

Chapter 5

Assessment

David R. Gastfriend, M.D.

Sharon Reif, Ph.D.

Sharon L. Baker, Ph.D.

Lisa M. Najavits, Ph.D.

Using Assessment Instruments in Treatment Planning
Characteristics of Valid Assessment Instruments
Instruments for Standardized Assessments
Introducing Assessment Instruments Into Practice

At its best, the clinical practice of addiction medicine offers treatments that, because they are tailored to the patient's needs, are effective and efficient. The rapid rise in health care costs has alarmed many employers and payers of care, including the federal government. Concern over costs, coupled with the perception that much care is unnecessary or provided inefficiently, has given rise to increasingly widespread techniques to manage health benefits and hold clinicians more accountable for the services provided (Institute of Medicine, 1990). Clinicians must continually advocate for their patients' access to quality care while remaining mindful of the demands for cost containment.

Over the past decade, the field of addiction medicine has been challenged to examine the status of patient evaluation after coming under particular scrutiny by the United States Congress, which asked the Institute of Medicine (IOM) to study treatment services for persons with alcohol problems. The IOM study noted that society is struggling with two cost-versus-quality questions that challenge clinicians to rethink our system of care: "First, how do we ensure that people get needed medical care without spending so much that other social objectives are compromised? Sec-

ond, how do we discourage unnecessary and inappropriate medical services without jeopardizing necessary, high-quality care?" The committee's report "Broadening the Base of Treatment for Alcohol Problems," defined a need for improvements in pretreatment assessment of alcohol problems so as to facilitate appropriate treatment decisions (IOM, 1990).

This thinking represented a departure from the 1980s, when the standard for treatment was to refer patients to the most intensive services they would accept. Current standards look to optimize the match between patient and treatment without relying on the assumption that the most promising treatment for a given patient is the most intensive treatment available. There is growing empirical support for matching strategies, although there is not yet uniformity in the variables used or the methods of implementation (Gastfriend & McLellan, 1997).

Any successful matching strategy must rely initially on the identification of key matching variables. Mattson and colleagues (1994) reviewed 31 empirical studies of treatment matching and identified at least four categories of clinical variables important to the matching process: (1) demographics, (2) addiction-specific characteristics

such as severity, (3) intrapersonal characteristics such as psychopathology and motivation, and (4) interpersonal function, including environmental factors and social support.

Formal assessment instruments may provide the standardization and credibility necessary for effective treatment matching, which ideally becomes a critical step in overall treatment planning. Reviewers frequently require providers to assess patients in at least the following areas in order to justify their participation in a particular treatment: (1) diagnosis, (2) severity of addiction, and (3) motivation and rehabilitation potential. These areas roughly correspond to the matching variables identified by Mattson and colleagues (1994) and can be assessed using available instruments with known reliability and validity.

USING ASSESSMENT INSTRUMENTS IN TREATMENT PLANNING

The considerations cited above demand new approaches to clinical assessment and documentation. Whereas traditionally the patient record served only to communicate clinical data among providers, today it is crucial in determining what type of care the patient will receive and, indeed, whether the patient will receive care at all. Interest in assessment instruments no longer is limited to research domains, now that managed care entities require clinicians to justify and document decisions about treatment. As third-party payers demand increased communication between providers and managed care monitors, uniform assessment becomes a necessity. Patient evaluations that document the assessment process in an objective way offer the distinct advantage of providing justification for any treatment recommendations derived from them.

Formal assessment instruments for treatment planning generally offer several advantages over the conventional clinical interview for both treatment matching and treatment planning. A valid instrument offers a uniform inquiry, comprehensive coverage of essential areas, quantification of data, and standardization of the interpretations of the data. Assessments without instruments cannot provide these features, because interviewers may vary widely in style (for example, use of open- versus closed-ended questions), areas of inquiry (severity of substance dependence versus psychopathology), depth of inquiry (screening superficially in some areas versus detailed probing in others), units of measure (severity of drug use may be measured in terms of quantity, frequency, recency, and/or expenditures), and—

most importantly—interviewers may vary widely in the assumptions they use in interpreting assessment results.

While a plethora of measures exists (Allen, 1995), the instruments presented in this chapter have been selected for their utility in treatment matching and treatment planning, their strong psychometric properties (reliability and validity), and the availability of data on their use. The instruments described provide information in the areas of clinical diagnosis, severity of substance abuse and dependence, and motivation and treatment readiness. Instruments may be combined to create a comprehensive battery that yields data for matching patients to levels of care, which presents exciting new possibilities for patient evaluation.

Clinical Diagnosis. Clinical diagnosis is perhaps the most fully developed assessment area because of the general acceptance of the criteria of the *Diagnostic and Statistical Manual of Mental Disorders* of the American Psychiatric Association (*DSM-IV*; 1994).

