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American Correctional Association

Institute for Behavior and Health, Inc.

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Monograph:

**Drug Testing of
Juvenile Detainees**

**Office of Juvenile Justice and Delinquency Prevention
Office of Justice Programs
U.S. Department of Justice**

U.S. Department of Justice
National Institute of Justice

ACA

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Drug Testing of Juvenile Detainees

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Introduction

The American Correctional Association and the Institute for Behavior and Health Inc., funded by a grant from the Office of Juvenile Justice and Delinquency Prevention (OJJDP), collaborated on a project to determine the status of drug testing of juvenile detainees and to develop prototype elements of a drug testing program, related policies and procedures and a training curriculum.

Juveniles at high risk for drug use are also at high risk for delinquent behavior, which often leads to arrest and detention. Information about recent drug use helps detention staff make appropriate case-management decisions, which may include drug treatment. Urine drug testing is the most reliable way to detect recent drug use.

In conjunction with the project, written and telephone surveys gathered information from juvenile detention programs throughout the United States. Staff members from ACA and IBH conducted site visits to detention facilities with drug testing programs. Subsequently, the best program components were identified, and a prototype drug testing program was developed. IBH and ACA drafted guidelines, as well as related policies and procedures and a training curriculum, to set up a drug testing prototype in a juvenile detention program.

Literature Review

A strong correlation exists between drug use and crime for both adult and juvenile offenders. Studies show that individuals entering the criminal justice system commonly under-report drug use (Dembo, 1990; Toberg, et al., 1989). If drug use is not detected, intervention and treatment to stop the juvenile's drug use will not happen. Undetected drug use adds to the risk of recidivism and frustrates all other rehabilitation efforts.

Determining recent drug use by urine drug testing is commonly used in the criminal justice system, primarily with adults both pre- and post-adjudication. Urine drug testing identifies drug use, which has occurred within one to three days before testing. Drug testing technology is accurate and sensitive in determining recent use of specific drugs.

Drug testing in juvenile detention facilities is less common than in adult facilities, but increasingly, sites throughout the country are beginning to implement routine drug testing programs. Identification of drug use is the essential first step for the juvenile, for the justice system, and for the community. Without identification through drug testing, denial takes hold and drug problems fester.

Identification of drug use also helps case managers use drug treatment where appropriate. Intervention is an important first step in breaking the cycle of substance abuse and delinquent behavior. Matching an adolescent to appropriate and effective drug treatment promotes abstinence and contributes to his or her return to the community. Failure to detect drug use and intervene enables this vicious cycle to continue. Urine testing to identify recent drug use provides information for appropriate intervention. The juvenile detention program provides an opportunity to address complex risk factors including physical and sexual abuse, medical neglect, dual diagnosis and substance abuse (c.f. Chatlos, 1989; Dembo et al., 1988; DuPont, 1989; Singer et al., 1989). Adolescents entering the juvenile justice system with these problems are the highest of high-risk juveniles who have a significant probability of continued anti-social behaviors (DuPont, 1989). Among all drug users, those at highest risk are individuals who start at the youngest ages and whom are involved in the criminal justice system. To protect the community from the effects of delinquent behavior, and in the interest of the needs of these high-risk juveniles, identifying drug use is essential to getting appropriate help for them.

Establishing recent drug use is not a substitute for educational, medical, psychological, or other rehabilitative care. Detection is a necessary precondition for these strategies to work since drug use exacerbates all other physical, mental, and emotional problems.

Several studies have revealed a powerful association between drug use and delinquency. Often, peer behaviors strongly influence drug use and other risky adolescent behaviors (c.f., White et al., 1985; Robinson et al., 1987; Huizinga & Elliott, 1981). Most studies have found that increased drug use is associated with increased delinquent behavior.

The Drug Use Forecasting (DUF) surveys conducted by the National Institute of Justice have been extended to include males detained at juvenile facilities in 11 cities in the United States. DUF data is collected through voluntary and anonymous urine drug testing of arrestees. Drug use was detected in 10% (Kansas City) to 31% (Los Angeles) of the juveniles tested in 1990. Marijuana use was most frequently detected in eight cities, marijuana and cocaine were detected almost equally in one city, and positive tests for cocaine were highest in Washington, D.C. and Cleveland. In addition, multiple drug use was detected at all sites (DUF, in press).

