When faced in a clinical setting with an adolescent suspected of or known to have a substance abuse problem, it is important to integrate the assessment process with treatment decisions. The initial phase involves efficient identification of substance use and related problems, psychiatric comorbidity, and psychosocial maladjustment. This objective can be achieved by the use of screening instruments as a brief first step for the assessment of drug use before moving, if necessary, to the second step of comprehensive assessment of problem severity once it becomes clear that the adolescent may meet criteria for a substance use disorder (SUD). The result of this assessment is a diagnostic summary that identifies the adolescent treatment needs. Finally, an integrative treatment plan is developed to target multidimensional areas of dysfunction, which includes psychiatric comorbidity, as well as potential problems in the school, family, peer, and legal domains. With 6.0% and 5.4% of youths ages 12 to 17 years classified as needing treatment for alcohol use and illicit drug use, respectively, and with substance use during adolescence appearing to lead to a much greater rate of a current SUD compared to rates if drug use occurs later in life, these are important public health issues. Reports on performance of pediatricians who customarily see youths for periodic checkups and address their medical needs have not been encouraging. Less than half of the pediatricians surveyed reported screening adolescents for use of tobacco, alcohol, and other drugs, and less than one fourth acknowledged feeling comfortable conducting a comprehensive assessment or offering or making referral for treatment. The reasons for these troubling figures have been summarized as follows: insufficient time, lack of training to manage positive screens, need to triage competing medical problems, lack of treatment resources, unfamiliarity with screening tools, and tenacious parents (who may not readily leave the room). There are no similar reports addressing how prepared child and adolescent psychiatrists (CAPs) are to follow the task at hand. Based on our own clinical and teaching experience, the quantity and quality of training devoted to the screening and assessment of youth substance use, abuse, and dependence in medical schools and psychiatric residency/fellowship training are often insufficient. Little, if any, training is given on how to screen and assess for substance involvement and related problems and on what tools are available to assist with this process. Therefore, the objectives of this column are, first, to introduce several established screeners and comprehensive assessments, and, second, to make recommendations as to standards of training and professional proficiency.

SCREENING AND COMPREHENSIVE ASSESSMENT INSTRUMENTS

Detecting recent drug use with a urine test may have a role in the pediatric or psychiatric setting due to the objective nature of the procedure. However, a positive result is neither diagnostic nor does it provide...
information about the person’s history of drug problems. Also, the time window for detecting drugs varies greatly (e.g., alcohol is only detectable for about 8 hours). The use of self-report and collateral information is important and the most reliable in many instances, so long as there is no legal contingency attached and confidentiality is ensured.\textsuperscript{10,11} Simply asking about the frequency or quantity of drug use (e.g., “How often have you used?”) is not particularly informative as to whether the young person does or does not have a drug problem. Thus, it is recommended that clinicians use a well-developed and validated self-report measure of drug abuse problem severity. There are numerous well-researched, self-report–based screening and comprehensive assessment tools available to clinicians.\textsuperscript{2}

Screening tools are brief self-reports or interviews used as the first step in the process of evaluating whether a youth may or may not have a drug problem. The outcome of a screening is to determine the need for further, more comprehensive assessment. Comprehensive assessment measures explore more deeply the extent and nature of the drug involvement (e.g., qualitative, quantitative, combination of substances, circumstances, social network for use), consequential problems, and treatment needs. Substances include the so-called obvious categories (alcohol, marijuana, tobacco, amphetamines), as well as the misuse of prescription drugs and inhalants, to name a few of the other, less obvious substances. A comprehensive assessment provides the more extensive information needed to determine what treatment plan and goals are warranted. This includes, at a minimum, treatment setting (e.g., outpatient, residential treatment), specific interventions (e.g., family therapy, medications, cognitive-behavioral therapy), and intensity, frequency, and type of contacts with providers or resources (e.g., family, community, treatment providers). Furthermore, any screening or assessment must consider cognitive developmental variability, motivation for cooperation, and expectations of the referral source, parents/caretakers, and the adolescent.

We identified a select group of self-report screening and comprehensive assessment instruments that have favorable features. Our selection was guided by a combination of psychometric rigor and user-friendliness, but should in no way be deemed comprehensive in its coverage. The interested reader is referred to recent reviews of all of the available instruments.\textsuperscript{2,12} For the purposes of this column, the features that we were most interested in include strong psychometric properties, simple scoring, efficient length and administration time, and user training available through simple reading of the published manual. Given that many adolescent substance users are also tobacco users, we also include in the table whether the tool assesses specifically for this. Three caveats are in order: first, not all of the tools that we review are in the public domain; second, and as noted in the disclosure statement, we have been involved in the development of some of the tools included; third, the tools that we review focus primarily on measuring drug abuse problems and are not intended as a substitute for structured psychiatric interviews. Given the high base rate of coexisting mental disorders with adolescent drug abuse, it is important to include appropriate assessment of the full range of mental disorders.