Several clinical interview instruments exist for establishing *DSM-IV* diagnoses of psychoactive substance use disorders. Of these, the Structured Clinical Interview for *DSM-IV* (SCID; First, Spitzer et al., 2001) is the most readily incorporated into a battery aimed at use in both research and clinical evaluation. Other measures are available, but the requirements for their administration may be less than ideal in most circumstances. The Schedule for Affective Disorders and Schizophrenia (SADS; Endicott & Spitzer, 1978), for example, requires interviewers with graduate degrees and fairly extensive clinical experience and can take up to 4 hours to administer. The Diagnostic Interview Schedule (DIS; Robins, Helzer et al., 1981) was designed for administration by non-clinicians and proceeds on a symptom-by-symptom basis, with the requirement that each question be read verbatim from a booklet (Hasin, 1991). The DIS also is available in a self-administered, computerized format.

The SCID thus provides a middle ground in terms of structure, level of expertise required for administration, and duration of the interview.

Substance Abuse and Dependence Severity. The term “severity” is used in relation to addiction to refer both to the severity of the addictive behavior itself (that is, the level of dependence and associated risks of withdrawal), and to functional impairments related to the addictive behavior (that is, the severity of the consequences of that behavior for other areas of life functioning). Assessment of severity

for purposes of treatment matching and treatment planning must take into account both uses of the term.

Severity of the addictive behavior is a multidimensional construct. To illustrate this problem, consider two examples: One patient has severe dependence and uses infrequently but in binges of large amounts. These activities are self-destructive in terms of legal violations and physical injury to self and others. Another patient with severe dependence uses regularly without intoxication but with multiple medical, career, and family disruptions and losses.

An effective instrument must characterize these differing patterns and yield some absolute level of severity that renders a similar score for both patients. To accomplish this, the instrument must measure severity across multiple dimensions. Of the instruments available for assessing severity, one of the earliest and most widely used is the Addiction Severity Index (ASI; McLellan, Luborsky et al., 1980), which was the first to provide a multidimensional assessment of substance abuse severity. A more recently developed instrument is the Drinker Inventory of Consequences (DrInC; Miller, Tonigan et al., 1995), which provides a comprehensive assessment of the extent of alcohol problems other than consumption and dependence.

Motivation and Treatment Readiness. Patient treatment readiness is a fundamental consideration in addiction treatment planning, yet it often is evaluated on an intuitive basis. Clinicians routinely report motivation as a global quality, which they believe may predict the patient's likelihood of treatment success. For example, a 1990 pilot study of patients newly admitted for addiction treatment found that demographic factors and comorbidity collectively accounted for only one-third of the variance in outcomes, while nurses' global ratings of patients' motivation significantly added to the prediction of outcome (Marc A. Schuckit, personal communication).

Because treatment readiness is a more recent area of investigation, the repertoire of available instruments is less well studied than in the case of diagnosis or severity assessment. However, several instruments are available that assess various aspects of motivation and readiness for treatment. The RAATE-CE (Mee-Lee & Hoffman, 1992; Mee-Lee, 1985, 1988), assesses treatment readiness as a multidimensional construct that combines patient awareness of problems, behavioral intent to change, capacity to anticipate future treatment needs, and medical, psychiatric, or environmental impediments. The University of Rhode Island Change Assessment Scale (URICA; DiClemente &

Hughes, 1992) assesses Prochaska and DiClemente's (1992) stages of change model. The Stages of Change Readiness and Treatment Eagerness Scale (SOCRATES; Miller & Tonigan, 1996) assesses the three factors of Recognition, Ambivalence, and Taking Steps. The Circumstances, Motivation, Readiness, and Suitability Scale (CMRS; DeLeon, Melnick et al., 1994) measures patients' perceptions across the four related domains.

CHARACTERISTICS OF VALID ASSESSMENT INSTRUMENTS

An assessment instrument should demonstrate certain psychometric properties if it is to be accepted for clinical research or routine clinical use. The items that make up the instrument should have clear meanings, should be distinct and parsimonious (that is, non-redundant), and should relate to one another in a coherent way (for example, items that are logically connected should be grouped with one another in subscales). Different raters should be able to use the instrument and obtain similar ratings (*inter-rater reliability*) and the same patient should obtain similar results on two different, yet closely spaced administrations (*test-retest reliability*).

In addition to reliability, an instrument must have demonstrated validity. The instrument and its items should be based on an underlying logical framework, or construct. The instrument should make sense as an effort to assess the intended area: that is, it should demonstrate *face validity*. If an accepted "gold standard" measure exists, a comparative trial between the two instruments should yield similar results, demonstrating *convergent validity*. Different scores should distinguish different outcomes, demonstrating *predictive validity*. Finally, the instrument should obtain different results from those of another instrument designed for a different purpose (*discriminant validity*).

