



# JAIBG

Juvenile Accountability Incentive  
Block Grants Program

## BULLETIN

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### *From the Administrator*

This OJJDP Bulletin offers specific information to assist those seeking to establish an effective substance abuse testing program. For example, the advantages and disadvantages of several testing methods are described, and sample budgets for testing programs conducted in various settings are provided. Suggested readings and resource organizations are also included.

The testing approach described in this Bulletin was recommended in the companion Juvenile Accountability Incentive Block Grants Best Practices Bulletin *Developing a Policy for Controlled Substance Abuse Testing of Juveniles*. Written by the same authors, the latter Bulletin provides an overview of substance abuse testing, sets forth testing indicators, and summarizes substance abuse trends.

It is my hope that these Bulletins will serve as a foundation for building successful substance abuse testing programs.

**John J. Wilson**  
Acting Administrator



## Ten Steps for Implementing a Program of Controlled Substance Testing of Juveniles

**Ann H. Crowe and Linda Sydney**

*This Bulletin is part of OJJDP's Juvenile Accountability Incentive Block Grants (JAIBG) Best Practices Series. The basic premise underlying the JAIBG program, initially funded in fiscal year 1998, is that young people who violate the law need to be held accountable for their offenses if society is to improve the quality of life in the Nation's communities. Holding a juvenile offender "accountable" in the juvenile justice system means that once the juvenile is determined to have committed law-violating behavior, by admission or adjudication, he or she is held responsible for the act through consequences or sanctions, imposed pursuant to law, that are proportionate to the offense. Consequences or sanctions that are applied swiftly, surely, and consistently, and are graduated to provide appropriate and effective responses to varying levels of offense seriousness and offender chronicity, work best in preventing, controlling, and reducing further law violations.*

*In an effort to help States and units of local government develop programs in the 12 purpose areas established for JAIBG funding, Bulletins in this series are designed to present the most up-to-date knowledge to juvenile justice policymakers, researchers, and practitioners about programs and approaches that*

*hold juvenile offenders accountable for their behavior. An indepth description of the JAIBG program and a list of the 12 program purpose areas appear in the overview Bulletin for this series.*

### **Major Steps for Program Implementation**

This Bulletin is a companion to the JAIBG Bulletin *Developing a Policy for Controlled Substance Testing of Juveniles* (Crowe and Sydney, 2000) and presents a detailed discussion of a 10-step process, shown in figure 1, for developing and implementing a substance-testing program. Although these steps are presented independently, in practice they are likely to overlap, with final determinations about policies and procedures in one area contingent on decisions made at other points during the process.

### **Step 1: Involve Key Stakeholders**

Several principal roles should be represented in the decisionmaking tasks of program development. These can be discussed in three categories:

### Figure 1: Steps for Developing a Substance-Testing Program

Involve key stakeholders.

Determine program purpose.

Investigate legal issues.

Identify youth to be tested.

Select methodology.

Decide how to use results and arrange for adequate and appropriate treatment.

Develop written policies and procedures.

Obtain funding.

Develop staff.

Evaluate the program.

- **Agency personnel** should include administrators, managers, and line personnel of the agency that will be administering the drug-testing program. Testing programs are most likely to be developed in detention, corrections, probation, residential, and aftercare agencies. Administrators must make important decisions about agency resources, while managers and line personnel will implement the program. Input from all is vital. Any new program

will affect the organization and staff of the agency implementing it. When both managers and staff are involved, they are more likely to support the effort. They also can provide key insights about the operation of the program, other staff and juveniles' reactions to it, and possible problems to avoid.

- **Other juvenile justice system stakeholders** who will not be involved directly with administering the drug-testing program, but whose support and views on drug testing will be important to the program, should be included in the planning process. These may consist of law enforcement personnel, judges, prosecuting and defense attorneys, paroling authority representatives, and court administrators. The appropriate mix of these representatives will depend on the agency(ies) implementing drug testing and the other juvenile justice agencies that might be affected by it.
- **Community representatives** also should be included as appropriate. For example, substance abuse treatment providers working with youth should be included. Family and caregivers are also critically important. Others to consider are personnel from education, social welfare, and healthcare organizations; technical experts; academicians; parents' or citizens' groups; and delegates from possible funding sources (e.g., businesses and the faith community).

### Step 2: Determine Program Purpose

It is essential to carefully consider and clearly articulate the purpose of the substance-testing program. Without a clear goal in mind, other decisions will be more difficult. A purpose statement should describe briefly:

- What is to be accomplished by substance testing.
- How it will be done.

- Who will be tested.
- Who is responsible.
- When testing will occur.
- How results will be used, including what treatment resources will be used.
- What objectives are not to be pursued through the program. (For example, if results of tests are to be used for case management, and not for punitive purposes, this should be stated clearly.)

The purpose statement must coincide with the agency's mission. For a balanced approach to juvenile justice, agencies should incorporate and place equal emphasis on the following three elements (Maloney, Romig, and Armstrong, 1988):

- Community protection.
- Accountability of youth.
- Competency development of youth.

Similar balance in the purposes of substance testing also is appropriate.

Substance testing can be used for the following:

- **Assessment and treatment.** Substance testing is used to identify youth whose use of alcohol and other drugs requires treatment and to monitor their progress in treatment (Pretrial Services Resource Center, 1998).
- **Health and safety assessment.** This is particularly important when youth enter programs directly from the community (such as in detention or after furloughs from residential facilities). If youth have abused substances, they may need medical care or special supervision to ensure their own and others' safety. Some drugs can cause life-threatening effects; withdrawal from some drugs also can be dangerous.
- **Case planning.** Results of substance testing may be used as part of the

information needed to process youth through the juvenile justice system. They may be a factor in determining whether a youth should be released from detention and what sanctions and treatment are needed.

- **Compliance monitoring and supervision.** Youth may be ordered by the court to abstain from using alcohol or other psychoactive substances. Substance testing is necessary to enforce these judicial orders. This does not necessarily mean that youth must be severely punished if they use drugs, but it gives juvenile justice personnel information they need for case management (Mieczkowski and Lersch, 1997; Pretrial Services Resource Center, 1998).
- **Epidemiological analysis.** Substance testing helps juvenile justice professionals learn the incidence and prevalence of substance abuse and the types of chemicals being abused in the communities they serve. The results provide information for planning and evaluation (Mieczkowski and Lersch, 1997).

### Step 3: Investigate Legal Issues

Legal issues require research at the local and State levels. The areas discussed in this Bulletin generally prevail, but they may vary according to local and State statutes or regulations and emerging case law. Having the help of legal counsel in drafting and reviewing policies is advised.

#### Authority To Test

Examine the agency's authority to test early in the development of drug-testing policies. Authority to test generally comes from one or more of the following three sources:

- **Statutes.** State or local statutes may mandate, permit, or prohibit practices related to substance testing of juveniles. Any such legislation should be cited in the jurisdiction

or agency's policies and procedures document. Statutory support for testing is preferred, as it provides the maximum legal protection for agencies and practitioners carrying out the program.

- **Court or paroling authority orders.** Court or paroling authority orders for adjudicated youth may direct that the youth submit to substance testing. Courts or paroling authorities should impose such a condition where substance testing could facilitate the rehabilitation of the youth or where alcohol or other drug use is related to the youth's delinquent behavior. (This provision does not apply to preadjudicated youth, whose situation is discussed later.) Although it is preferred that courts or paroling authorities impose conditions for substance testing, they should make those orders flexible enough for the agency or practitioner to determine the frequency of testing.
- **Agency policy.** All agencies conducting substance testing should have written policies that clearly state the purpose for testing and identify the juveniles who will be subject to testing (e.g., all juveniles, those juveniles with a history of drug use, youth with court orders for testing).

The testing program is most defensible if all three sources of authority are in place. In the absence of statutory authority, both court or paroling authority orders and agency policies are recommended.

#### Testing Preadjudicated Youth

Because of their age and status, adjudicated youth's rights are diminished in some respects. Being minors, they cannot vote, drive vehicles, or legally purchase alcohol or tobacco, and as a result of their adjudication, they may lose their freedom or have restrictions placed upon it. However, until youth have been adjudicated, they are entitled to all the rights and protections

afforded any youth in the community. Nonetheless, there is a rationale for conducting testing of preadjudicated youth in a detention program, as stated by the American Correctional Association and Institute for Behavior and Health, Inc. (ACA/IBH) project (1991a, p. 1):

The issue of constitutionality of urine collection and testing in detention facilities hinges on what use is made of the test results. Test results can be used with confidence as part of a case management plan, just like other information from a medical examination. When an initial health screen reveals evidence of diabetes or a sexually transmitted disease (STD), the detention facility is obligated to devise a plan for treatment. This principle holds for urine test results. On the other hand, if testing is used to file charges and prosecute, there is a potential for legal challenge.

Agencies should note that statutory authority still is preferable when considering testing of preadjudicated youth. Sometimes laws do not specifically authorize drug testing, but authority may be inferred from other laws. For example, the Code of the District of Columbia contains the following three provisions that are interpreted broadly to allow for urine drug testing of youth in detention (ACA/IBH, 1991b, 1995):

- Physical examinations of youth are permitted. Drug testing is considered within the definition of "physical examinations" allowed by this law (D.C. Code 16-2315).
- A preliminary determination of the need for supervision is mandated (D.C. Superior Court Rules 102 and 103). Because the determination of illegal drug use generally justifies the need for supervision, testing to detect drug use may be viewed as an essential part of the intake process.

- A determination must be made about the necessity of detaining a juvenile for his or her protection or the protection of others. Substance abuse is among the factors considered when assessing the need to keep a youth in detention (D.C. Superior Court Rule 106).

The District of Columbia Superior Court determined these statutory and regulatory provisions were sufficient to enter into a memorandum of understanding that allows for drug testing of preadjudicated youth. Jurisdictions should approach preadjudication testing cautiously and explore jurisdiction-specific laws to determine whether present statutes support preadjudicatory testing (ACA/IBH, 1995).

## Voluntary Testing

Where legislation does not support testing, agencies may elect to make testing voluntary, especially at the preadjudication phase. In a voluntary program, agencies should obtain informed consent from youth (and possibly their parents in some States) before testing. Informed consent includes knowledge of the following:

- Specimen collection process.
- Use that will be made of test results.
- Consequences of testing positive.
- Confidentiality provisions.
- Right to legal counsel, if applicable.

This information should be given to youth orally and in writing. Youth should then sign a statement confirming that they understand the information and give their consent to participate in testing. If the testing program is voluntary, youth should not be penalized for refusing to be tested.