Screening Tools

We describe two clinically useful and well-researched screening tools: CRAFFT and the Personal Experience Screening Questionnaire (PESQ; Table 1). The CRAFFT\textsuperscript{13} is a specialized six-item screen in the public domain designed to be administered verbally during a routine pediatric interview to address both alcohol and drug use. Its name is a mnemonic device to assist physicians to incorporate six questions during their primary care examinations.

\textbf{CRAFFT Screener.} \textit{C}: Have you ever ridden in a car driven by someone (including yourself) who was “high” or using alcohol or drugs (AOD)? \textit{R}: Do you use AOD to relax, change your mood, feel better about yourself, or fit in? \textit{A}: Do you ever use AOD while you are by yourself, \textit{alone}? \textit{F}: Has any friend, family member, or other person ever thought you had a problem with AOD? \textit{F}: Do you ever forget (or regret) things you did while using? \textit{T}: Have you ever got into trouble while using AOD, or done something you would not normally do (break the law, rules, or curfew; engage in risky behavior to you or others)?

Based on a study in a large hospital-based adolescent clinic, including pediatric settings, scores from the CRAFFT were found to be highly predictive of the presence of a substance abuse or dependence diagnosis (as defined by an existing and valid measure of DSM-IV–defined SUD, the Adolescent Diagnostic Interview\textsuperscript{14}). When evaluated in a general pediatric setting, a cutoff score of \geq2 correctly classified in 86\% of cases whether the youth did or did not have a current
substance abuse or dependence disorder (see Table 2 for details of classification data). Further assessment therefore is recommended.13,15

The 40-item PESQ,16,17 which is not a public domain instrument, consists of an 18-item problem severity scale and other items that measure drug use history, a small number of psychosocial problems, and response distortion tendencies (“faking good” and “faking bad”). Thus, the PESQ’s extra length and the fact that it has a fee is a tradeoff for the additional content it covers. Norms for nonclinical, juvenile offender, and drug-abusing populations are available. The validation study of the PESQ found that an empirically derived cutoff score yielded an overall agreement rate of positives and negatives of 87% in predicting independently derived judgments by clinicians of the client’s “need for further drug abuse assessment.”15 The false-positive rate was 13% (see Table 2 for details of classification data).

Comprehensive Tools. We identified three comprehensive instruments that combine psychometric rigor and user friendliness (Table 3). The Global Appraisal of Individual Needs (GAIN)18 is a semistructured interview that measures recent and lifetime functioning in several areas, including substance use, legal and school functioning, and psychiatric symptoms. Favorable internal consistency, test-retest reliability, and construct validity data are associated with the GAIN, including evidence that GAIN scores are significantly correlated with independent ratings of drug involvement problem severity and that youths referred to drug treatment score higher on these core sections compared to youths not referred for treatment.19 The comprehensiveness and multidimensionality of the GAIN require a relatively long administration time and a lengthy and detailed training (see the Chestnut.org Web site for more details).

The second comprehensive interview is the Teen Addiction Severity Index (T-ASI).20 The T-ASI is a semistructured interview that consists of seven content areas: chemical use, school status, employment-support status, family relationships, legal status, peer-social relationships, and psychiatric status. A medical status section was not included because it was deemed to be less relevant to adolescent drug abusers. Adolescent and interviewer severity ratings are elicited on a 5-point scale for each content area. Psychometric data indicate favorable interrater agreement and association of the various scales to existing valid measures of similar constructs.21 A computerized, Internet- and telephone-based, modified version entitled T-ASI-II and its psychometrics has been piloted on a large number of adolescents and will be available soon for clinical use.22,23

The final instrument in this group is a self-administered, multiscale questionnaire, the Personal Experience Inventory (PEI). It consists of several scales that measure drug use problem severity, psychosocial risk, and response distortion tendencies. Supplemental problem screens measure eating disorders, suicide potential, physical/sexual abuse, and parental history of drug abuse. The computerized report includes narratives and standardized scores for each scale as well as other clinical information. Norms for drug-clinic and nonclinical controls are provided. Psychometric data

![Table 1](http://www.projectcork.org/clinical_tools/pdf/CRAFFT.pdf)

![Table 2](http://lib.adai.washington.edu/instruments)

### Table 1

<table>
<thead>
<tr>
<th>Instrument</th>
<th>Settings in Which Studied</th>
<th>Format</th>
<th>Administration Time, min</th>
<th>Manual Scoring Available</th>
<th>Computer Scoring Time, min</th>
<th>Fee for Use</th>
<th>Tobacco?</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>CRAFFT</td>
<td>Clinic, drug treatment</td>
<td>6 items</td>
<td>5</td>
<td>Yes</td>
<td>2</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>PESQ</td>
<td>Clinic, drug treatment, 40 items</td>
<td>10 items</td>
<td>5</td>
<td>Yes</td>
<td>5</td>
<td>Yes</td>
<td>Yes</td>
<td><a href="http://lib.adai.washington.edu/instruments">http://lib.adai.washington.edu/instruments</a></td>
</tr>
</tbody>
</table>