Issues in Patient Self-Report. One of the greatest challenges of clinical assessment in addiction treatment is the reliability of patient self-report. Effective interviewing depends on helping patients to understand the meaning of each question, to organize their recollections, and to avoid defensiveness about their behaviors. In general, the reliability of patient self-report can be improved by using a consistent sequence of questions, which progress from general to specific information, and an interview style that moves from an open-ended to a closed-ended question format.

What follows is the description of a set of instruments that incorporates these principles and that provides a

comprehensive assessment capable of yielding sufficient information for treatment matching and/or treatment planning. The battery includes the SCID for *DSM-IV* (First, Spitzer et al., 2001), the Clinical Institute Withdrawal Assessment-Alcohol, Revised (CIWA-Ar; Sullivan, Sykora et al., 1989), the ASI (McLellan, Luborsky et al., 1980; McLellan, Kushner et al., 1992), and the RAATE-CE (Mee-Lee, 1985, 1988).

INSTRUMENTS FOR STANDARDIZED ASSESSMENTS

Structured Clinical Interview for DSM-IV (SCID). The Structured Clinical Interview for *DSM-IV* (SCID) is a widely used, semistructured interview that obtains Axis I and II diagnoses using *DSM-IV* criteria. The SCID is designed for use with psychiatric, medical, or community-based normal adults (Spitzer, Williams et al., 1989). Its reliability and validity have been demonstrated in numerous studies. It is composed of one module for each major syndrome group in the *DSM-IV*: anxiety disorders, affective disorders, psychotic disorders, and substance use disorders. Each module may stand on its own for assessment of that particular diagnostic syndrome. Each question on the SCID corresponds to a specific *DSM-IV* criterion. The questions are sequenced to carefully obey the decision rule process and to yield a diagnosis only if the patient meets all requisite *DSM-IV* criteria.

The SCID is designed for use by a clinical evaluator trained at the master's or doctoral level, although in research settings it has been used by bachelor's level technicians with extensive training. Administration of Axis I and Axis II batteries may require more than two hours each for patients with multiple diagnoses. The Psychoactive Substance Use Disorders module may be administered by itself in 30 to 60 minutes, depending on the extent of the patient's substance use history and current involvement.

For the Psychoactive Substance Use Disorders module, the SCID poses a query for each *DSM-IV* criterion for abuse/dependence, first for alcohol and then for each non-alcohol psychoactive substance. The information is collected in such a way that it is possible to establish lifetime diagnoses, age of onset of first abuse or dependence, and current severity.

In a recent study, Kranzler and colleagues (1996) reported on the validity of SCID substance abuse diagnoses, using the SCID for *DSM-III-R*. The researchers were able to demonstrate both concurrent and discriminant validity for both alcohol and drug abuse/dependence diagnoses with a number of related measures, including the ASI, with sig-

nificance for the most part in the range of $p < .001$. For comorbid major depression and antisocial personality disorders, validity was established with a smaller number of concurrent measures in the significance range of $p < .05$ to $p < .01$. Concurrent validity was not demonstrated for comorbid anxiety. Predictive validity using measures of substance use at six-month followup generally was good and significant, with some variability across measures for abuse and dependence, but not for comorbid disorders.

One reason for the poorer showing of the SCID in diagnosing comorbid disorders may be that the *DSM-III-R* version did not assess specifically for substance-induced disorders. Anxiety symptoms, in particular, tend to be high in early abstinence and can be difficult to differentially diagnose. The *DSM-IV* incorporates substance-induced mood disorders and substance-induced anxiety disorders as distinct categories with specific diagnostic criteria. The SCID for *DSM-IV* includes separate modules for obtaining substance-induced diagnoses, which are linked to the mood and anxiety modules by specific skip-out instructions. Improved validity for comorbid diagnoses might be expected with the presence of the substance-induced disorder modules.

Because the SCID is constructed around the *DSM-IV*, it uses symptom criteria based on the loss of behavioral control model for the spectrum of dependence-producing substances. Although it does measure criterion-based symptomatology, the SCID is too limited for a comprehensive treatment evaluation and should be supplemented with an instrument that has been designed for severity assessment, such as the ASI or the DrInC.

Clinical Institute Withdrawal Assessment-Alcohol, Revised (CIWA-Ar). Often the first step in conducting an addiction assessment is to establish degree of risk associated with the current level of acute intoxication. The CIWA-Ar is a brief scale of 10 items (requiring less than two minutes to administer), which provides a clinical quantification of the severity of the alcohol withdrawal syndrome. The instrument was developed and reliability and validity data obtained on patients in alcohol withdrawal, although it has been shown to be useful in assessing withdrawal from other benzodiazepine drugs as well.

An observer rates the intensity of 10 common withdrawal symptoms and a total score is obtained by summing the ratings from the 10 items. It can be administered by trained non-medical personnel, such as detoxification unit workers or research assistants.