## Constitutional Issues Regarding Testing

Challenges to drug testing usually relate to the five constitutional rights

discussed below (Del Carmen and Sorensen, 1988):

- **Right against unreasonable search and seizure (fourth amendment).** Urine testing is equivalent to a search for illicit drugs and includes invasive procedures to collect body fluids. To ensure that it meets this constitutional test, the “search” must be reasonable and based on a rational belief that it is necessary.
- **Right to due process (fifth and fourteenth amendments).** Before a youth is deprived of liberty, certain procedures must be followed. Tests must be accurate and meet scientific standards acceptable to courts. A second confirmatory test may be necessary before limiting a youth’s freedom. Chain-of-custody procedures involving specimens also are vital. There must be safeguards against the possibility of tampering with the specimen or test results, or they may be invalid for legal use. (Chain-of-custody procedures are discussed later.) Specimens from positive tests should be kept in case of possible legal challenges.
- **Right to confrontation and cross-examination (fifth amendment).** If the personnel who actually conduct tests are not present to provide testimony, the potential for challenging results on the basis of hearsay evidence exists. These challenges usually have not succeeded, as courts have allowed exceptions to the hearsay rule. The business records, reliability, and trustworthiness of a laboratory are factors a judge might rely upon when excluding the testimony of staff member(s) who administered the test(s) from the hearsay rule.
- **Right to equal protection (fourteenth amendment).** Under the Constitution, individuals cannot be treated differently unless such treatment is legally justified. In detecting substance abuse, different treatment is related to alleged illegal activity

rather than to racial, gender, socioeconomic, or other differences. Drug screening is reasonably related to detecting, treating, and preventing substance use and, therefore, is a reasonable requirement.

- **Right against self-incrimination (fifth amendment).** Defendants are protected against self-incrimination when they give testimony in court. Urinalysis, however, is a form of physical evidence (similar to fingerprinting or appearing in a lineup). Therefore, it is not included in this constitutional protection. Substance testing does not require a youth to confess to drug use.

## Challenges to Drug Testing

Substantial case law supports substance testing,<sup>1</sup> but only a few cases are specifically related to substance testing of juveniles. Those cases are summarized briefly:<sup>2</sup>

- *In re C.J.W.*, 727 P. 2d 870 (Colo. Ct. App. 1986). A juvenile failed to submit to urine testing, which was a condition of probation, but she admitted this failure to the probation officer. The court held that hearsay testimony of the probation officer was admissible to establish that the juvenile violated conditions of probation.
- *In re Jimi A.*, 257 Cal. Rptr. 147 (Cal. Ct. App. 1989). A juvenile disturbed

<sup>1</sup> For a review of drug-testing case law, refer to *Drug Testing Guidelines and Practices for Juvenile Probation and Parole Agencies*, developed by the American Probation and Parole Association (APPA) and published by the U.S. Department of Justice, Office of Justice Programs, Office of Juvenile Justice and Delinquency Prevention, 1992. Summaries of 62 cases are presented and classified for easy reference in this document.

<sup>2</sup> Some other recent court challenges to drug testing that are not specific to juvenile offenders include: *Alston v. State*, 646 So.2d 184 (Fla. Sup. Nov. 1994); *Bryant v. State*, 622 So.2d 620 (Fla. Dist. App. Aug. 1993); *Peterson v. State*, 623 So.2d 637 (Fla. Dist. App. Sept. 1993); *Stevens v. State*, 900 S.W. 2d 348 (Tex. App. July 1995); *United States v. Stephens*, 65 F.3d 738 (U.S. 8th Cir. Sept. 1995); *Garcia v. State*, 661 So.2d 1313 (Fla. Dist. A.P. Nov. 1995); *United States v. Grandlund*, 71 F.3d 507 (U.S. 5th Cir. Dec. 1995); *Brock v. State*, 667 So.2d 1014 (Fla. Dist. A.P. Feb. 1996).

the peace and committed a battery on school property. The defendant had a history of admitted substance abuse and had no parental supervision in the evening hours. A condition of probation required the defendant to submit to random drug testing. The court held this condition was appropriate, given the youth's background of substance abuse and lack of parental supervision.

- *In the Interest of C.P.*, 217 (Ga. A.P. 1995 505). A juvenile was adjudicated for violating probation terms imposed for possessing alcohol. She appealed, but the court held that possession of alcohol was a delinquent act and upheld the court-ordered probation.
- *ALJ v. State of Wyoming*, 836 P. 2d 307 (Wyo. 1992). A youth attended a party during which he pointed a gun at others and was adjudicated for reckless endangerment. He was placed on 3 years' probation and required to submit to random chemical testing, among other things. The youth contested this condition on the grounds that it violated his right to be free from unreasonable searches and seizures. The court ruled that fourth amendment protections that apply to adult probationers do not necessarily apply to juvenile probationers. They held it was within the court's discretion to allow a probation officer to search a juvenile without reasonably suspecting a probation violation exists. There are differences in the rights of juveniles at the adjudicatory stage (due process and fair treatment) and at the dispositional stage. By statute, Wyoming requires that the court do what is best for public safety, preservation of families, and the welfare of the child. This allows the court to impose conditions for counseling, treatment, or other programs to rectify the problems contributing to delinquency. The appellate court

decided these were broad enough to include chemical testing.

Del Carmen and Sorensen (1988) say conditions of probation, to be valid, must be constitutional, clear, reasonable, and reasonably related to the protection of society or the rehabilitation of the individual. They make the following recommendations for implementing a drug-testing program:

- Impose drug screening only when it is reasonably related to public safety concerns or the rehabilitation of the individual and in such cases where the person's delinquent behavior could be attributed to drug use.
- Determine whether a confirmatory test is required.
- Ensure that those administering drug tests are trained and properly qualified, whether they are agency staff or employees of a laboratory.
- Follow strict chain-of-custody procedures, including sealing, labeling, storing, and documenting the transfer of specimens.
- Save samples with positive results until the time for all possible legal challenges has elapsed.
- Have clearly written policies and procedures for drug screening and for responses to positive findings.

### Confidentiality

Programs implementing substance testing should examine present policies, State and local statutes, and case law on confidentiality to ensure that the program complies with them. Some special considerations apply when substance abuse services are provided. Two Federal laws and several Federal regulations affirm these confidentiality rights (42 U.S.C., § 290dd-3 and ee-3 and 42 CFR Part 2).

The Federal confidentiality laws and regulations protect any information about a youth if the youth

has applied for or received any alcohol or other drug-related services—including diagnosis, treatment or referral for treatment—from a covered program.<sup>3</sup> The restrictions on disclosure apply to any information, whether or not recorded, that would identify the youth as an alcohol or other drug user, either directly or by implication. (Brooks, 1990, p. iv)

The purpose of the confidentiality laws preventing disclosure of (written or oral) information that would identify a person receiving alcohol or drug treatment is to promote participation in treatment and related programs. Programs should establish policies and procedures for confidentiality. Some of these confidentiality concerns are more likely to apply to treatment providers than to juvenile justice agencies; however, juvenile justice personnel must consider these confidentiality issues and be aware of the restraints under which treatment providers must work.

Policies and procedures about confidentiality for drug testing should address:

- The youth's right to privacy.
- The person(s) to whom and the circumstances under which information may be released.
- The type of information that may and may not be shared.
- The process and forms for obtaining permission to release information.<sup>4</sup>

<sup>3</sup> Covered programs include those that are federally assisted, both directly and indirectly. Indirect forms of Federal aid might include tax-exempt status or funding from State or local governments that originated with the Federal Government (Brooks, 1990).

<sup>4</sup> A sample consent form for release of information and a statement regarding redisclosure of information may be found in *Legal Issues for Alcohol and Other Drug-Use Prevention and Treatment Programs Serving High-Risk Youth*, written by M.K. Brooks and published by the U.S. Department of Health and Human Services (HHS), Substance Abuse and Mental Health Services Administration (SAMHSA), Office for Substance Abuse Prevention, 1990.

- The consequences for unauthorized disclosure of information.
- The precautions to be taken when collecting and aggregating data to ensure the confidentiality of individual youth.

## Step 4: Identify Youth To Be Tested

Selection of youth to participate in a substance-testing program will be based, in part, on the agency and the purpose for testing. Testing could be conducted at every point in the juvenile justice continuum. For example, the following illustrates options for testing juveniles:

- **At intake to detention.** All youth could be tested to detect possible health or safety concerns, to help in considering (with other factors) which youth might be released before adjudication with minimal risk to themselves or the community, and to assist in making case plans for treatment, supervision, or placement.
- **During probation supervision.** Probation agencies might adopt policies to test every youth at intake to probation or limit testing to those with court orders for testing. Testing should be adjusted to the case situation on an ongoing basis. For example, if a youth tests negative several times, stopping or diminishing drug testing should be considered. On the other hand, if a youth who was not previously subject to testing begins showing signs of substance abuse (e.g., declining grades, absenteeism, getting in trouble), initiating testing should be deliberated.
- **In residential placement.** Testing in a residential facility might be done when youth are admitted, when they have been away from the facility (e.g., furloughs, work release) and might have had access to psychoactive substances,

and when behavior or evidence (e.g., discovery of contraband) suggests they may have used chemicals.

- **During aftercare or parole.** Youth who have been in placement usually are supervised during their reintegration into the community. This may be a time when they are vulnerable to resuming substance use, and testing can provide needed information for personnel supervising them. Awareness that testing will occur may also serve as a deterrent when youth are deciding on drug usage. Many youth released from placement may need ongoing substance abuse treatment and relapse prevention in the community, and substance testing provides a method of monitoring their compliance and progress.

The JAIBG legislation requires that States or local units of government develop a “policy of controlled substance testing for appropriate categories of juveniles within the juvenile justice system.” However, it leaves the responsibility of determining which groups of youth are considered “appropriate” for testing to the States and local agencies. As John J. Wilson, Deputy Administrator of State and Local Programs for OJJDP, stated (Mattingly, 1998, p. 14):

We will let the State and local governments make the determination of what the appropriate categories of juveniles are. Our research shows that most drug testing occurs as a result of local policies and so I expect that whether there is drug testing at the local level will vary not only from State to State, but also within the State. The determination of who should be tested will depend, in part, upon what kind of program interventions are available or can be developed for juveniles

who test positive for drug use. It doesn’t make any programmatic sense to test somebody for drug use unless you’re going to do something with the results. So, in part, it will depend upon the capacity of the State or local government to use those results in a meaningful way.

## Step 5: Select Methodology

### Testing Technology

There are several technologies available to test for substances, and new ones are emerging rapidly. Developing substance-testing policies requires making informed choices about the most accurate, cost-effective, and practical methodology. Several technologies presently available or in development are summarized in tables 1 through 6.

Technologies for substance testing have changed rapidly during the past 25 years, and developments are ongoing. Urine testing for alcohol and other drugs of abuse and breath or saliva testing for alcohol use are presently the most practical and cost-effective methods available for juvenile justice. Thus, this Bulletin focuses primarily on urinalysis for illicit drug use. However, new technologies likely will provide more comprehensive and precise information as they emerge and become more generally used. They also may be able to detect new drugs of abuse better and more quickly than present methods. Thus, reviewing current information about technology development is very important for juvenile justice practitioners involved in substance testing (Mieczkowski and Lersch, 1997; Pretrial Services Resource Center, 1998).