Studies comparing the drug use histories of juveniles involved in the justice system with juveniles in the general population have yielded striking results. For example, the Colorado Division of Youth Services conducted a survey of juveniles admitted to five corrections centers and compared the results with 12- to 17-year-old juveniles in the 1982 National Household Survey on Drug Abuse sponsored by the National Institute on Drug Abuse (NIDA). Ninety-five percent of the Colorado juveniles reported having used marijuana and alcohol. Over half had used hallucinogens, stimulants, cocaine, and inhalants, and over 30% had used painkillers, sedatives or tranquilizers non-medically. Compared to the 1982 NIDA sample, juveniles in contact with the juvenile justice system were almost three times more likely to have used illegal drugs, and they were twice as likely to have used alcohol (Colorado Division of Youth Services, 1985). Dembo and his colleagues (1988) reached similar conclusions comparing juveniles between the ages of 10 and 18 in a Florida detention center with those in the 1985 NIDA National Household Survey. In this sample, 72% were male. The detained juveniles reported dramatically greater drug use: marijuana use was 70% for detained juveniles compared to 24% in the NIDA sample, and the rates for lifetime cocaine use were 37% and 5%, respectively.

Juveniles are detained if they are apt to leave the jurisdiction or commit another offense before their court hearing, if they are being transferred to another facility, or if they have no family or friends to provide shelter after arrest (Simonsen & Gordon, 1979). Detention facilities prepare detainees for the legal, social and personal trials that accompany entry into the justice system. Besides providing secure confinement, most detention programs try to address the short-term and long-term physical, psychological, emotional, and social needs of the adolescents in their care. To meet these needs, detention centers commonly provide medical and psychological assessments, including determination of physical or sexual abuse. Most detention facilities also provide activities and programs that promote pro-social adjustment and coping skills, and individual and group counseling (ACA, 1983).

Case management in juvenile detention centers balances the need for rehabilitation, custodial care, and contingency management by individualizing available resources (c.f., Beilenson, 1987). In detention, case management is essential to (1) provide information about drug use and assess its impact on behavior and health; (2) make informed recommendations to courts, parents, social agencies, probation/aftercare services or commitment sites; and (3) ensure adequate follow-up. In the case management philosophy, detention becomes an opportunity to provide services that have been absent. Knowledge of community and area resources is essential to identify services that match the needs specified in the case management plan. The few detention programs that currently test for drug use demonstrate the benefits of case management.

Unpublished annual reports and policies and procedures manuals from nine detention facilities and probation and aftercare programs with active urine drug testing programs show that urine drug testing helps identify drug users and prepares staff to act appropriately during and after detention. Juvenile detention centers differ widely in their application of urine drug testing. Some programs use testing to plan for subsequent action, whereas other facilities conduct drug testing to protect the safety and security at the facility.

In some juvenile detention programs, urine testing is court-ordered, although other programs rely on voluntary compliance. Pre-trial urine screening is done routinely as part of the intake process at only a few sites. In some programs reviewed, refusing to provide a specimen for testing can mean a probation/aftercare violation or a violation of the rules of the institution, which results in the same disciplinary action as a positive drug test.

One program, where juveniles are required to pay the cost of testing when the results are positive, uses admission of drug use instead of testing. One administrator noted that on-site testing serves as a "lie detector" because juveniles know results will be available quickly. When faced with the certainty that the equipment will verify drug use, juveniles often will acknowledge recent drug use voluntarily, reducing or eliminating the cost of a drug test.

Prevention of drug use and related delinquent activity is the goal of all juvenile drug testing. Achieving abstinence from drug and alcohol use is the primary goal of urine drug testing for juveniles who become involved in the juvenile justice system. The legal, emotional, and social handicaps of continued drug and alcohol use practically ensure future problems for these high-risk juveniles. Urine drug testing helps make juveniles accountable for their actions, minimizing denial and emphasizing the importance of maintaining a drug-free lifestyle.