Addiction Severity Index (ASI). The ASI is a widely used semistructured interview that is designed to elicit information about areas of the patient's life that may contribute to and/or be affected by his or her substance use problem. The ASI assesses seven dimensions that typically are of foremost concern to patients with substance dependence. These are: Medical Status, Employment/Support Status, Drug/Alcohol Use, Legal Status, Family History, Family/Social Relationships (including family history), and Psychiatric Status. The ASI asks factual questions about the amount of alcohol and drug use within the preceding 30 days as well as lifetime use, about living arrangements and disruptions in relationships, and about the number of legal charges resulting in convictions.

The ASI has been used for both clinical and research purposes and has been incorporated into some large-scale intake and referral programs, such as the U.S. Target Cities Program demonstration project for city-wide drug treatment improvement and the Drug Evaluation Network System, which tracks trends in addiction treatment (Carise, McLellan et al., 1999). It is designed to be administered by a trained technician in approximately 40 to 60 minutes. It also is available in a self-administered, computerized format. A subset of items is used in followup interviews to assess the patient's progress over time. The ASI can be administered as frequently as once a month to assess serial change.

A potentially useful feature of the ASI is that it first establishes with the patient a detailed list of adverse behaviors and consequences of addiction. Then, having acknowledged these consequences, the patient is asked to assess the severity of his or her problems in each area. A Severity Rating Scale asks "How important to you now is treatment for these alcohol problems?" on a five-point scale, with potential responses ranging from "not at all important" to "extremely important."

The fact that the ASI, like most clinical interviews, relies heavily on historical data obtained from the patient, without access to external corroboration, presents a potential limitation to the validity of the data obtained. As a check on the subjective quality of the patient's self-report, the ASI incorporates the judgment of the rater about the patient's apparent comprehension or misrepresentation. In addition, there is an interviewer severity rating in which the interviewer is asked to estimate severity on each ASI dimension, using a 10-point scale. These ratings have been shown to produce reliable and valid estimates of patient

status (McLellan, Luborsky et al., 1985; Hodgins & el-Guebaly, 1992).

The ASI provides a composite score for each dimension. Composite scoring increases standardization because, being mathematically derived, it obviates the need to use the rater's judgment to gauge the quantitative severity (McGahan, Griffith et al., 1986). Composite scores were constructed by selecting and combining items from each problem area that had the capacity to demonstrate change in patient status. The items included in each composite were shown to have fairly high internal consistency (alphas of .70 or higher on each of the composites). Comparison by the instrument's authors with other well-validated measures for each ASI dimension has shown significant convergent validity for all composite scores (McLellan, Luborsky et al., 1985).

The ASI was developed and initially validated in methadone maintenance populations, but since has been validated in other substance-dependent populations (Alterman, McDermott et al., 2000). It has shown excellent capabilities for characterizing severe dependence with multiple areas of dysfunction, such as homeless substance abusers (Argeriou, McCarty et al., 1994) and those with psychiatric impairment (Hodgins & el-Guebaly, 1992). However, because it was developed for use in more severely dependent heroin addicts, it primarily measures gross impairments associated with substance use. For example, it provides data on loss of income or employment, degree of legal involvement, and number of previous detoxifications. While in certain settings this may be a strength, in others it may represent a limitation. By itself, the ASI may lack sufficient resolution to adequately characterize problems in less severe patients such as alcoholic outpatients.

The ASI recently has been supplemented by an Expanded Female Version (ASI-F; Brown, Frank et al., 1995). The ASI-F was designed to be used in the same manner and for the same purposes as the ASI. Some of the new items refer to problems and situations unique to women, such as how many times the subject has been pregnant or given birth. Other items, while possibly more relevant to women, actually may apply to men as well. These include information on the gender and age of children, a history of sexually transmitted diseases, and a recent history of homelessness. The name "Female" thus is somewhat misleading, as the instrument can be used with male patients. This version of the ASI has established reliability and validity.

Severity-of-illness data based on past and recent history of drug use and consequences establish a baseline assessment of severity, but not an ongoing short-term measurement of improvement. To plan efficient individualized treatment, assessment of severity requires instruments that provide a comprehensive severity assessment at the time of admission, and also are sensitive and flexible enough to measure short-term treatment response (for example, within a five- to seven-day inpatient detoxification). The ASI was developed for re-administration, but at a minimum of 30-day intervals. It measures gross functional impairments that are not likely to change in brief time frames or in restrictive treatment settings.

Finally, the ASI and most severity-oriented evaluation tools lack items for assessing patient attitudes, cognitive understanding of chemical dependence, treatment expectations, and commitment to treatment. Yet these are areas of great significance in treatment and are widely regarded as concurrent indicators of progress. This is the basis for supplementing severity assessment with a measure of motivation and treatment readiness.