Immunoassay tests that detect specific drug metabolites in urine when they react with antibodies that are

formulated to respond to that substance are generally used as the initial urine test in juvenile justice settings (Mieczkowski and Lersch, 1997). The chemical reaction produced between the antibody and the drug or drug metabolite in the specimen causes a change in the test medium and can be measured to determine the presence of a drug in the sample. If a change is noted, it is compared with the change caused by a known quantity of the substance (calibrator). This known quantity of the substance is set as the cutoff for measuring the presence of a substance with the test. If the response indicates that the cutoff amount (or a greater quantity of the substance) is present, it is a positive test. If the amount present is lower than the cutoff (or none is present), the test is negative (Robinson and Cargain, 1998).

Immunoassay tests are used only to measure the presence or absence of substances (qualitative measure) and are not accurate for determining the quantity of drug in the sample. There are several types of immunoassay tests that vary primarily according to the type of material the manufacturers use to produce the reaction.

A study reported in 1991 compared the accuracy and suitability of various technologies for use in the criminal justice system. The research concluded that "thin-layer chromatography performed poorly in identifying the presence of illegal drugs," but "no one type of immunoassay is consistently superior in identifying positive and negative urine specimens" (Visher and McFadden, 1991, p. 3).

Chromatography works on the principle that molecules of different substances move at different rates. This movement creates characteristic patterns that can be differentiated from each other. In a chromatography test, concentrated substances are placed

## Table I: Hair Analysis

### Summary

Drugs and drug metabolites remain in the hair shaft indefinitely. Thus, testing hair provides an extended view of a person's history of using substances. The period for which substances can be detected depends on the length of hair (Robinson and Cargain, 1998). It generally costs between \$50 and \$100 to screen and confirm the five drug classes through hair testing (Jackson and Borrowman, 1998).

### Substances Tested

All types of illicit substances can be tested. However, tests for marijuana have been inconsistent. Hair analysis also has not been useful in detecting some opiates, especially codeine (Mieczkowski, 1995; Mieczkowski, 1997).

### Benefits

- Specimen collection is easy and noninvasive.
- Preservation, storage, and transportation of samples is relatively easy.
- Drug use history can be detected.
- The amount of drugs detected can be quantified (but the amount ingested cannot be quantified).

### Disadvantages

- It takes time for the drug metabolites to enter the hair shaft, so hair analysis may not detect the most recent drug use.
- Washing and manipulation of hair (e.g., permanents, coloring) may affect the concentration of drugs in hair, but sensitive tests still can detect the presence of substances.
- Results may be subject to influences related to race, environment, and sex differences. For instance, hair pigment may alter the amount of a drug absorbed in hair. In some cultures, hair has significant meaning, and cutting it may cause distress.
- Hair length affects the period of detection. Shaving may make detection difficult, although hair from any part of the body may be used for testing.
- Presently, hair samples must be sent to laboratories for analysis, so it may take longer for results of tests to be available.
- There are a limited number of laboratories that can test hair.
- Hair testing is more expensive than urine testing.

**Sources for lists:** Jackson and Borrowman, 1998; Mieczkowski, 1995; Mieczkowski and Lersch, 1997; Pretrial Services Resource Center, 1998; Robinson and Cargain, 1998.

on a surface where they separate from each other and the molecules form distinctive patterns or bands. An early form of this method, thin-layer chromatography (TLC) was slow and required interpretation by expert technicians (Crowe and Schaefer, 1992; Mieczkowski and Lersch, 1997). Chromatography methods indicate the quantity of a substance in the sample.

Gas chromatography/mass spectrometry (GC/MS) uses two testing procedures. This method is highly accurate and considered the "gold standard" in urinalysis methodologies. It also is the most expensive method because it is an elaborate and time-consuming procedure. Therefore, it is only practical for confirmation of positive results when this is legally required.

**Table 2: Breath Analysis**

**Summary**

Breath analysis is used widely to detect alcohol use. The quantity of alcohol in the breath an individual exhales is directly related to the quantity of alcohol in the person's blood (Milgram, 1990).

**Substances Tested**

Alcohol.

**Benefits**

- The level of alcohol use can be detected.
- The procedure is noninvasive.
- Results are displayed immediately.
- Courts have upheld breath analysis results.
- Per-test costs are low, although initial purchase of the device is costly.

**Disadvantages**

- Only very recent use of alcohol (within a few hours) can be detected.
- The results do not indicate the frequency or duration of alcohol use.
- The initial cost of the device is expensive.
- Only one person (staff) can use the instrument at a time.

**Sources for lists:** Crowe and Schaefer, 1992; Jackson and Borrowman, 1998.

**Onsite or Offsite Testing**

The testing process may be conducted in three ways:

- By a certified laboratory.
- By using an onsite instrument operated by trained personnel.
- By using onsite noninstrument-based tests (small kits or handheld devices) at the point of contact with the youth.

Several factors should be considered when selecting the most appropriate process for a particular jurisdiction or program. Costs, staff training, and the time it takes to obtain results are some of the important areas to consider.

**Laboratory Testing**

Using a laboratory to complete the tests usually requires a contract for services. This demands excellent chain-of-custody procedures because the specimen and the results will

leave the juvenile justice agency for processing. The agency and the laboratory should enter into a written contract specifying the laboratory's testing equipment, staff qualifications, chain-of-custody practices, and other procedures. The laboratory should have in place procedures for quality control to ensure the accuracy, validity, precision, performance, and reliability of the tests. Sending specimens to a laboratory will require a longer time to obtain results, but the turnaround time should be limited to 72 hours or less (Crowe and Schaefer, 1992).<sup>5</sup> Usually a commercial laboratory service will be used, but in some communities, there may be a possibility of obtaining services through a criminal justice or healthcare agency laboratory. Even if an agency plans to do initial testing onsite, a laboratory

<sup>5</sup> See "Contracting for Drug Testing Services" in *Drug Testing Guidelines and Practices for Juvenile Probation and Parole Agencies* for additional details about using laboratory services for testing (APPA, 1992).

should be identified and contracted to perform any necessary confirmatory tests.

**Onsite Instrument-Based Testing**

Testing instruments can be purchased or leased for use at an agency for initial immunoassay tests. These instruments can test for one drug at a time or for a group of drugs. Staff who operate these machines must be trained and must follow the manufacturer's suggested procedures for operation. The instruments must be calibrated regularly as directed by the manufacturer to ensure test accuracy. Policies and procedures should include methods for monitoring each aspect of the testing process to ensure quality control. Further, safety precautions for conducting the tests should be incorporated in agency policies. Results should be available relatively quickly with this type of testing; however, sometimes it is more practical and cost effective to run tests only when there are enough specimens to use all of the instrument's capacity (Crowe and Schaefer, 1992).<sup>6</sup>

**Onsite Noninstrument-Based Tests**

Several manufacturers have developed portable test devices that are variously called kits, handheld tests, or point-of-contact tests. These tests can analyze for a single drug, and some are available that will detect several drugs at the same time. They are suitable for initial testing and provide qualitative results (the drug is present or not found in the sample). The cutoff levels for these tests are set by the manufacturers and usually are consistent with government and industry standards. Staff training is very important when using these devices. Manufacturer's instructions for operation should be strictly followed. An advantage of this method is the

<sup>6</sup> See "Establishing Juvenile Justice Onsite Instrument-Based Drug Testing for Initial Drug Testing" in *Drug Testing Guidelines and Practices for Juvenile Probation and Parole Agencies* for additional information on this type of testing (APPA, 1992).



immediacy of results; tests can be performed while the youth watches. The tests also can be used outside the agency, such as on home visits. However, agencies should consider and develop protocols for all testing that include consideration of staff and youth safety (Crowe and Schaefer, 1992).<sup>7</sup>

### Accuracy and Validity of Onsite Drug Testing

To rate the performance of onsite testing methods, the test results are compared with the results obtained when the same specimen is tested using laboratory instruments, usually GC/MS. When a specimen has a negative result using the onsite test device and a negative result in subsequent testing by GC/MS it is considered a true negative. If the “negative” specimen tests positive by GC/MS, it is considered to be a false negative. When a specimen has a positive result by the test device and a positive result by GC/MS, it is considered a true positive. A specimen that tests positive with an onsite testing device and subsequently tests negative by GC/MS is considered a false positive.

False positives and false negatives are more likely to occur with specimens in which the drug concentration is at or near the cutoff levels. With those specimens, the varying sensitivities of the testing methods can produce the differing results. It is thus more accurate to refer to the testing result as an unconfirmed positive when the presence of the drug was accurately detected but the quantity was inaccurately determined. The likelihood is that most specimens in field situations will not have drug concentrations near the cutoff levels. With drug concentrations noticeably above or below the cutoff levels, the number

<sup>7</sup> See “Establishing Onsite Non-Instrument-Based Drug Testing” in *Drug Testing Guidelines and Practices for Juvenile Probation and Parole Agencies* for additional information on this type of testing (APPA, 1992).

### Table 3: Sweat Analysis

#### Summary

The body constantly discharges waste through sweat. By placing an absorption pad on the skin, sweat and the components it contains can be collected and analyzed. The patch may be worn for a period of from a few days to about 2 weeks (Baer and Booher, 1994).

Sweat analysis technologies are still in development and are not used widely. In the future, patches may be designed to include a microelectronic chip that will give immediate results and detect the specific date on which particular substances were used (Mieczkowski and Lersch, 1997).

Roughly, costs are \$7 for a patch, up to \$15 for an initial screening, and up to \$22 for a confirmation test (Jackson and Borrowman, 1998).

#### Substances Tested

Marijuana, cocaine, amphetamines, barbiturates, opiates, phencyclidine, benzodiazepines.

#### Benefits

- Specimen collection is relatively noninvasive, and the patches are easier to collect, handle, store, and transport than urine.
- The period for which drugs may be detected is about 2 weeks (compared with much shorter periods for most drugs when tested by urinalysis). Sweat analysis also offers the ability to detect drug intake for as long as the youth is wearing the patch.
- Use of sweat patches allows for more flexibility in scheduling testing, and as it is worn continuously, it reduces the potential for youth to plan their substance use to avoid detection.
- Patches are designed so tampering with them is apparent.
- Secretion of drugs and/or metabolites through sweat is not affected by consuming water or other substances.
- Although sweat analysis costs more than urinalysis, it may be more cost effective because it can be conducted less often.

#### Disadvantages

- It takes time for enough sweat to accumulate for analysis. Therefore, immediate detection of recent substance use is not feasible.
- There are no proficiency testing programs for administrators. Thus, accuracy of results may be questioned.

**Sources for lists:** Baer and Booher, 1994; Jackson and Borrowman, 1998; Mieczkowski and Lersch, 1997.

of true positives and true negatives increases.

