

## Drug-Assessment Instruments:

# Making Wise Choices

By Doris Wells

**Author's Note:** Points of view expressed in this article do not represent the official position or policies of the U.S. Department of Justice.

Faced with large numbers of drug-involved offenders and limited treatment resources, correctional institutions need drug-assessment instruments that are quick, reliable, cost-effective and appropriate for their facilities. An article published in the *Journal of Substance Abuse Treatment* documented a study of newly admitted inmates to a Texas prison transfer facility and found several drug-screening instruments to be effective.<sup>1</sup>

However, the study's authors agreed that the effectiveness of the screens should be viewed in relationship to a correctional administrator's desired goals and objectives. Some screens perform better than others in certain respects, and all have limitations and need additional research to further validate the promising results.

The study's authors selected the instruments (see "Instruments Selected" sidebar) because they are widely accepted by the research and treatment community, frequently used, in the public domain, commercially available and have potential applicability in criminal justice settings.<sup>2</sup> The study categorized and examined the screening instruments according to their ability to identify alcohol and drug disorders.

## Results

The evaluation examined the following elements (see Table 1 for performance results):

- Overall accuracy — How accurate the instrument was in correctly identifying individuals

who do and do not have drug or alcohol problems without falsely placing individuals in either category;

- Positive predictive value — How accurate the screen was in identifying only individuals who had alcohol or drug problems;
- Negative predictive value — How accurate the screen was in identifying only individuals who did not have alcohol or drug problems;
- Specificity — How accurate the screen was in identifying non-drug-dependent individuals, even if it falsely selected drug-dependent individuals; and
- Sensitivity — How accurate the screen was in identifying drug-dependent individuals, even if it falsely selected nondrug-dependent individuals.

## Other Important Factors

According to a study funded by the National Institute of Justice,<sup>3</sup> administrators selecting an instrument must consider its performance, as described above, as well as factors such as cost, length, scope and treatment accommodations.

**Cost.** The amount of available funds might determine whether to choose screens that are in the public domain and, therefore, free or ones available commercially for a fee.

**Length.** The number of offenders requiring screening and a facility's staff size might determine whether to choose brief, self-administered screens that save time or lengthy, structured clinical interviews that might be more comprehensive and reliable.

**Scope.** The time frame covered by the test could be crucial in identifying those needing treatment the most. A

short detection period (30 days) might fail to identify serious abusers, such as parolees or recent arrestees who are only forcibly drug free, whereas a long period of time might mistakenly identify participants for immediate treatment based on old drug abuse habits that are now moderate.

**Treatment Accommodations.** The capacity to provide treatment options; for example, just two options (treatment or no treatment) versus multiple options (ranging from education to intensive treatment) might determine whether to choose a simple basic screen or one that provides more detailed and precision screening.

## Conclusion

The *Journal of Substance Abuse Treatment* study noted that these assessment instruments can help correctional facilities avoid spending money on "intensive treatment of low-risk offenders ... [that] is likely to have a minimal impact on reincarceration rates and may be wasting valuable taxpayer dollars and scarce treatment resources." The challenge is to continue to improve and develop screening instruments that will be cost-effective and "achieve a high level of screening accuracy."<sup>4</sup>

NIJ continues to support research efforts for drug screening and treatment. Additional resources and publications about drug screening and treatment can be downloaded from NIJ's Web site at [www.ojp.usdoj.gov/nij](http://www.ojp.usdoj.gov/nij).

## ENDNOTES

<sup>1</sup> Peters, R.H., P.E. Greenbaum, M.L. Steinberg, C.R. Carter, M.M. Ortiz, B.C. Fry and S.K. Valle. 2000. Effectiveness of screening instruments in detecting substance use disorders among prisoners.

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*Journal of Substance Abuse Treatment*, 18(4):349-358.

Most of the instruments' definitions and performance results are based on information from this study.

<sup>2</sup> Peters et al. 2000.

<sup>3</sup> Knight, K., D.D. Simpson and M.L. Hiller. 2000. *Screening and referral for substance-abuse treatment in the criminal justice system*. Washington, D.C.: U.S. Department of Justice.