Recovery Attitude and Treatment Evaluator (RAATE-CE). The Recovery Attitude and Treatment Evaluator (RAATE-CE) was designed to quantify patient resistance and impediments to addiction treatment. The RAATE-CE is a clinician-rated structured interview that assesses five areas relevant to substance abuse treatment planning decisions: (1) degree of resistance to treatment, (2) degree of resistance to continuing care, (3) acuity of biomedical problems, (4) acuity of psychiatric problems, and (5) extent of social, family and/or environmental systems that are not supportive of recovery (Mee-Lee, Hoffman et al., 1992; Mee-Lee, 1985, 1988). It is designed to be administered by a trained counselor and requires approximately 35 minutes to complete.

The RAATE-CE consists of 35 items, rated on a one- to four-point fixed interval scale, on which higher scores represent greater resistance or impediments to recovery. A typical item asks, "Is the patient aware of an addiction problem?" The RAATE also permits serial assessment of treatment progress (Mee-Lee, 1988).

In a study of 139 public sector, high severity patients, inter-rater reliability on the five RAATE dimensions was reported to range from .59 to .77. Internal consistency coefficients ranged from .65 to .87 (Smith, Hoffman et al., 1992). Inter-rater reliability was higher with raters who

had higher levels of clinical expertise. The validity of the RAATE-CE has been studied in 220 consecutive admissions to an inpatient addictions unit (Gastfriend, Filstead et al., 1995). Patients were assessed on the RAATE-CE by counselors shortly after admission, and the results were compared to patients' discharge dispositions. All five RAATE dimensions yielded one or more associations with subsequent treatment outcomes in the expected directions, thus providing initial evidence of predictive validity of the instrument. In particular, on the RAATE-B, C, D and E dimensions, significant mean group differences occurred between subjects who required extended hospital rehabilitation versus those discharged to less restrictive settings ($p=.046$ to $.001$). RAATE-B, D, and E significantly differentiated between the groups who would accept intensive treatments versus those who left against medical advice ($p=.071$ to $<.001$).

The RAATE-CE subsequently has been revised for use in clinical research (RAATE-CE/R). The RAATE-CE/R provides probe questions in preparation for each scored item and provides descriptive anchors to explain quantitative ratings. Preliminary reliability data indicate high inter-rater reliability, high internal consistency, independence of subscales, and a factor structure that partially supports the scale's original design (Najavits, Gastfriend et al., 1996).

INTRODUCING ASSESSMENT INSTRUMENTS INTO PRACTICE

In the authors' experience, most patients view these assessment instruments positively as a means to further understand themselves and as a thought-provoking inquiry. However, for a smaller subset, resistance to a structured interview format initially is strong, so that implementing the protocol requires attention to both clinical and interpersonal skills. Particularly if the data are to be used for research as well as clinical purposes, it is not uncommon for the patient to feel like a "research guinea pig." It often is helpful to explore such feelings at the outset of the interview. Feeling that the interviewer is concerned and interested in him or her as a person usually can dispel subjects' negative reactions to the interview. In situations in which research subjects subsequently will be receiving treatment, it also is helpful to emphasize that the results will enhance the staff's ability to help them. A supportive and nonjudgmental style, a conversational approach (rather than a checklist), and the opportunity to take a break if necessary are essential to developing an atmosphere of comfort and respect.

It is essential to provide thorough training in each instrument, regardless of the level of education and expertise of the clinician rater. Manuals for each of the instruments provide a basis for standardized training; training tapes also are available. Training can be tailored to meet site-specific as well as individual needs. It is important that training be treated as an iterative process. Ideally, raters need to receive feedback not only throughout the training process but intermittently thereafter in order to prevent slippage from the standardized administration. In addition to receiving feedback on their performance, it is important to elicit feedback from raters on an ongoing basis about their experiences in using the battery and to provide them with updates about the usefulness of the data they have collected.

Using Assessments To Individualize Treatment Planning. Studies on spontaneous smoking cessation have conceptualized motivation in terms of stages of behavioral change. This literature, subsequently generalized to all substance dependence, contradicts the view of low motivation as a trait characteristic, but rather describes a dynamic forward spiraling pattern (Prochaska & DiClemente, 1992) through which change efforts may successfully progress as a result of the interaction between patient and clinician (Miller & Rollnick, 1991). These findings suggest that the clinician needs to go beyond conventional data-gathering to measure and then influence the patient's motivational state (Prochaska & DiClemente, 1992).

The data-gathering processes involved in a clinical assessment can promote behavioral change by providing detailed objective feedback to the patient about his or her behaviors, symptoms, and consequences. Sometimes, the objective interview process itself may help the patient to move from the precontemplation stage to the contemplation stage (during which he or she becomes aware of a need to change). When further strategies are necessary to enhance this transition, comprehensive patient history data gathered with these instruments can be helpful in confronting denial about the degree to which substance use has been a causal factor in losses.