Onsite drug testing results can also be affected by food such as poppy seeds and foods containing hemp derivatives and by over-the-counter products such as some cold medications consumed by the individual being tested. Results can also be affected by products added to the urine specimen after urination.

Laboratory testing can detect the different molecular structure of cross-reacting agents and can determine if an adulterant has been added to the specimen in an effort to mask the test result. Therefore, unless the person being tested admits to using drugs after a positive test result, positive test results should be confirmed by a laboratory test, preferably GC/MS.

To ensure the greatest accuracy when using onsite testing devices, it is advisable to establish protocols for collection and testing that minimize the numbers of false positives and false negatives. Suggested procedures are:

- Appropriately identify the person being tested.
- Observe all specimen collections.
- Follow appropriate chain-of-custody procedures.
- Obtain information from manufacturers of onsite test devices on the foods or products that may affect their test results.
- Require youth to report consumption of any prescribed or over-the-counter medication or use of any of the identified food products.
- Prohibit consumption of identified cross-reacting foods, over-the-counter medication, or other products.
- Check urine samples for adulterants.
- Conduct confirmation testing when positive test results are disputed.

### Determine Which Drugs To Test For

If possible, initial urine tests should cover a variety of drugs based on information about the substances most commonly abused in a particular locality and, if the youth is cooperative, his or her drug use history. These tests might identify a combination of several of the following:

- Marijuana.
- Cocaine.
- Amphetamines.
- Barbiturates.
- Opiates.
- Phencyclidine (PCP).
- Benzodiazepines.

Depending on the timeframe, it also might be advisable to test for alcohol

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### Table 4: Saliva Testing

#### Summary

Tests of saliva have been used to detect recent drug and alcohol use (Mieczkowski and Lersch, 1997). The presence of the substances is identified through a chemical reaction between saliva and the reagents in the test. Various tests may give either qualitative results (i.e., substance is present) or quantitative results (i.e., the amount of substance present).

Costs of testing saliva for alcohol are minimal. However, the cost of testing saliva for other substances is similar to the cost of blood tests, often ranging from \$50 to \$200 depending on the type and number of analyses (Jackson and Borrowman, 1998).

#### Substances Tested

Alcohol, cocaine, cannabinoids, opiates.

#### Benefits

- This method does not pose a privacy issue and is considered noninvasive.
- Testing is not difficult for the administrator because the specimens are readily available.

#### Disadvantages

- There are no proficiency testing programs to determine the accuracy of this testing method and the results it produces.
- Scientists do not yet fully understand the biological functions and attributes of saliva. Therefore, saliva testing should be used in conjunction with a confirmatory test of urine or blood for illicit substances.

**Sources for lists:** Jackson and Borrowman, 1998; Mieczkowski, 1997; Mieczkowski and Lersch, 1997.

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### Table 5: Blood Analysis

#### Summary

Testing of blood is one of the most accurate methods of detecting substances that have been ingested. It is most commonly used in medical settings and for forensic purposes, such as postmortem investigations. It also is frequently used to test for driving under the influence of psychoactive substances. Costs range from \$50 to \$200 (Jackson and Borrowman, 1998).

#### Substances Tested

Alcohol and all illicit substances.

#### Benefits

- Results are accepted by courts for criminal justice purposes.

#### Disadvantages

- Invasive procedures are required to collect samples.
- Specialized training for drawing blood samples is required.
- Storing and transporting samples requires special procedures.
- Lack of proficiency testing programs and accreditation of many laboratories can make results questionable.

**Source for lists:** Jackson and Borrowman, 1998.

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## Table 6: Urine Testing

### Summary

Urine testing is presently the most practical and widely used technology for testing for illicit substances among youth in the juvenile justice system.

Costs vary according to the type of tests, onsite or laboratory testing, number of tests conducted by an agency, and other factors. For onsite instrument-based tests, the cost is about \$1 to \$2 per test for each drug tested (not including the cost of equipment). For onsite noninstrument (handheld) test kits, the cost ranges from \$2 to \$5 for each drug tested. For laboratory testing, costs range from \$2 to \$20 for each drug tested (Pretrial Services Resource Center, 1998).

### Substances Tested

Marijuana, cocaine, amphetamines, barbiturates, opiates, phencyclidine, benzodiazepines, alcohol.

### Benefits

- It is the most cost-effective methodology presently in common use.
- It is less invasive than blood testing.
- Urine tests are very accurate and generally accepted by courts.
- Results can be available very quickly, especially when using onsite testing methods.

### Disadvantages

- To be confident of accurate testing, specimen collection should be observed, which is invasive and sensitive.
- Requires physical facilities for sample gathering.
- Has a short window of detection, as drugs or their metabolites stay in the body a relatively short time. Thus, testing must be conducted frequently to monitor drug use.
- Special storage and transportation practices are required.
- It will not indicate the amount, frequency, or duration of drug use.

**Sources for lists:** Crowe and Schaefer, 1992; Jackson and Borrowman, 1998.

use. This would be most appropriate at times such as detention intake, return of the youth to a facility after a furlough or a runaway episode, and staff visits with youth on probation and parole at home or other places in the community. Alcohol does not stay in the system long, and testing is usually not indicated if the youth has not had recent access to alcoholic beverages.

At intake to the program, screening for multiple drugs gives the most helpful information for juvenile justice personnel to use in planning for the needs of the youth. How-

ever, the more drugs included in the test, the more expensive it becomes. Where funds are very limited, the panel may be restricted to the most commonly seen drugs, with the knowledge that others may be missed.

When youth are tested on an ongoing basis, urinalysis may be limited to their drug(s) of choice; however, if possible, a full panel should be given occasionally to ensure that youth are not changing drugs to avoid detection.

Various ordinary household and other substances are inhaled by

youth for the psychoactive effect they induce. Testing for inhalants becomes more complex because each substance produces different antibodies. Some laboratory tests are available for the more frequently abused components of inhalants, but others require much more sophisticated chemical analysis.

## Step 6: Decide How To Use Results and Arrange for Adequate and Appropriate Treatment

### Juvenile Justice Response

The use of results of drug testing should be determined by the agency mission and the substance-testing program purpose. A response should be given every time a youth is tested. When test results are positive for drug use, referral for assessment and treatment, a system of graduated sanctions, or both, should be in place. By the same token, when results are negative, a supportive response is needed to reinforce continued abstinence.

A youth's time perspective is different from that of an adult. Youth are more likely to be present- than future-focused and to discount the future consequences of their present behavior. Thus, it is important to respond to youth as soon as possible after they have been tested so they are more likely to connect their actions with consequences. *Drug Testing Guidelines* recommends that juveniles be confronted with test results within 72 hours after they are obtained and that the period for responding should never exceed 7 days (American Probation and Parole Association [APPA], 1992). With onsite instrument- or noninstrument-testing technologies, responses can be given almost immediately. Responses to youth also must be appropriate for their developmental level.

Nonadjudicated youth who test positive upon entering detention should

not be punished. A drug test at arrest or intake to detention should be used for assessment and diagnosis. Positive results provide the basis for referring youth for further assessment and treatment.

At the time of admission to a juvenile justice program or facility, all youth should be told the possible therapeutic, incentive, or punitive responses that will occur following every test. Examples of graduated responses that could be used for positive tests include the following:

- Participation in drug education programs.
- Participation in discussions about his or her substance abuse behavior.
- Increased frequency of drug testing.
- Increased contact with a probation or parole officer or other staff.
- Earlier curfew or loss of other privileges.
- Community service or other work assignments.
- Home or facility restriction.
- Probation or parole violation determination or facility disciplinary procedures.

Possible responses to negative results include the following:

- Verbal praise.
- Positive notes to parents.
- Rewards (e.g., movie tickets, skating passes, fast-food coupons).
- Privileges and activities (e.g., later curfews, drug-free parties).

## Substance Abuse Treatment for Juveniles<sup>8</sup>

Juvenile justice professionals should be able to recognize the need for substance abuse assessment or treatment and serve as brokers to obtain needed services. Juvenile justice and treatment professionals should establish

collaborative working relationships to best meet the needs of the youth they both serve. Interagency agreements between juvenile justice agencies and treatment providers are crucial for ensuring appropriate treatment resources for substance-abusing youth.

## Need for Substance Abuse Treatment for Youth

It is difficult to compare the need for treatment among youth with the rate of treatment availability. There is no national treatment system for adolescents and, therefore, national data collection and analysis are largely unavailable. However, the 1997 National Household Survey on Drug Abuse estimates more than 8.2 percent of youth ages 12 to 17 need drug abuse treatment—that is, approximately 1,887,000 of the 23 million adolescents in the Nation (Substance Abuse and Mental Health Services Administration [SAMHSA], 1998b). The survey also estimates 9.5 million persons need treatment for illicit drug abuse, but that in any year, only 2.1 million receive it in a specialized facility. It is estimated that the current national treatment system, designed primarily for adults, can treat 50 percent of persons with the most severe addiction. In a system able to treat only 50 percent of those most needing treatment, triage decisions are influenced by who is the most needy and priority is often given to adults who are chronically and severely addicted. It is important to note that these data do not include adolescents and adults needing treatment for alcohol abuse.

<sup>8</sup> Most of this section was contributed by Roberta Messalle, Office of Evaluation, Scientific Analysis and Synthesis, Center for Substance Abuse Treatment (CSAT). It was developed from material presented in CSAT publications. References used include *Screening and Assessment of Alcohol and Other Drug Abusing Adolescents*, HHS Publication No. (SMA) 95-3058, SAMHSA, 1995; *Guidelines for the Treatment of Alcohol and Other Drug Abusing Adolescents*, HHS Publication No. (SMA) 93-2010, SAMHSA, 1993; and *Treatment for Alcohol and Other Drug Abuse: Opportunities for Coordination*, HHS Publication No. (SMA) 94-2075, SAMHSA, 1994.

More trained clinicians are needed to provide specialized treatment services, and more case managers are needed to coordinate community resources and monitor issues involving other social systems, such as treatment, primary medical and mental health care, education, and family services. There are few national examples of a system coordinating all services needed to provide a continuum of treatment services for youth. Using a systematic program to identify the number of substance-using and -abusing youth lays the foundation for the next step in building a national system for treating adolescents. Comprehensive programs for drug testing will document the need for adequate and appropriate substance abuse treatment for those youth who are identified as needing such services.

## Effective Treatment for Adolescents

Adolescent substance abusers are more difficult to treat than adult substance abusers. The pressures created by physical, hormonal, and emotional changes produce stressors that are magnified by typical adolescent developmental drives for individuality, separation, autonomy, and social acceptance. Lacking life experience, youth often have difficulty controlling their impulses or making appropriate decisions. Chemical dependence intensifies the behavior problems associated with adolescent development and simultaneously delays emotional development. Substance-abusing adolescents are frequently members of dysfunctional families in which there are no appropriate role models or support. An estimated 7 million children are growing up with at least one substance-abusing parent, and approximately 38 percent of all child abuse cases have parental substance abuse as a factor. These multiple disorders—mental, medical, and developmental—interfere with the progress and effectiveness of treatment. For that reason, the most

successful treatment for any adolescent is based on an assessment of each contributing factor and is designed for that individual.