See also Knight, K., D.D. Simpson and J.T. Morey. 2002. *An evaluation of the TCU drug screen*. Washington, D.C.: U.S. Department of Justice.

<sup>4</sup> Shearer, R.A. and C.R. Carter. 1999. Screening and assessing substance-abusing offenders: Quantity and quality. *Federal Probation*, 63(1):30-34.

*Doris Wells is a writer/editor for the National Institute of Justice, the research, development and evaluation branch of the U.S. Department of Justice.*

Table 1. Results for all Screening Instruments in Detecting Alcohol or Drug Dependence Disorders

Instrument	Overall Accuracy	Positive Predictive Value	Negative Predictive Value	Specificity	Sensitivity
<b>Alcohol dependence disorder</b>					
ADS: Alcohol Dependence Scale (n=379)	84 (%)	81 (%)	85 (%)	96 (%)	51 (%)
TCUDS: Texas Christian University Drug Screen (n=377)	75	52	87	78	66
ASI-A: Addiction Severity Index-Alcohol Use Subscale (n=98)	71	47	99	70	98
SSI: Simple Screening Instrument (n=379)	67	44	95	58	92
SASSI-2: Substance Abuse Subtle Screening Instrument-2 (n=372)	60	38	87	53	78
MAST: Michigan Alcoholism Screening Test (n=379)	51	35	100	34	100
<b>Drug dependence disorder</b>					
ASI-D: Addiction Severity Index-Drug Use Subscale (n=305)	90	81	94	92	83
DAST: Drug Abuse Screening Test-20 (n=306)	83	64	95	81	88
TCUDS: Texas Christian University Drug Screen (n=305)	82	65	92	83	81
SSI: Simple Screening Instrument (n=306)	70	48	96	61	93
SASSI-2: Substance Abuse Subtle Screening Instrument-2 (n=300)	60	40	86	52	79

Source: Created with information from Peters et al., Table 5. Numbers have been rounded.

## Selected Instruments

*Researchers evaluated the following instruments:*

**Alcohol Dependence Scale (ADS)** — a 25-item instrument that screens for alcohol dependency symptoms. It was developed through factor analysis of the 147-item Alcohol Use Inventory (AUI).

**Addiction Severity Index (ASI)-Drug Use/Alcohol Use Subscales** — an instrument that uses a structured interview format to examine several areas of functioning that are commonly affected by substance abuse. The ASI-Drug, which screens only for drugs, and the ASI-Alcohol, which screens only for alcohol, are the two subscales used in the study.

**Drug Abuse Screening Test-20 (DAST 20)** — a widely used 20-item screening instrument that examines symptoms of drug dependency.

**Michigan Alcoholism Screening Test (SMAST)-Short Version** — a 13-item screening instrument that examines symptoms of alcohol dependency.

**Substance Abuse Subtle Screening Inventory-2 (SASSI-2)** — an 88-item screening instrument that examines symptoms and other indicators of alcohol and drug dependency.

**Simple Screening Instrument (SSI)** — a recently developed 16-item screening instrument that examines symptoms of alcohol and drug dependency.

**Texas Christian University Drug Screen (TCUDS)** — a 19-item screen that examines diagnostic symptoms of drug use. It is derived from a substance abuse diagnostic instrument developed by the Texas Christian University Institute of Behavioral Research.

**Thirty-Day Structured Clinical Interview for DSM-IV (SCID-IV)** — one of two widely used structured interview instruments that provide an accurate and broad range of DSM<sup>1</sup> diagnoses for adults. It describes lifetime and past 30-day diagnoses for alcohol and other drugs, and differentiates between substance abuse and dependence disorders.<sup>2</sup> ♦

<sup>1</sup> Refers to the American Psychiatric Association's Diagnostic and Statistical Manual.

<sup>2</sup> The study used results from the 30-day Structured Clinical Interview for DSM-IV as the standard measure to evaluate the instruments on detecting the presence of substance abuse disorders.