While the structured clinical interview may be a more powerful way of confronting the patient with his or her problems, alternatives do exist. These are paper and pencil questionnaires that can be completed by the patient in a relatively short period of time. The obvious advantage of such questionnaires is the time saved for the clinician interviewer. The obvious disadvantage is that the clinician interviewer does not have an opportunity to interact with

the patient and thus loses a chance to obtain a better sense of the validity and reliability of what the patient is reporting. However, the results of such self-administered instruments can be used as a guide for the clinician or interviewer in future interactions with the patient.

Questionnaires with known reliability and validity for assessing severity and motivation/readiness to change can, however, be an invaluable adjunct to treatment matching and/or planning where a structured clinical interview is either not possible or not desirable. They may be used in conjunction with the full structured clinical interview described earlier, or as substitutes for some or all of the instruments. The instruments described below focus on the problem areas that are important not only in planning treatment, but in offering feedback to the patient regarding problems and accompanying attitudes.

Drinker Inventory of Consequences (DrInC). The Drinker Inventory of Consequences (DrInC) was developed to provide a comprehensive assessment of drinking problems and consequences, separate from consumption and dependence (Miller, 1995). Unlike the ASI, which assesses functional impairment across dimensions without reference to a specific causal connection to drinking, the DrInC asks the respondent to make a connection between drinking and his or her problems.

The DrInC is a paper and pencil questionnaire that can be completed in about 10 minutes. It asks about physical consequences ranging from hangovers to impact on sexual functioning; intrapersonal consequences such as guilt, shame, loss of interest, and loss of spirituality; social responsibility consequences relating to failure to meet obligations; interpersonal consequences regarding family and friends; and impulse control consequences, including motor vehicle crashes, fights, and arrests. It also contains a number of reverse-scored items as a validity check against blanket denial of all problems.

The pretreatment assessment version of the DrInC consists of two scales containing the same items. One set of items asks for yes/no responses to questions related to "Lifetime Consequences." The other set provides a Likert scale, which allows for an intensity measure of "Recent Consequences." There are other forms of the DrInC, including a short form, a version to be completed by the significant other, and an "Inventory of Drug Use Consequences" (InDUC).

The DrInC has demonstrated both internal consistency within subscales (generally in the .70 to .80 range) and independence between subscales. It has adequate test-retest

reliability. It can be hand-scored and the raw scores easily transferred to a profile sheet. Separate profiles sheets for men and women reflect gender differences in the pattern of scores.

The advantage of the DrInC is that is quick and simple to administer. The disadvantage is that, because it is a paper and pencil questionnaire, there is no opportunity for a clinician or interviewer to probe responses.

University of Rhode Island Change Assessment Scale (URICA). The URICA measures the four theoretical stages of change proposed by Prochaska and DiClemente (1992): precontemplation, contemplation, action, and maintenance. It is designed to measure change across a variety of problem areas; specific versions have been adapted for alcohol- and drug-abusing populations. Items are in the form of a statement and are endorsed on a five-point scale from "strongly disagree" to "strongly agree." For example, a typical item is the statement, "As far as I'm concerned, I don't have any problems that need changing." The URICA is a paper-and-pencil questionnaire that requires about 10 minutes to complete.

Both internal consistency and test-retest reliability have been established. The scale offers a single readiness score. It also has been used to profile patients in terms of their stage of change with mixed success (Abellanas & McLellan, 1993; DiClemente & Hughes, 1990).

Stages of Change Readiness and Treatment-Eagerness Scale (SOCRATES). The SOCRATES was designed to assess motivation for change in problem drinkers. It is a paper and pencil questionnaire with both a short (19-item) and a longer (39-item) version. The scale identifies three subgroups. The first group has been variously described as either "Uninvolved" or "Recognition," the second group as "Ambivalent," and the third group as either "Active" or "Taking Steps" (Isenhardt, 1994; Miller & Tonigan, 1996). Reliability has been established.

Circumstances, Motivation, Readiness, and Circumstances Scale (CMRS). The CMRS was designed to measure patient perceptions within the specific context of the therapeutic community. Patients endorse statements on each of four subscales, using a five-point scale ranging from "strongly disagree" to "strongly agree." There are 58 items. The scale yields a total score as well as four subscale scores. An example of an item on the Circumstances Subscale is, "I am sure that I would have come to treatment without the pressure of my legal involvement." The scale has been used to predict treatment retention in a therapeutic community

(DeLeon, Melnick et al., 1994). In the same study, discriminant and factor analyses confirmed the face validity of the four subscales. Internal consistency has been demonstrated.