#### **Treatment begins with a diagnosis.**

Substance abuse is a disease of the brain that is expressed in behavioral ways and occurs in a social context (Bigelow, 1995). Unlike other health conditions, substance abuse is highly individualized and complex, grounded in each individual's biological and psychological makeup, and influenced by each individual's unique experiences of social development and functioning. However, like all other health disorders, effective treatment for substance abuse begins with a trained professional's careful diagnosis of the causes and symptoms of the condition.

**Other components of an effective treatment strategy.** Effective treatment for substance abuse includes the following elements:

- **Screening**—a quick gathering and sorting of preliminary information used to determine if a person has substance abuse problems, mental health disorders, or infectious diseases and to ascertain if a clinical assessment is needed.
- **Drug testing**—part of a structure for holding participants accountable while also allowing a flexible but finite response to substance abuse.
- **Intake and assessment**—an in-depth collection of detailed information concerning, but not limited to, a youth's substance abuse and treatment history, current conditions, emotional and physical health, family status, social roles, victimization, education, and criminal history.
- **Patient-oriented treatment plan**—a course of action developed by a licensed substance abuse counselor or mental health professional that includes various milestones for evaluating the progress and success of the treatment. The treatment

includes a case management plan that oversees the following elements:

- Planning for treatment, establishing agency coordination, and implementing reporting procedures.
- Brokering treatment and other services to ensure continuity as the client progresses through treatment and program completion.
- Monitoring and reporting the client's progress using a schedule that ensures reporting back to the referral source on a frequent and consistent basis.
- Supporting the client by identifying problems.
- Advocating for the client with legal, treatment, social service, medical, and mental health systems.
- Monitoring through urinalysis, breath analysis, or chemical testing for relapse to substance abuse.
- Protecting the confidentiality of a client's treatment records, consistent with Federal and State regulations regarding the right to privacy.

#### **Treatment modalities and components.**

A continuum of treatment options should be available to provide the services most appropriate to the treatment needs of each youth and family. Detoxification is not a treatment modality, but it may be a necessary first step in the treatment process. Detoxification provides medical and supportive services needed to alleviate the short-term symptoms of physical withdrawal from chemical dependence, including physical discomfort, cravings, and mood changes (Institute of Medicine, 1990; Office of National Drug Control Policy, 1990). Once symptoms of craving and withdrawal are controlled, treatment can

begin. Available modalities should include:

- **Substance abuse education and drug testing** for persons assessed as having no history of abuse or dependence and therefore having no withdrawal symptoms.
- **Weekly outpatient treatment** including pharmacological interventions (e.g., naltrexone, methadone); treatment includes group therapy and help building life, cognitive, and anger-management skills.
- **Intensive outpatient treatment** for persons abusing substances and having additional problems requiring structured therapy and weekly outpatient treatment, including pharmacological interventions.
- **Intensive residential treatment** for persons experiencing acute intoxication and withdrawal, having medical or psychiatric disorders, or needing assistance to provide for their immediate needs. This usually is hospital-based treatment that requires short- or long-term residential services. It also may include therapeutic communities, a more behaviorally based intervention usually targeting fairly hardcore drug abusers.

In addition to these treatment approaches, self-help or 12-step programs may also be beneficial. These organizations involve mutual help among peers experiencing similar problems. Alcoholics Anonymous (AA) was the first and is the best known of these programs, but many others exist. Members of AA believe (as do many others, including the National Institute on Drug Abuse) that addiction is a disease that can never be cured; however, they maintain that the progression of the disease can be arrested and describe those in remission as recovering alcoholics (Doweiko, 1990). If used with adolescents, these programs need to be tailored to meet their specific developmental needs.

**Patient-oriented treatment components.** Treatment should be designed to respond to each patient's specific configuration of causes with an array of "wraparound" services. For example, several of the following services may be needed by youth:

- Counseling involving and strengthening the family unit.
- Preventive and primary health care and health education.
- Mental health services for co-occurring substance abuse and mental health disorders.
- Specialized treatment for girls (addressing, for example, victimization issues, pregnancy, and childcare).
- Remedial assistance for educational deficits or disabilities.
- Group counseling interventions.
- Treatment that is sensitive to racial, ethnic, cultural, and social minority issues.
- Employment training or counseling.
- Practical life skills including refusal and avoidance skills and independent living skills training.
- Housing for the homeless or those needing a drug-free environment.
- Liaison with other social service agencies or support groups (e.g., victim support, assistance for HIV/AIDS patients).
- Cognitive skill development for managing stress, anger, violence, and antisocial behaviors.

**Medical interventions.** The diagnostic assessment may show the need for other medical care, which is provided onsite or through arrangements with other healthcare facilities, such as pharmacotherapeutic interventions (medications) to block cravings associated with addictions or treat underlying psychiatric disorders and primary

health care to treat any physical health problems, including HIV/AIDS.

**Relapse prevention methods.** Substance abuse and addiction are chronic disorders that are prone to recur. Effective treatment includes special counseling to prevent or limit relapse and creates a structure of incentives and sanctions that respond to episodes of relapse.

### Special Concerns About Treatment for Youth

Adolescents are in a stage of intense physical, hormonal, and developmental change that presents challenges to the effectiveness of treatment for substance abuse. Just as services must be specialized for them, there are several pitfalls to avoid when planning a treatment program for adolescents, including the following:

- **Limiting assessment to substance abuse alone** and thus excluding the diagnosis of contributing disorders that may complicate or interfere with treatment.
- **Standardizing treatment** and not considering adolescent developmental stages; the specific needs created by the age, gender, ethnicity of the youth; or co-occurring disorders of the adolescent substance abuser.
- **Using adult criteria** for treatment services that do not consider the psychological and clinical needs created by the developmental stages of adolescents.
- **Ignoring evidence** that family-focused services for adolescents have more successful outcomes than those that focus only on individual youth. This does not negate that family management skills may have contributed to the adolescent's addictive disorder and that possible solutions could strengthen the family unit.

## Step 7: Develop Written Policies and Procedures<sup>9</sup>

Policies help to formulate a course of action that determines the way specific decisions are made. There are several key issues that must be addressed by substance-testing policies and procedures.

### Scheduled and Random Testing

Some agencies may schedule testing of youth at specific points in the system's process:

- At intake to detention.
- Following any furlough from a residential placement.
- At intake to probation.

However, for ongoing substance testing, random specimen collection is recommended. Random or unscheduled testing reduces the possibility that youth will attempt to schedule their drug use to avoid detection.

### Frequency of Testing

Youth should be tested randomly and frequently enough to detect and deter illicit drug use. Agency resources and a youth's drug(s) of choice will influence how often testing occurs. Some drugs typically remain in the

<sup>9</sup> This section highlights some of the important areas to consider in developing policies and procedures for substance testing. For more details on these and other policy issues, consult *Drug Testing Guidelines and Practices for Juvenile Probation and Parole Agencies*, published by the U.S. Department of Justice, Office of Justice Programs, Office of Juvenile Justice and Delinquency Prevention (APPA, 1992). Suggested forms to use with a substance abuse testing program may be found in *Drug Identification and Testing in the Juvenile Justice System* (Crowe, 1998) and *Drug Testing Guidelines and Practices for Juvenile Probation and Parole Agencies* (APPA, 1992). References used to develop this section include American Probation and Parole Association (1992), *Drug Testing Guidelines and Practices for Juvenile Probation and Parole Agencies*, Washington, DC: U.S. Department of Justice, Office of Justice Programs, Office of Juvenile Justice and Delinquency Prevention; and Crowe, A.H., and Schaefer, P.J. (1992), *Identifying and Intervening with Drug-Involved Youth*, Lexington, KY: American Probation and Parole Association.

**Table 7: Approximate Duration of Detectability of Selected Drugs in Urine**

Drug	Duration of Detectability*
Amphetamine	48 hours
Methamphetamine	48 hours
Barbiturates	
Short acting	24 hours
Intermediate acting	48–72 hours
Long acting	7 days or more
Benzodiazepines	3 days (therapeutic dose)
Cocaine metabolites	2–3 days
Methadone	3 days (approximate)
Codeine/Morphine	48 hours
Propoxyphene/Norpropoxyphene	6–48 hours
Cannabinoids (marijuana)	
Single use	3 days
Moderate use (4 times weekly)	4 days
Heavy use (daily)	10 days
Chronic heavy use	21–27 days
Phencyclidine (PCP)	8 days (approximate)

\* These are general guidelines only. Interpretation of the duration of detectability must take into account many variables, such as drug metabolism and half-life; the youth's physical condition, fluid balance, and state of hydration; route of administration; and frequency of ingestion.

**Source:** Council on Scientific Affairs. 1987. Scientific issues in drug testing. *Journal of the American Medical Association* 257(22):3112.

system longer than others. Table 7 indicates the approximate duration of detectability of selected drugs. As the table shows, a youth using marijuana might be tested less frequently than one who is using amphetamines.

### Specimen Collection

If the person collecting specimens does not personally know each youth being tested, a process for identification of youth should be implemented to ensure the sample is from the appropriate individual. Urine collection should be observed by juvenile justice personnel to avoid the possibility of youth switching or adulterating specimens. The collection facility should have both a sink and toilet and should afford privacy for the youth and staff involved in the collection

process from other youth, staff, or the public. Youth should be instructed to wash their hands and then void into the collection cup within the view of the attending staff member, who should be of the same gender as the youth. The youth also should seal the cup and verify on the attached paperwork that the specimen is theirs.

Youth may consume enough liquid to dilute the sample sufficiently to influence test results. Therefore, if enough of the drug has already been excreted so the level is at or near the cutoff, dilution could be effective in rendering the test negative. Similarly, youth could add something to the voided specimen that would dilute or change its chemical composition so the test will be inaccurate. The amount of liquid a youth drinks affects the

concentration of creatinine, a substance eliminated from the body in urine. Many current drug-testing technologies can measure creatinine and detect youth's attempts to dilute specimens by drinking fluids. Similarly, some tests check for specific gravity by measuring the concentration of solid particles in urine to ensure youth have not diluted or adulterated a specimen (Elbert, 1997).

Additional precautions may be taken to prevent youth from switching or adulterating samples:

- Have youth take off jackets, empty pockets, and leave purses outside the collection area.
- Place a blueing agent in the toilet to avoid substitution of toilet water for the specimen.
- Use pH paper to measure the pH level or a temperature strip to record the temperature of the specimen. (The temperature should be measured within 4 minutes of urination.)
- Keep soap and other chemicals outside the collection area.
- Allow only one observer and one juvenile to be in the collection area at a time, and prohibit youthful offenders from participating in the collection of another youth's sample or having access to testing equipment, supplies, storage facilities, or documentation.