A summary literature review was prepared based on the existing juvenile drug testing information. This literature review served as the background for an expert workshop. Thirty experts from juvenile detention, drug testing, and academic research were brought together to discuss and develop the key elements of a model drug testing program for juveniles in detention. The parameters of the model included the caveat that testing be conducted in the context of other needs, and the reminder that detention is only a piece of the larger system of juvenile justice. The group unanimously agreed that the test results be used for case management purposes only.

Juvenile Detention Center Survey

A written questionnaire was prepared and sent to over 500 juvenile detention facilities across the United States. Forty-eight percent, or 237 questionnaires, some with written guidelines and/or policies and procedures attached, were returned and analyzed. Sixty-three centers were identified as having some type of drug testing program.

Prerequisites for testing, size, and extent of the program yielded 35 juvenile detention sites that were contacted by telephone. The telephone interview clarified information on the original

questionnaire and supplied greater detail about the drug testing program. Information sought in the telephone interview included changes to the program since completion of the written survey, turn-around time for drug test results, and budgetary provisions for testing. After review of the additional information, nine detention facilities were selected for site visits to obtain first-hand knowledge about their urine drug testing program.

The site visits provided information about collection sites, chain-of-custody procedures, and laboratory processing or on-site testing technology. Disseminations of drug test results, record-keeping, and data collection were reviewed. Staff members were interviewed to determine their support. Discussion with detention staff centered on local patterns of drug use, community support, and involvement with the center.

Findings from the survey, telephone interviews, and site visits provided information on the status of juvenile drug testing programs in detention facilities. This information is summarized in the following section.

Status of Juvenile Drug Testing Programs

Considerable diversity exists among the juvenile detention drug testing programs visited. The scope of drug testing programs is based on the size of the facility, staffing patterns, population, and budgetary consideration. The sites visited are committed to drug testing, yet interested in improving and expanding their programs.

Most of the juvenile detention centers view drug testing as a tool for making informed case-management decisions. A few programs include legal sanctions for positive drug tests. Information about drug testing or informed consent is provided to most juveniles before testing.

Most urine testing takes place during intake; few detention programs screen all detainees for drug use as part of a routine intake process. Instead of regular screening, some programs rely on court-orders, recommendations from parents, probation officers or medical personnel, or paper-and-pencil screening instruments to identify drug-involved juveniles.

The visited programs test for a variety of drugs on the initial screen. All the programs test juveniles for marijuana and cocaine; all but one program tests for alcohol use either routinely or upon suspicion of use. Other drugs are added to the screen if a drug becomes popular locally or if a laboratory contract specifies a particular drug profile. Cut-off levels usually correspond to NIDA recommendations or to those determined by the manufacturers of on-site equipment.

Most of the detention programs reviewed use positive test results to design case-management plans, including medical intervention and treatment referral. Some programs keep detailed records and monitor community drug use trends, although the extent of record keeping varies among facilities.

Visited detention programs were equally divided between those who did on-site testing and those that used off-site laboratories. All detention sites that routinely test each detainee agree that urine drug testing is a significant asset to the program.

Administrative and staff concerns included budgetary constraints that prevent testing programs from becoming an integral part of the detention process and a lack of education about drugs and testing procedures, which leads to fears about handling urine because of the risk of AIDS transmission. Legal issues surrounding drug testing concern staff in centers where positive results can lead to legal action. An additional concern was expressed about the strain drug testing can place on staff schedules filled with other duties. Administrators expressed interest in enhancing the testing programs by expanding testing to include all detainees, adding more drugs to the screen, reducing turn-around time, increasing budgetary support, and improving staff support and education.

Several programs currently use testing to track community drug use trends. A few sites anticipate entering test results on a computer for analysis. In some detention programs, the number of drug positives has dropped substantially since the initiation of testing.

Although drug use among juveniles is recognized as a major problem, most detention facilities in the country do not have drug testing as part of their detention programs.

Legal Authority for Conducting Urine Drug Tests for Juveniles

The serious drug problem of the past decade has left no segment of society untouched. The most devastating effects of illicit drug use can be seen in hospital emergency rooms, in our juvenile justice systems, in our prisons and jails, and in our courts. At all levels of the justice system, from juveniles to adults, drug use is consistently cited as the largest and most intractable problem facing practitioners. Not surprisingly, public officials are searching for ways that provide, if not solve underlying problems, a better means of managing them. Drug testing has been seen as one such method.

