstinence (Zweben, 1991). Significant differences have been found between SO involved treatment and individual approaches in terms of both drinking and compliance outcomes (i.e., medication and continuance) (Sisson & Azrin, 1986; Zweben, Pearlman and Li, 1983; Miller et al, 1998). In Project MATCH better outcomes were found among patients who had an SO attend at least one session. However, the presence of an SO was noted in a minority of cases (e.g., 18% of the cases in MET).

# **COMBINE Behavioral Intervention (CBI): An Illustration**

## **Other Characteristics of CBI**

- Session attendance flexible**
- Matching modules to participants**
- Menu of options (i.e., empirically sound components)**
- Process of functional analysis**

CBI employs a functional analysis to assist therapists in determining which treatment modules are most suitable for dealing with special needs and problems. The decision to include certain treatment modalities was based on evidence on their efficacy in addressing particular problems. For example, communication skill training module was selected because it has been shown to be effective in dealing with marital disorders. Consistent with the principles of MET, a treatment plan is negotiated using data derived from the assessment battery and functional analysis. Patients are informed about the different treatments that could be targeted to specific problems. With the support and guidance of the therapist, patients decide which of the modules might be most appropriate for addressing different issues or problems associated with alcohol misuse. The underlying assumption here is that the patient has the capability and responsibility to make this decision and that such a process helps facilitate intrinsic motivation to change.

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## **COMBINE Behavioral Intervention (CBI): An Illustration**

### **▪ Four Phases of CBI**

- Enhancing commitment to change**
- Development of a treatment plan**
- Implementation of selected treatment modules**
- Maintenance and monitoring of progress**

Phase 1 and Phase 2 focuses on establishing a therapeutic relationship, eliciting and clarifying the patient's concerns about drinking and enhancing his/her intrinsic motivation to change. Feedback from the pretreatment assessment is presented with the aim of increasing motivation and identifying potential areas to change in order to achieve drinking goals. Evaluating and enlisting the involvement of the SO occurs in these initial phases. Phase 1 and Phase 2 usually occur during the first four weeks of treatment. Phase 3 involves the implementation of treatment modules negotiated earlier in Phase 2. The number of sessions in Phase 3 is not fixed but is criterion-based, depending upon the amount of time that may be necessary to achieve particular goals. Treatment may be longer if it involves the implementation of several modules. (However, for purposes of the research, no patient may be seen in CBI for more than 20 sessions over a 4-month period). Phase 4 entails the monitoring and maintenance of goals. This phase is used to renew motivation, to evaluate whether gains are being maintained, to modify treatment plans if necessary, and to prepare the client for termination. Phase 3 and Phase 4 can take up to 16 sessions (if 4 sessions are already used in the Phases 1 and 2) over the remaining time period established for CBI treatment.

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