### Chain of Custody

All possible steps should be taken to ensure the integrity of youth's drug test results. Chain of custody means procedures are used to document that the specimen collected is that of the intended youth and the specimen, testing procedures, and results of the tests are handled properly throughout the process. In addition to the specimen collection procedures already discussed, the following elements of chain-of-custody procedures are needed:

- **Handling.** There should be a record of the whereabouts and names of

persons handling the urine specimen and test results at all times.

- **Storage.** Urine specimens should be refrigerated immediately after they are collected or, if tested immediately, right after they are tested. After testing, negative specimens may be discarded, but positive samples should be frozen until all relevant court proceedings are completed.
- **Transportation.** Packaging and transportation procedures should include secure sealing and identification and should safeguard against tampering or the possibility of misidentification of specimens.
- **Testing.** Agency staff or laboratory personnel testing specimens must properly document all steps taken to analyze the specimen.
- **Results.** Forms and logs should be completed to document the instrumentation used, drugs tested for, test results, and cutoff level of each test.

### Confirmation Tests

If an initial test is positive, it may be necessary to perform a confirmation test, especially if serious sanctions will be applied or if the results will be used in court. It may not be necessary to perform confirmation tests if results are being used solely for case management and treatment purposes. Both costs of testing and legal issues are considerations when determining whether to perform confirmation tests. Three types of confirmation are possible:

- **Admission statement.** A youth signs a statement acknowledging drug use.
- **Second test using the same methodology.** A specimen is tested a second time with the same test method. This is not recommended if sanctions for a positive test will result in loss of liberty.

- **Second test using a different methodology.** The second test methodology used must have an accuracy rate that is at least as high as the initial screening instrument, and the cutoff level must be the same or lower. High performance liquid chromatography (HPLC) and GC may be used for confirmation tests. However, GC/MS is the most specific and most sensitive method of urinalysis.

### Cutoff Levels

The cutoff level is the amount of drug or metabolite that must remain in the specimen for a test to show a positive result. Thus, a positive test means a youth has an amount of the substance in his or her system that exceeds the cutoff level. Negative results indicate the youth either has none of the drug in his or her system or its concentration is below the cutoff level. The Division of Workplace Programs, Center for Substance Abuse Prevention, recommends the cutoff levels in table 8 for initial and confirmation tests for cannabinoids, cocaine, opiates, amphetamines, and methamphetamines. Cutoff levels for benzodiazepines,

barbiturates, and methadone are consistent with recommendations by the scientific community.

If the results of drug tests are challenged, cutoff levels that are consistent with those recommended by the U.S. Department of Health and Human Services guidelines (SAMHSA, 1998a) are more likely to be accepted by courts.

### Health and Safety

According to the Occupational Safety and Health Administration (OSHA) of the U.S. Department of Labor (Clark, 1993), employers must make a determination about jobs that involve an occupational risk of exposure to bloodborne pathogens such as HIV and hepatitis. Bloodborne pathogens are most likely to be transmitted from an infected to a noninfected person through blood-to-blood or sexual contact. When there is a risk of exposure to blood or semen, vaginal secretions, and other body fluids containing visible blood, universal precautions should be used to minimize the risk; however, "universal precautions do not apply to feces, nasal secretions, sputum,

**Table 8: Recommended Cutoff Levels**

Drug	Initial Tests	Confirmation Tests
Cannabinoids*	50 ng/ml	15 ng/ml
Cocaine*	300 ng/ml	150 ng/ml
Opiates*	2,000 ng/ml	2,000 ng/ml
Amphetamine/Methamphetamine*	1,000 ng/ml	500 ng/ml
PCP*	25 ng/ml	25 ng/ml
Benzodiazepines**	300 ng/ml	250 ng/ml
Barbiturates**	300 ng/ml	250 ng/ml
Methadone**	300 ng/ml	250 ng/ml

\* U.S. Department of Health and Human Services Mandatory Guidelines for Testing Levels.

\*\* Cutoff levels for these drugs are not included in the HHS guidelines because they may be legally prescribed. The cutoff levels cited are those recommended by the scientific community.

**Sources:** Substance Abuse and Mental Health Services Administration (1998), *Mandatory Guidelines for Federal Workplace Drug Testing Programs*, Washington, DC: U.S. Department of Health and Human Services, Substance Abuse and Mental Health Services Administration; American Probation and Parole Association (1992), *Drug Testing Guidelines and Practices for Juvenile Probation and Parole Agencies*, Washington, DC: U.S. Department of Justice, Office of Justice Programs, Office of Juvenile Justice and Delinquency Prevention.



sweat, tears, *urine* and vomitus *unless they contain visible blood*" [emphasis added] (Update, 1988). Several problems may cause blood in the urine, but the most common are kidney and urinary tract diseases. For girls, menstrual blood also may become mixed with urine. Any urine containing visible blood should be discarded, and if the cause could be anything other than menstruation, the youth should be referred for medical care. However, if no visible blood is present in the urine sample, the risk of infection from bloodborne pathogens, even if one comes in direct contact with urine, is considered negligible. No cases of HIV transmission through laboratory contact with urine have been reported.

For general health and sanitation, however, personnel should take standard precautions to protect themselves from possible contact with urine. Because accidental spills and splashes can be hazardous, it should be standard procedure for staff to wear rubber gloves, lab coats, and goggles, as procedures require, when conducting urine testing.

Specimens also should be protected. Smoking, eating, or drinking should be prohibited in the area where specimens are stored or handled. No food should be stored in the same refrigerator with specimens.

Because of the strong association between injection drug use and HIV transmission, youth who have injected drugs may need guidance and assistance in being tested for HIV. Health and safety procedures also should be developed for working with youth. Personnel should be able to identify possible withdrawal symptoms or side effects of substance abuse that might endanger a youth's health and safety. Erratic behavior that could endanger the youth or others may be provoked by some substances. Some youth may also become upset when positive results are revealed. There should be a

crisis intervention protocol so staff know how to intervene appropriately in emergencies.

### **Interventions**

Besides the policies and procedures needed for the actual testing process, guidelines should be in place for interventions, including appropriate responses to both positive and negative test results.

### **Rewards and Sanctions**

The general purpose and approach to responding to youth should be incorporated in policy documents, including the requirement that youth receive an appropriate response for *every* drug test result. Listing suggested graduated sanctions can be helpful in assisting staff working with youth to select appropriate responses, but these should allow enough flexibility to make them suitable to the particular circumstances of individual youth.

If testing is voluntary, it is not appropriate to punish or otherwise intervene with youth who refuse to give a specimen. In a voluntary testing program, youth probably would refuse rather than attempt to adulterate or dilute a specimen. However, where testing is mandatory, some youth may attempt to refuse or to provide an adulterated or diluted sample, and policies should be designed for responding to these situations. For youth who are required to submit to drug testing because of probation or paroling authority orders or program rules, a refusal to provide a specimen (either by failure to report for collection or by being unable to provide a specimen) may be considered a violation of program rules or probation and paroling authority conditions. However, if a youth is unable to provide a specimen at the appointed collection time, he or she should be given a reasonable amount of time (and liquids) to allow for specimen production.

If it is evident that a youth has switched samples or diluted or adulterated the specimen, policies should be in place for responding to the situation. Sometimes such attempts are addressed as if results would have been positive if the person's own urine or an uncontaminated or undiluted specimen had been available.

### **Referrals for Substance Abuse Assessment and Treatment**

Policy documents should include procedures to be used when youth require referral to other service providers for substance abuse assessment and treatment. Interagency agreements should be developed between juvenile justice agencies and substance abuse treatment providers that spell out these processes, the requirements of practitioners in each agency, and any special concerns of the youth and family/caregivers.

### **Support of and Cooperation With the Treatment Process**

The policies and procedures document should describe interagency agreements between juvenile justice agencies and treatment providers. Policies should underscore the expectation that juvenile justice staff and treatment providers will work in concert toward the treatment and best interests of the youth. In addition, procedures should stipulate that youth be informed about the treatment process. Some programs develop a written agreement for youth to sign regarding their role in, responsibilities toward, and understanding of the treatment process. Important information to incorporate in discussions or written agreements with youth include the following (Aukerman and McGarry, 1994):

- A description of the treatment program.
- Types of misconduct and their consequences.

- Information that will be shared between the treatment and juvenile justice agencies.
- Criteria for successful completion of treatment.
- Results that can and cannot be achieved through treatment.
- Demands of treatment and recovery.
- Description of the typical recovery process and information about relapse.

## Step 8: Obtain Funding

### Costs

A paramount concern for agency administrators and others who must worry about budgets is the cost of drug testing. There are several important factors to consider. This document provides information for estimating program costs. However, as each agency or program is different, tests diverse numbers of youth, and perhaps needs to test for different classes of drugs, cost factors must be adjusted for each locality. (Three examples of costs for substance testing in different types of juvenile justice agencies appear on pages 18 to 20.)

Several types of costs accrue to an agency or jurisdiction and should be considered in program planning (Crowe and Schaefer, 1992; Pretrial Services Resource Center, 1989, 1998), including:

- **Costs that are constant regardless of methodology used, such as:**
  - Supplies for collecting specimens (e.g., collection cups, rubber gloves, chain-of-custody forms).
  - Space and equipment required (e.g., a toilet and sink with running water for specimen collection; secure refrigerator and freezer space for storing specimens; if testing is onsite, a secure room for storing testing

### Example 1: Small Detention Center

The Eastview Detention Center admits approximately 500 youth each year. It is the policy of the center to drug test each youth at admission as part of the physical examination. Only marijuana and cocaine tests are used. There are 10 staff members, and all must know how to collect specimens and administer the onsite test kits. No confirmation tests are required because results are used only for assessment purposes and referral for services.

#### Startup Costs

The youth restrooms will be used, and the nurse's office has running water and room to securely store specimens and test supplies.

Refrigerator	\$500
Staff training (2 [8-hour] days x 10 staff @ \$8/hour)	\$1,280
Trainer for 1 day (Training provided by the test manufacturer on the second day.)	\$350
Substitute staff while others in training	\$1,024
Personal computer, software, and training to use it	\$3,000
Other miscellaneous expenses (e.g., trash receptacle, gloves)	\$100
<b>Total Startup Costs</b>	<b>\$6,254</b>

#### Ongoing Costs (estimated for 1 year)\*

Number of youth tested at admission	500
Number of tests administered to each youth	1
Number of drugs tested for	2
Total tests	500
Cost per test (two drugs/test)	x \$6
Total cost for tests	\$3,000
Supplies, forms, etc. @ \$.50/youth	\$250
Staff time @ 15 minutes/youth @ average salary of \$8/hour	\$1,000
Additional utilities	Negligible
<b>Yearly Cost</b>	<b>\$4,250</b>

\* Estimated costs per test were taken from *Pretrial Drug Testing: Overview of Issues and Practices* (Pretrial Services Resource Center, 1998).