Several jurisdictions propose to expand drug testing to the juvenile system because of its success in a number of adult criminal justice systems. Drug use among juvenile delinquents is known to be significant and widespread, according to data from the Drug Use Forecasting System of the National Institute of Justice.¹ The DUF data and other research tell us that drug use typically begins early, around age 12, often progressing from beer, wine, and tobacco to more serious drugs. Younger drug users are much less likely to self-report their drug use. Often, a drug test is the only means of breaking through the denial associated with juvenile drug use.

Testing juveniles charged with delinquent acts for illegal drug use seems, to many, a logical application of existing technology. After all, the goals of the juvenile justice system require that the court act to help the child and provide the care and supervision when the home environment is lacking. Consistent with the "*parens patriae*" theory underlying the juvenile justice system, the court needs to know if the child is involved in illegal drug use. Only by identifying a potential problem can the court begin to deal with it. But is it legal? Does authority exist to require juveniles to produce urine samples? If so, at what stage of the proceedings? Can urine samples be collected immediately after arrest? Only after adjudication? In connection with a drug treatment program or as a condition of probation? These questions inevitably arise in any discussion of juvenile drug testing.

¹ Since 1988, the National Institute of Justice has surveyed drug use among juveniles as part of the Drug Use Forecasting system. Currently, 11 sites are collecting data and requesting urine samples from juvenile detainees. The 11 sites are Birmingham, Cleveland, Kansas City, Los Angeles, St. Louis, San Antonio, Washington, D.C., Indianapolis, Portland, San Diego, and San Jose.

To date, few states have enacted legislation authorizing juvenile testing for drugs of abuse. For that matter, it has only been within the past few years that some states and the federal government have amended statutes authorizing jurisdictions to test adult arrestees. Aside from legislative authorization, authority for testing may exist in Court Rules, departmental decrees, or specific judicial or probation orders. The American Probation and Parole Association, in drug testing guidelines for adult probationers and parolees published July 1991, recommends that "drug testing should be authorized by state law instead of being merely a condition imposed by the judge or parole board."²

Despite the lack of specific legislative authorization, many juvenile justice systems are using drug testing at some level. Some use drug testing as part of a routine assessment procedure after adjudication for identifying appropriate candidates for treatment programs. Several jurisdictions conduct testing within secure institutions. With or without specific authorization, many practitioners view drug testing as a tool well within the traditional framework of the juvenile justice system.

The District of Columbia has an extensive juvenile drug testing program. Although legal cultures and practices vary from place to place, the experience of the District is useful in that it illustrates how local officials, applying traditional principles of the juvenile justice system, developed a legal basis for implementing comprehensive juvenile drug testing. The elements of the program include testing juveniles immediately after arrest; as a condition of release pending adjudication; and as a condition of probation after adjudication. The tests are conducted by the D.C. Pretrial Services Agency, which operates a drug testing laboratory located in the courthouse. Drug test results become part of the juvenile's "social record" and are subject to strict confidentiality laws.

As with other locations, the District of Columbia Code provides no specific statutory authorization for drug testing, or for using drug test results in juvenile proceedings. However, the statute was viewed as sufficiently broad to encompass drug testing. The D.C. statute is quite similar to most state statutes. Although juveniles now have many due process rights, the system still reflects the paternal orientation that has been the hallmark of the system for the past 90 years. The accused juvenile is a "respondent," not a "defendant." Charges are brought by a "petition" and the truth of the allegations

² Guideline 4-3, "Authority to Test," Drug Testing Guidelines and Practices for Adult Probation and Parole Agencies," July, 1991. The Commentary to this guideline goes on to state that "although courts have generally considered drug testing imposed by the judge... without legislative authorization as valid, the passage of such legislation ensures a more successful defense against potential legal challenges." (page 13)

is determined by a "fact finding hearing." For the juvenile to be found "involved," the Court must determine that the juvenile committed a "delinquent act" and is "in need of care or rehabilitation." Both the juvenile records of adjudications and the "juvenile social records" are subject to strict confidentiality laws with criminal penalties for unauthorized disclosures. As in almost every state, juvenile proceedings in the District of Columbia are concerned with the "best interests of the community" and the "best interests of the juvenile."