CONCLUSIONS

The instruments described here provide clear benefits for initiating treatment planning. The SCID diagnostic assessment comprehensively assesses use of all addictive substances and yields definitive data on the need for psychiatric evaluation. The CIWA-Ar provides an objective assessment of the risk of alcohol withdrawal at the initiation of treatment. The ASI delineates case management needs and is ideal for outlining a comprehensive treatment plan. The RAATE determines the patient's acceptance and willingness to engage in active treatment and targets specific treatment impediments for intervention. There are as yet no standards for discrete scores or thresholds for categorizing patients for targeted treatments. Further research is needed to validate the use of these instruments for predicting individual treatment outcomes and for optimizing treatment plans.

All of the measures discussed, particularly when incorporated into treatment planning in some combination, can be expected to improve the uniformity, comprehensiveness, and inter-agency or inter-provider reliability of clinical assessment. Despite the costs of training, staff adaptation, and additional time for the duration of administration, these gains can be expected to yield improvements in time and, hopefully, cost efficiency in the long run.

ACKNOWLEDGMENT: Preparation of this chapter was supported by grant No. DA07693-02 from the National Institute on Drug Abuse, the Center for Substance Abuse Treatment, and the Parkside Medical Services Corporation, Parkside, IL.

REFERENCES

- Abellanas L & McLellan AT (1993). "Stage of change" by drug problem in concurrent opioid, cocaine, and cigarette users. *Journal of Psychoactive Drugs* 25:307-313.
- Allen JP (1995). *Assessing Alcohol Problems: A Guide for Clinicians and Researchers (NIAAA Treatment Handbook, Series 4)*. Rockville, MD: National Institute on Alcohol Abuse and Alcoholism.
- Alterman AI, McDermott PA, Cook TG et al. (2000). Generalizability of the clinical dimensions of the Addiction Severity Index to nonopioid-dependent patients. *Psychology of Addictive Behaviors* 14:287-294.