- equipment and analyzing specimens that includes a sink with running water to dispose of negative specimens; a trash receptacle for disposing of used testing supplies).
- Utility costs for additional water used.
- Personnel time for collecting specimens and completing necessary paperwork for chain-of-custody procedures.
- Trainer costs, staff time, and materials for general training of staff in substance-testing policies and procedures.
- **Costs that vary by methodology selected, including:**
  - *Costs per test for onsite instrument-based testing.* Testing a specimen for a single drug with these instruments presently necessary costs about \$1 per test for the reagents required (Pretrial

## Example 2: Medium Residential Facility

Youthville is a residential treatment program for 35 juveniles. The total number of youth served each year is about 90. The facility's policy is to test each youth at admission and again, randomly, following off-grounds activities, such as home visits, recreation, or work details. Staff estimate that each of the youth will make eight off-grounds trips each, and staff expect to test the youth about half of the time. Three tests—for marijuana, cocaine, and methamphetamines—will be conducted on each specimen. There are 15 staff members who will collect specimens, when needed, and must be trained. A laboratory will conduct tests and perform confirmations on positive tests. A supervisor and clerical staff member will have responsibility for shipping specimens and receiving and filing results.

### Startup Costs

No remodeling or additional space is needed.

Refrigerator	\$500
Staff training (1 [8-hour] day x 16 staff @ \$9/hour)	\$1,152
Trainer for 1 day	\$350
Substitute staff while others in training	\$504
Computer system not needed because the laboratory will keep records of the testing and can furnish information on numbers tested, results, etc.	
Other miscellaneous expenses (e.g., trash receptacle, gloves)	\$100
<b>Total Startup Costs</b>	<b>\$2,606</b>

### Ongoing Costs (estimated for 1 year)\*

Number of youth tested at admission	90
Number of tests administered to each youth	1
Number of drugs tested for	3
Total admission tests	90
Cost per test (three drugs/test)	<u>x \$10</u>
Total cost for admission tests	\$900
Number of youth tested randomly	90
Number of tests administered to each youth (after 50% of eight off-ground trips)	4
Number of drugs tested for	3
Total random tests	360
Cost per test (three drugs/test)	<u>x \$10</u>
Total cost for random tests	\$3,600
Total cost for all tests	\$4,500
Supplies, forms, etc., will be provided by laboratory.	
Staff time @ 15 minutes/youth @ average salary of \$9/hour	\$1,013
Additional utilities	<u>Negligible</u>
<b>Yearly Cost</b>	<b>\$5,513</b>

\* Estimated costs per test were taken from *Pretrial Drug Testing: Overview of Issues and Practices* (Pretrial Services Resource Center, 1998).

Services Resource Center, 1998). In addition, there is the initial cost for purchasing the instrument or ongoing costs for leasing it (these costs often are negotiable and may be lower if the program purchases a certain volume of testing supplies from the manufacturer). Further, it probably will be prudent to purchase a maintenance contract for the machine. Electrical renovations may be required for its proper use, and higher electric utility bills are possible. Additional training and staff time for the operator(s) of the machine also must be considered.

- *Costs per test for onsite noninstrument-based testing (kits).* Prices currently range from about \$2.50 to \$4.50 per individual test according to Pretrial Services Resource Center (1998). These usually are less expensive when purchased in larger quantities, but they may have a limited shelf-life. Thus, an agency should purchase only the number of tests that reasonably can be used before the expiration date. Costs will be greater for devices that test for multiple drugs or when several single drug tests are used to detect multiple drugs.
- *Costs per test for laboratory testing.* These costs may vary markedly depending on the volume of testing, the drugs tested for, and the laboratory used. According to Pretrial Services Resource Center (1998), the costs can range from about \$2 or \$3 to \$20 for each drug tested. In addition, there are costs for shipping specimens to the laboratory.
- *Costs per test for confirmatory testing (usually by a laboratory).* Regardless of the initial testing

### Example 3: Large Juvenile Probation Department

The Springfield Probation Department has approximately 1,000 youth on its caseload at any time. Five hundred of those are newly adjudicated cases each year. All youth will be tested for five drugs at intake. Based on history, the department estimates that approximately one-half of the youth use drugs on an ongoing basis. Marijuana and cocaine are the major drugs used, but methamphetamines are a problem occasionally. Tests will be administered randomly three times a month. The department has 30 probation officers who will be required to collect specimens. An onsite instrument will be used for testing, and two officers will be specially trained to use it. Five administrators also will attend training. Confirmation tests will be used for any youth—estimated at about 10 percent—who will go back to court for possible revocation after several consecutive positive tests.

#### Startup Costs

No remodeling is necessary, and there is sufficient space to store tests and operate testing equipment.

Refrigerator	\$500
Staff training (1 [8-hour] day x 35 staff @ \$12/hour)	\$3,360
Trainer for 2 days (Training provided in two sessions each for half the staff; no substitute staff needed. Training on use of instrument provided by manufacturer.)	\$700
Personal computer, software, and training to use it	\$3,000
Other miscellaneous expenses (e.g., trash receptacle, gloves, safety goggles)	\$200
<b>Total Startup Costs</b>	<b>\$7,760</b>

#### Ongoing Costs (estimated for 1 year)\*

Number of youth tested at admission	500
Number of tests administered to each youth	1
Number of drugs tested for	5
Total admission tests	500
Cost per test (five drugs/test)	x \$5
Total cost for admission tests	\$2,500
Number of youth tested randomly (50% of 1,000-youth caseload)	500
Number of tests administered to each youth (three tests/month)	36
Number of drugs tested for	2
Total random tests	18,000
Cost per test (two drugs/test)	x \$2
Total cost for random tests	\$36,000
Total cost for all tests	\$38,500
Supplies, forms, etc. @ \$.35/test (18,500 tests [admission and random] x \$.35/test)	\$6,475
Confirmation tests at laboratory for 10% of randomly tested youth (50 tests x \$20/test)	\$1,000
Staff time @ 15 minutes each for 18,500 tests [admission and random] @ average salary of \$12/hour	\$55,500
Staff to operate instrument @ 3 minutes each for 38,500 drugs tested @ \$12/hour	\$23,100
Maintenance contract on instrument	\$750
Additional utilities @ \$50/month	\$600
<b>Yearly Cost</b>	<b>\$125,925</b>

\* Estimated costs per test were taken from *Pretrial Drug Testing: Overview of Issues and Practices* (Pretrial Services Resource Center, 1998).

method selected, it may be necessary to budget for some confirmatory tests. The amount required may depend on the program's policies. Some policies require confirmation of all positives, others require confirmation only if results will be used for legal purposes, and some confirm only if the youth contests the findings. In some cases, youth are required to pay for confirmatory tests that also show a positive result, while the agency pays if the confirmation test is negative.

■ **Costs for a substance-testing information system.** Keeping accurate information about each youth and the entire testing program is vital. Records can be kept by hand, but unless the population of youth to be tested is quite small, record keeping on computers is likely to save time and yield more accurate and accessible results. Costs associated with this may include software, programming time, hardware, and data entry time.

■ **Costs for responding to tested youth.** As stated previously, there should be a response given for each and every test administered. Much of the time, a verbal response praising youth for a negative test or counseling and admonishing them for a positive test will be the primary response. However, some programs may want to include rewards for ongoing negative tests and graduated sanctions for ongoing positive tests. Rewards could include the cost-saving measures of decreasing the frequency of testing and limiting visits by community supervision personnel. On the other hand, sanctions such as increased testing and supervision or the need for referrals to treatment or other programs may increase the

financial cost to the juvenile justice agency.

Variable factors that must be considered to determine costs for substance testing include:

- The number of youth to be tested.
- The number of personnel to be trained.
- The frequency of testing.

### Cost Savings

One way of minimizing costs is to test youth only as needed. In programs of ongoing testing, after several negative tests, the frequency of testing may be reduced or testing may be stopped altogether. Decisions about testing also may be related to the youth's behavior, peer associations, and history of drug use and to the nature of the offense committed. If testing is random, it can be done somewhat less frequently. Youth also may be encouraged to admit illicit drug use rather than undergo testing.

Using volunteers or student interns within the agency may be another cost-saving device. Only trained personnel should conduct drug testing, but volunteers or interns may be able to assist with other time-consuming tasks that free some of the juvenile justice professionals' time.

Never economize by collecting specimens but not testing them. This can seriously jeopardize the integrity of the testing program. If youth know they should be testing positive but do not receive feedback on the test results, they are more likely to take chances using drugs.

### Sources of Funding

There are a variety of avenues and creative strategies for obtaining funds for a testing program, including:

■ **Federal, State, and local grants and funding programs.** For example,

the JAIBG legislation states: "Funds received under this program may be expended for such purpose [i.e., substance testing]." Some States or localities have drug seizure programs where money and property related to drug trafficking are confiscated. These funds often can be used for combating drug use and might be available for a juvenile substance-testing program.

■ **Agency collaboration.** For example, agencies can share space, pool supplies, and engage in interagency training and staffing to defray the costs of implementing the program.

■ **Resource sharing.** It may be possible to obtain donations of needed items, such as refrigerators, rubber gloves, testing supplies, and possibly even test equipment in exchange for public recognition by the agency.

■ **Fundraising.** Businesses, organizations, churches, and other community entities interested in fighting crime, protecting the community, and helping youth could provide funding for the program.

■ **User fees.** This is not as realistic with youth as it is with adults, because youth seldom have steady income; however, youth might be required to provide community service or engage in other work activities in exchange for testing.

### Step 9: Develop Staff

Staff involvement and cooperation are vital for implementing any program change. Staff roles, attitudes, and comfort in performing their jobs may be affected by developing a substance-testing program.

Staff resistance to implementing a substance-testing program often is related to program expectations, such as:

■ Additional paperwork to comply with rigorous chain-of-custody procedures and program evaluation.

- Observed specimen collection.
- Confrontation of drug-involved youth.
- Additional work in managing cases when youth need treatment and other services.

Staff enthusiasm may increase with program benefits, such as:

- More accurate information about youth to assist in case management and intervention.
- Drug-testing results to help overcome youth's denial of drug use.
- Data collected from a drug-testing program to document the need for additional treatment resources.

### Staff Empowerment

Staff involvement in the program planning and development process is recommended. Staff at all levels are stakeholders in the program and should be included in the process. In addition, agency administrators can facilitate effective teamwork and staff cohesion by:

- Working with staff to set clear objectives and achievable goals for the program.
- Establishing effective procedures for conducting the program.
- Maintaining constructive communication among team members.
- Allowing the team latitude to solve problems and grow with their responsibilities.
- Providing training programs to help members perform their duties proficiently.
- Recognizing and rewarding excellent job performance and allowing the team to share in the success of the program.