Although the D.C. Code does not deal specifically with drug testing, it does permit physical examinations.

At any time following the filing of a petition, on motion of the Corporation Counsel or counsel for the child, or on its own motion, the [Family] Division [of the Superior Court] may order a child to be examined to aid in determining his physical or mental condition.³

D.C. Superior Court judges consider drug testing to be within the definition of "physical examinations" as authorized by statute.

The second legal basis for pre-petition, or intake, drug testing is found in Superior Court Rules 102 and 103. The Rule mandates the Director of Social Services (probation) to make a preliminary determination whether there is a "need for supervision." Any indications of illegal drug use have been deemed, almost by definition, to justify a finding that there is a need for supervision. Thus a drug test has become viewed as an essential element in the intake process.

Another Court Rule addresses the criteria to be considered in determining whether a juvenile shall be placed in detention before a fact finding hearing. Rule 106 requires a judicial finding that detention is necessary to protect the person or property of others or of the juvenile. In determining whether detention is necessary to protect the juvenile's own person, the rule specifically mentions "narcotics addiction or other severe and chronic drug abuse."

³ D.C. Code 16-2315.

Taken together, the philosophy of the juvenile justice system, the factors to be considered at intake, and the well-recognized role of the Court to serve in a semi-parental capacity "in the best interests of the child" all support the view that drug testing is appropriate. This belief is reflected in a "Memorandum of Understanding" setting forth the goals and procedures of juvenile drug testing, and in an order issued by the Chief Judge directing the Pretrial Services Agency to "perform drug tests on and monitor compliance with Court ordered conditions by juvenile offenders..."

Whether the experience of the District of Columbia is applicable to other jurisdictions is a matter for those jurisdictions to determine for themselves. Two final points bear noting. First, after almost five years of continuous operation in which almost every juvenile is tested at intake, no legal or constitutional challenges have been filed. Second, the legal framework for the juvenile justice system in Washington, D.C. is quite similar in philosophy and substance to that of most states. Although specific legislative authorization for juvenile drug testing is clearly preferable, existing authority is probably sufficient to conduct post-adjudication testing. Pre-adjudication testing should be approached cautiously. However, the positive experience of the District of Columbia may offer some guidance and encouragement to practitioners in other states.

Operational Issues

Operational issues for urine drug testing include developing policies and procedures, determining types of equipment, staffing, location of equipment, and related issues. Some issues are simple; others are technical. A simple issue at one detention center may be a complex issue at another. The following paragraphs present common operational issues and include recommendations based on site visits of existing programs.

Urine collection should always be observed since samples can be altered easily. A staff member of the same sex monitors while the juvenile disrobes, showers, and provides a urine sample. Urine samples collected while the juvenile is unclothed present few opportunities for adulterating the sample

with concealed substances. Showers before sample collection eliminate chemical concealment (e.g., Drano) under the fingernails. A staff member's presence also prevents the urine specimen from being diluted with liquid soap or tap water. In programs that do not require a shower as part of the intake process, urine samples are collected in a lavatory large enough for the juvenile and a staff observer.

Since stringent consequences may follow a positive drug test result, chain-of-custody procedures should be observed. Chain-of-custody means that strict rules are followed in collecting a sample, storing it, and sending it to the laboratory. Each person who handles the specimen either initials or signs a form or label attached to the sample. All samples are stored in secure areas that have limited and tightly controlled accessibility.

Urine drug testing can take place either on-site at the facility or off-site in a laboratory. Many detention programs have access to government laboratories and to commercial laboratories. On-site urine drug screening uses testing equipment or kits at the facility and detention staff to conduct the tests.

Each program should develop procedures that work best in its setting. Although standard policies and procedures need to be followed, there should be flexibility to accommodate organizational differences. Specimen collection should take place during the intake process, and testing should occur before the pre-hearing or within 48 hours of detention.