- American Psychiatric Association (APA) (1994). *Diagnostic and Statistical Manual of Mental Disorders, 4th Edition (DSM-IV)*. Washington, DC: American Psychiatric Press.
- Argeriou M, McCarty D, Mulvey K et al. (1994). Use of the Addiction Severity Index with homeless substance abusers. *Journal of Substance Abuse Treatment* 11:359-365.
- Brown E, Frank D & Friedman A (1995). *Supplementary Administration Manual for the Expanded Female Version of the Addiction Severity Index (ASI) Instrument, The ASI-F*. Herndon, VA: Head & Co., Inc.
- Carise D, McLellan AT, Gifford LS et al. (1999). Developing a national addiction treatment information system. An introduction to the Drug Evaluation Network System. *Journal of Substance Abuse Treatment* 17:62-77.
- DeLeon, G, Melnick G, Kressler D et al. (1994). Circumstances, motivation, readiness, and suitability (the CMRS scales): Predicting retention in therapeutic community treatment. *American Journal of Drug and Alcohol Abuse* 20(4):495-515.
- DiClemente CC & Hughes SO (1990). Stages of change profiles in outpatient alcoholism treatment. *Journal of Substance Abuse* 2:2172-2175.
- Endicott J & Spitzer RL (1978). A diagnostic interview: The Schedule for Affective Disorders and Schizophrenia. *Archives of General Psychiatry* 35(7):837-844.
- First MB, Spitzer RL, Gibbon ML et al. (2001). *Structured Clinical Interview for DSM-IV-TR Axis I Disorders, Research Version, Patient Edition (SCID I/P)*. New York, NY: Biometrics Research Department, New York State Psychiatric Institute.
- Gastfriend DR, Filstead WJ, Reif S et al. (1995). Validity of assessing treatment readiness in patients with substance use disorders. *American Journal on Addictions* 4(5):254-260.
- Gastfriend DR & McLellan AT (1997). Treatment matching: Theoretic and practical implications. *Medical Clinics of North America* 81(4):1-22.
- Hasin D (1991). Diagnostic interviews for assessment: Background, reliability, validity. *Alcohol Health & Research World* 15:293-302.
- Hodgins D & el-Guebaly N (1992). More data on the Addiction Severity Index: Reliability and validity with the mentally ill substance abuser. *Journal of Nervous and Mental Disease* 180:197-201.
- Institute of Medicine (1990). *Broadening the Base of Treatment for Alcohol Problems: A Report of a Study by a Committee of the Institute of Medicine, Division of Mental Health and Behavioral Medicine*. Washington, DC: National Academy Press.
- Isehart C (1994). Motivational subtypes in an inpatient sample of substance abusers. *Addictive Behaviors* 19:463-475.
- Kranzler H, Kadden R, Babor T et al. (1996). Validity of the SCID in substance abuse patients. *Addiction* 91:859-868.
- Lajeunesse C & Thorenson R (1988). Generalizing a predictor of male alcoholic treatment outcomes. *International Journal of Addiction* 23:183-205.
- Letteri D, Nelson J & Sayers M (1985). *Alcoholism Treatment Assessment Research Instruments*. Rockville, MD: National Institute on Alcohol Abuse and Alcoholism.
- Mattson ME, Allen JP, Longabaugh R et al. (1994). A chronological review of empirical studies matching alcoholic clients to treatment. *Journal of Studies on Alcohol* 12(Suppl):16-29.
- McGahan P, Griffith J, Parente R et al. (1986). Composite scores from the Addiction Severity Index. Pittsburgh, PA: Penn-VA Center for Studies of Addiction (unpublished manuscript).
- McLellan AT, Kushner H, Metzger D et al. (1992). The fifth edition of the Addiction Severity Index. *Journal of Substance Abuse Treatment* 9:199-213.
- McLellan AT, Luborsky L, Cacciola J et al. (1985). New data from the addiction severity index—Reliability and validity in three centers. *Journal of Nervous and Mental Disease* 173:412-423.
- McLellan AT, Luborsky L & Woody GE (1980). An improved diagnostic evaluation instrument for substance abuse patients: The Addiction Severity Index. *Journal of Nervous and Mental Diseases* 168:26-33.
- Mee-Lee D (1985). The Recovery Attitude and Treatment Evaluator (RAATE) an instrument for patient progress and treatment assignment. *Proceedings of the 34th International Congress on Alcoholism and Drug Dependence* 424-426.
- Mee-Lee D (1988). An instrument for treatment progress and matching: The Recovery Attitude and Treatment Evaluator (RAATE). *Journal of Substance Abuse Treatment* 5:183-186.
- Mee-Lee D, Hoffmann NG & Smith MB (1992). *The Recovery Attitude and Treatment Evaluator Manual*. St. Paul, MN: New Standards, Inc.
- Mee-Lee D, Shulman G, Fishman M et al. (2001). *ASAM Patient Placement Criteria for the Treatment of Substance-Related Disorders, Second Edition-Revised (PPC-2R)*. Chevy Chase, MD: American Society of Addiction Medicine.
- Mee-Lee D, Shulman G & Gartner L (1996). *Patient Placement Criteria for the Treatment of Substance-Related Disorders, Second Edition (PPC-2)*. Chevy Chase, MD: American Society of Addiction Medicine.
- Miller W & Rollnick S (1991). *Motivational Interviewing: Preparing People to Change Addictive Behavior*. New York, Guilford Press.
- Miller W & Tonigan JS (1996). Assessing drinker's motivations for change: The Stages of Change Readiness and Treatment Eagerness Scale (SOCRATES). *Psychology of Addictive Behaviors* 10(2):81-89.
- Miller W, Tonigan JS & Longabaugh R (1995). *The Drinker Inventory of Consequences (DrInC): An Instrument for Assessing Adverse Consequences of Alcohol Abuse. Test Manual (NIAAA Project MATCH Monograph Series, Volume 4)*. Rockville, MD: National Institute on Alcohol Abuse and Alcoholism.
- Najavits LM, Gastfriend DR, Nakayama EY et al. (1996). A measure of readiness for substance abuse treatment: Psychometric properties of the RAATE research interview. *American Journal on Addictions*.
- Prochaska JO & DiClemente CC (1992). Stages of change in the modification of problem behaviors. *Progress in Behavior Modification* 28:183-218.
- Robins LN, Helzer JE, Croughan J et al. (1981). National Institute of Mental Health Diagnostic Interview Schedule. *Archives of General Psychiatry* 38(4):381-389.
- Skre I, Onstad S, Torgersen S et al. (1991). High interrater reliability for the Structured Clinical Interview for DSM-III-R Axis I. *Acta Psychiatrica Scandinavica* 84:167-173.
- Smith B, Hoffman N & Nederhoed R (1992). The development and reliability of the RAATE-CE. *Journal of Substance Abuse* 4:355-363.
- Spitzer RL, Williams JB, Gibbon M et al. (1992). The Structured Clinical Interview for DSM-III-R (SCID) I: History, rationale and description. *Archives of General Psychiatry* 49:624-629.
- Spitzer RL, Williams JB, Mirian G et al. (1989). *Instruction Manual for the Structured Interview for DSM-III-R*. New York, NY: Biometrics Research Dept., New York State Psychiatric Institute, May 1.

Sullivan JT, Sykora K, Schneiderman J et al. (1989). Assessment of alcohol withdrawal: The revised Clinical Institute Withdrawal Assessment for Alcohol Scale (CIWA-Ar). *British Journal of the Addictions* 84:1353-1357.

Williams JB, Gibbon M, First MB et al. (1992). The Structured Clinical Interview for DSM-III-R (SCID), II. Multisite test-retest reliability. *Archives of General Psychiatry* 49:630-636.