### Staff Responsibilities

A substance-testing coordinator should be designated to oversee the program. Depending on the size of the program,

this may or may not be a full-time responsibility. Responsibilities of the coordinator include, but are not limited to, the following:

- Assisting in development of policies and procedures for the program.
- Handling contract negotiations and renewals for program instruments and supplies, and recommending and implementing changes when needed.
- Acting as a liaison between contracting agencies, ensuring that contract obligations are fulfilled, and seeing that rendered services are satisfactory.
- Taking steps to solve problems.
- Coordinating training opportunities for staff.
- Making budgetary decisions in compliance with agency policy.
- Monitoring legal issues, such as court challenges and requirements for testifying.
- Assisting in evaluating the program design and implementation and analyzing results regarding the substance-testing program.

Staff of the program will have an array of responsibilities. The primary ones include the following:

- Advising youth of the testing program and the procedures that will be taken.
- Collecting specimens.
- Following all chain-of-custody procedures.
- Operating instruments, using test kits, or sending specimens to laboratories.
- Complying with all procedures to maintain quality control.
- Communicating results to youth and handling results properly within the agency (e.g., filing, entering in log).
- Testifying in court, if necessary.

- Completing all program evaluation procedures.

### Staff Training

To successfully implement a testing program, staff will need to participate in training to acquire an array of information and skills. Training content should include:

- Information about adolescent drug use.
- Effects of various drugs on youth.
- Program purpose and agency mission.
- Discussion of legal issues.
- Testing methodology and how it works.
- Use that will be made of results.
- Program policies and procedures, such as scheduled or random testing, frequency of testing, observed specimen collection, chain-of-custody procedures, confirmation of positive results, cutoff levels, and health and safety requirements.
- Intervention strategies, including graduated sanctions and rewards.
- Conflict management.
- Program evaluation procedures.

## Step 10: Evaluate the Program

Although it is the last topic in the program development process, program evaluation is essential and occurs throughout program implementation.

### What To Evaluate

Both process and outcome evaluation measures are vital. Process evaluation examines the implementation of the program, while outcome evaluation focuses on the impact of the program. For example, questions that might be answered through a process evaluation include:

- Are the intended youth being tested at the appropriate frequency?
- Are staff correctly following chain-of-custody procedures?
- How is drug testing affecting the staff?

Questions that might be answered through outcome evaluation include:

- How many youth are using drugs, and what kinds of substances are they using?
- Are youth who test positive receiving needed assessment and treatment services?
- Are tested youth abstaining from using drugs?
- Is recidivism reduced for youth who are tested?

Many other important process and outcome questions can be answered through evaluation. The specific areas to be measured should correspond with the agency mission and the purpose and goals of the testing program.

### When To Evaluate

Evaluation should be built into the testing program and should begin when the program begins. It is helpful if baseline data can be collected against which later findings can be compared.

### Data Collection

The purpose of the program determines the data to be collected. Data can be collected through traditional paper forms and filing systems, or they can be entered, stored, and retrieved using computers. Selection of a method will depend, in part, on the availability of technology, the amount of data to be collected, and the expertise and time required by staff to use the method. Whichever method is selected, it is vital that a systematic process be established for collecting and using the data. Some of

the types of data that should be collected on individual youth include the following:

- General identifying information about the youth (e.g., name, age, legal status).
- Substance use history (e.g., types, amount, and frequency of drugs used).
- Treatment history and current status (e.g., types of treatment received, attendance at present treatment program).
- Drug-testing results (e.g., dates tested, types of drugs tested for, results).
- Responses given to drug-testing results.

### Evaluation Findings

Collected data can be used in several ways. This information may be used to track the services provided and the progress of an individual youth. Data such as those listed above can be used to show trends in drug use and youth responses to treatment and juvenile justice interventions. This is useful in assessing the effectiveness of the current case plan and modifying it if necessary.

Aggregate data also can be used to assess the drug-testing program. For example, cumulative data can reveal trends in drug use among youth over time, the effectiveness of treatment services and case plans, and any problems in program implementation.

Evaluation results should be used to make ongoing decisions about program operations. Evaluation findings can help to answer these questions:

- Are program goals appropriate?
- Are the program's processes adequate and are they being implemented accurately?

- What are the outcomes?
- Are the outcomes found through the evaluation consistent with the program goals?
- Are there any unintended outcomes?
- Is the cost of the program appropriate for the results received?
- Are the data collected appropriate and adequate for effective evaluation and decisionmaking?
- Are the findings consistent with local community data?

A management information system is necessary for evaluating a substance-testing program. The system may be either manual or automated, but it should be capable of providing information about the effectiveness of the program. It should be easy to use, and results should be easily retrievable. The agency should establish standard procedures for staff responsibilities and operation of the management information system. Confidentiality must also be considered in designing the input, storage, and retrieval of information.

### Conclusion

The 10 steps outlined in this Bulletin are important because they can help agencies reach the ultimate goal of a substance-testing program—helping youth to stop using substances of abuse. The consequences of juveniles' use of mood-altering substances can be dire. Substance abuse and delinquency are closely associated. Further, substance abuse can strain the user's peer and family relationships, damage his or her physical and emotional health, and even lead to death by overdose, suicide, or drug-related homicide. Creating an effective substance-testing program will allow agencies to prevent some of these tragic consequences as they accomplish the following:

- Identify youth needing treatment and other interventions for substance abuse.
- Deter youth's use of alcohol and other drugs.
- Screen for substances that may lead to health and safety problems for the youth and others.
- Assist agency staff in making appropriate case plans and supervising and monitoring youth's compliance with court orders or program rules.

Without effective testing, youth involved with alcohol and other drugs may not be discovered and opportunities for intervention may be lost.

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## For Further Information

### Suggested Readings

#### Drug Testing

The following publications offer additional information on drug testing strategies and procedures.

American Probation and Parole Association. 1992. *Drug Testing Guidelines and Practices for Juvenile Probation and Parole Agencies*. Washington, DC: U.S. Department of Justice, Office of Justice Programs, Office of Juvenile Justice and Delinquency Prevention.

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### Substance Abuse Treatment

The Center for Substance Abuse Treatment publishes numerous protocols and technical assistance materials on substance abuse treatment. All are free of charge and available from:

#### National Clearinghouse for Alcohol and Drug Information (NCADI)

P.O. Box 2345  
Rockville, MD 20857–2345  
800–729–6686

The following publications may be ordered from NCADI by title and number:

*Assessment and Treatment of Patients with Coexisting Mental Illness and Alcohol and Other Drug Abuse* (BKD134)

*Combining Alcohol and Other Drug Abuse Treatment with Diversion for Juveniles in the Justice System* (BKD169)

*Comprehensive Case Management for Substance Abuse Treatment* (BKD251)

*Detoxification from Alcohol and Other Drugs* (BKD172)

*Juvenile Justice Treatment Planning Chart* (PHD 598)

*Guidelines for the Treatment of Alcohol and Other Drug Abusing Adolescents* (BKD109)

*Principles of Drug Addiction Treatment: A Research-Based Guide* (BKD347)

*The Role and Current Status of Patient Placement Criteria in the Treatment of Substance Use Disorders* (BKD161)

*Screening and Assessment of Alcohol and Other Drug Abusing Adolescents* (BKD108)

*Simple Screening Instruments for Outreach for Alcohol and Other Drug Abuse and Infectious Diseases* (BKD143)

*Substance Abuse Treatment Planning Guide and Checklist for Treatment-Based Drug Courts* (SMA 97-3136)

## **Organizations**

### **American Correctional Association**

4380 Forbes Boulevard  
Lanham, MD 20706-4322  
301-918-1800  
301-918-1900 (fax)

### **American Probation and Parole Association**

Juvenile Drug Testing Project  
P.O. Box 11910  
Lexington, KY 40578-1910  
606-244-8192  
606-244-8001 (fax)

### **Center for Substance Abuse Treatment**

Substance Abuse and Mental Health Services Administration  
5600 Fishers Lane, Rockwall II  
Rockville, MD 20857  
301-443-2467  
301-443-3543 (fax)

### **Centers for Disease Control and Prevention**

U.S. Department of Health and Human Services  
1600 Clifton Road NE.  
Atlanta, GA 30333  
770-488-5292

### **Drug Courts Program Office**

U.S. Department of Justice  
Office of Justice Programs  
810 Seventh Street NW.  
Washington, DC 20531  
202-616-5001  
202-514-6452 (fax)

### **Drug Information Hotline**

800-662-4357

### **Juvenile Justice Clearinghouse**

800-638-8736

### **Legal Action Center**

153 Waverly Place, Eighth Floor  
New York, NY 10014  
212-243-1313

### **National Association of Drug Court Professionals**

901 North Pitt Street, Suite 300  
Alexandria, VA 22314  
703-706-0576  
703-706-0565 (fax)

### **National Association of State Alcohol and Drug Abuse Directors**

444 North Capitol Street NW.  
Suite 642  
Washington, DC 20001  
202-783-6868

### **National Center for Juvenile Justice**

701 Forbes Avenue  
Pittsburgh, PA 15219-3000  
412-227-6950  
412-227-6955 (fax)

### **National Center on Addiction and Substance Abuse**

152 West 57th Street  
New York, NY 10019  
212-841-5200  
212-956-8020 (fax)

### **National Clearinghouse for Alcohol and Drug Information**

P.O. Box 2345  
Rockville, MD 20847-2345  
800-729-6686  
301-468-6433 (fax)

### **National Institute on Alcohol Abuse and Alcoholism**

6000 Executive Boulevard, Wilco Building  
Bethesda, MD 20892-7003  
301-443-3860

### **National Institute on Drug Abuse**

National Institutes of Health  
6001 Executive Boulevard,  
Room 5213  
Bethesda, MD 20892  
301-443-1124

### **National Juvenile Detention Association**

Eastern Kentucky University  
217 Perkins Building  
Richmond, KY 40475-3127  
606-622-6264

### **National Treatment Accountability for Safer Communities**

1911 North Fort Meyer Drive,  
Suite 900  
Arlington, VA 22209  
703-522-7212  
703-741-7698 (fax)

### **Office of Justice Programs Drug Court Clearinghouse and Technical Assistance Project**

American University  
Brandywine 660  
4400 Massachusetts Avenue NW.  
Washington, DC 20016-8159  
202-885-2875  
202-885-2885 (fax)

### **Office of Juvenile Justice and Delinquency Prevention**

U.S. Department of Justice  
Office of Justice Programs  
810 Seventh Street NW.  
Washington, DC 20531  
202-307-5911

### **Pretrial Services Agency**

District of Columbia  
Superior Court  
400 F Street NW.,  
Suite 310  
Washington, DC 20001  
202-727-2911  
202-727-9852 (fax)

Points of view or opinions expressed in this document are those of the authors and do not necessarily represent the official position or policies of OJJDP or the U.S. Department of Justice.

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P.O. Box 6000

Rockville, MD 20849-6000

800-638-8736

301-519-5600 (fax)

E-Mail: [askncjrs@ncjrs.org](mailto:askncjrs@ncjrs.org)

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Office of Justice Programs

*Office of Juvenile Justice and Delinquency Prevention*

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