*Note: PESQ = Personal Experience Screening Questionnaire.*

### Table 2

<table>
<thead>
<tr>
<th>Instrument</th>
<th>Sensitivity</th>
<th>Specificity</th>
<th>Overall Concordance of Test With Criterion</th>
</tr>
</thead>
<tbody>
<tr>
<td>CRAFFT</td>
<td>0.80</td>
<td>0.87</td>
<td>0.86</td>
</tr>
<tr>
<td>PESQ</td>
<td>0.89</td>
<td>0.84</td>
<td>0.88</td>
</tr>
</tbody>
</table>

*Note: CRAFFT criterion = substance use disorder (S); PESQ (Personal Experience Screening Questionnaire) criterion = need for comprehensive assessment (T).*
include internal consistency and test-retest reliability data and a range of convergent, discriminant, and criterion validity (e.g., scores compared with existing validated measures, independent clinician ratings, and archival data).24

**METHOD OF ADMINISTRATION**

Assessment strategies generally consist of a combination of self-report scales (such as the CRAFFT, PESQ, and PEI) and interviews (such as the GAIN and T-ASI). Self-report as a source of diagnostic information is a mainstay in assessment, largely because the method is generally valid25 and the individual is the most knowledgeable source of information.

Self-administered questionnaires (e.g., CRAFFT, PESQ, PEI) are convenient, yet it may be necessary for the assessor to supervise and assist the adolescent, especially in cases in which the adolescent has poor reading skills. Interviews can be described as structured or semistructured based on the process of interviewing, the rigidity of decision rules, and the degree of clinical judgment required and allowed when determining symptoms and diagnoses. Most structured interviews can be administered by a well-trained layperson. Semistructured interviews, such as the GAIN and T-ASI, require the interviewer to elicit an initial response from the interviewee, but then permit unstructured probing to determine whether a symptom is present. Users of these interviews usually require more training in assessment, but their flexibility can be important if an adolescent is initially resistant to providing valid information or if the teenager does not clearly understand the questions.

**CONCLUSIONS AND RECOMMENDATIONS**

Clinicians who work with youths should receive formal training in either medical school or residency in the assessment of substance use and use disorders, and master at least one screen and one comprehensive assessment instrument. The measures described here are suitable not only for initial evaluation but also for periodic reevaluations to measure outcomes of treatment. When choosing which assessment tools to use, one should take into consideration the length of administration time, resources in the clinic for training (i.e., professional manpower, funding for time allocated for evaluation, potential reimbursement), and periodic

<table>
<thead>
<tr>
<th>Characteristics of Select Comprehensive Assessment Measures</th>
<th>Setting in Which Studied</th>
<th>Format</th>
<th>Administration Time, min</th>
<th>Manual Available</th>
<th>Time, min</th>
<th>Computer Scoring Available</th>
<th>Scoring Time, min</th>
<th>Computer Scoring Fee for Use</th>
<th>Tobacco?</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Instrument</td>
<td>GAIN</td>
<td>Clinic, drug treatment, juvenile detention</td>
<td>Semistructured interview</td>
<td>75-100</td>
<td>Yes</td>
<td>Yes</td>
<td>60</td>
<td>Yes</td>
<td>Yes</td>
<td><a href="http://lib.adai.washington.edu/">http://lib.adai.washington.edu/</a></td>
</tr>
<tr>
<td></td>
<td>T-ASI</td>
<td>Clinic, drug treatment, juvenile detention</td>
<td>Semistructured interview</td>
<td>25-45</td>
<td>Yes</td>
<td>Yes</td>
<td>10</td>
<td>No</td>
<td>No</td>
<td><a href="mailto:kaminer@psychiatry.uchc.edu">kaminer@psychiatry.uchc.edu</a></td>
</tr>
<tr>
<td></td>
<td>PEI</td>
<td>Clinic, drug treatment, juvenile detention</td>
<td>Self-report</td>
<td>45-60</td>
<td>Yes</td>
<td>Yes</td>
<td>10</td>
<td>No</td>
<td>No</td>
<td><a href="http://lib.adai.washington.edu/">http://lib.adai.washington.edu/</a></td>
</tr>
</tbody>
</table>

Note: GAIN = Global Appraisal of Individual Needs; T-ASI = Teen Addiction Severity Index; PEI = Personal Experience Inventory.
administration to measure multidimensional outcomes. Parameters of quality assurance for the curriculum of the training material and competence posttraining should be established. Finally, adolescents with SUD may be better served if current programs enable trainees to be more involved with their evaluation and treatment.

Disclosure: Dr. Winters is the sole author of a copyrighted screening tool (PESQ) and is one of the coauthors of a comprehensive assessment tool (T-ASI). He does not have any financial interest in their sales; the royalties from sales are received by The Saint Paul Foundation. Dr. Kaminer is one of the coauthors of a copyrighted comprehensive assessment tool (T-ASI). The instrument is available free of charge.

REFERENCES