Some juvenile programs use random testing within the detention facility. Random testing is unannounced, and all juveniles in the program are equally likely to be tested on any given day. The frequency of random testing may vary from one to three times a week.

There are several urine testing technologies that are currently available and are described in the following table.

Table One
**Commonly Used Technologies for
Detecting Drug Abuse in Urine**

TLC (thin-layer chromatology)

The TLC process is based on concentration of the urine sample, separation of compounds on a thin layer of silica, and interaction with chemical compounds that produce characteristic color reactions. These color reactions are evaluated by a trained laboratory technician to determine the presence of a drug.

Immunoassay Tests:

Immunoassay tests are new, more sensitive, higher-technology tests, which depend on an immunologic chemical reaction involving antibodies and antigens. Antibodies are developed in animals to react with a specific drug. A label or tag is then chemically attached to a sample of the drug sought. The tagged drug, the untagged drug in the urine specimen, and the antibody are then mixed together during the immunoassay test. Each of the immunoassays detects a drug using a different process, explained below.

EIA (enzyme immunoassay)

EIA tests urine by measuring color change with a device called a spectrophotometer. Gives qualitative results quickly, but does not produce quantitative results.

RIA (radio-immunoassay)

Uses radioactive tags to identify drugs in urine. This method produces qualitative and quantitative results.

FPIA (fluorescence polarization immunoassay)

Uses fluorescent tags, which are counted by a computer-driven system to determine drugs in urine. This method gives both semiquantitative and qualitative results.

GC/MS (gas chromatography/mass spectrometry)

Most frequently used as confirmation test, this method heats the urine sample until it vaporizes and the drug metabolites are separated. These components are passed through a capillary column. Of the many ways used to detect drugs, mass spectrometry is the most accurate. Gas chromatography used with mass spectrometry is known as GC/MS and is the gold standard against which all other detection methods are compared.

Urine test results are reported qualitatively, quantitatively, or semiquantitatively. Qualitative results give either a "positive" or a "negative" result compared to a particular cut-off level. This gives a "yes" or "no" answer to the question, "Has there been recent drug use by this individual?" Quantitative results are given as numbers, such as 300 nanograms per milliliter (ng/mL). This result can determine more precisely the level of drug metabolite in the urine. Semi-quantitative results give a numerical value relative to a standard specimen that is run through the drug testing equipment before the client samples.

Thin-layer chromatography (TLC) was one of the first testing technologies used widely in the criminal justice system. TLC is a laboratory-based technique that cannot be performed on-site, because it requires a high degree of technical training to read the subjective test results. Because it is not as sensitive at low levels as other testing technologies, TLC has been shown to underdetect recent drug use.

Immunoassay tests are newer, higher-technology urine tests; two of which are appropriate for use on-site. Enzyme immunoassay tests (EIA) are relatively inexpensive, but do not give a numerical readout of the amount of drug in the urine. Fluorescence Polarization Immunoassay (FPIA) is a semi-quantitative procedure (DuPont and Saylor, unpublished). The third immunoassay test, radioimmunoassay (RIA), can give both qualitative and quantitative results. However, because RIA uses radioactive substances that require special precautions, the equipment is not suitable for on-site testing. One other recently developed immunoassay, agglutination, produces qualitative results in minutes in a simple-to-use, portable system that is specific to each substance. This technique provides qualitative (i.e., positive/negative) results. A similar technique using EIA produces a color change when the drug metabolite is present.

Gas chromatography/mass spectrometry (GC/MS) is a highly sophisticated system appropriate only for laboratories. GC/MS is the standard against which all other technologies are compared and is used most frequently to confirm positive results obtained using other technologies. Except in rare situations, it is unlikely that juvenile detention programs will use GC/MS.

Hair analysis is a recently introduced testing technique. Drugs are deposited in the hair root via the blood stream; the hair shaft grows at the rate of approximately one-half inch per month. For testing, a small portion of hair is clipped close to the scalp. The hair sample is analyzed by an RIA

enzyme technique. Hair testing has a longer detection window than urine testing. A one-and-a-half inch hair sample shows drug use over a period of three months compared to a one- to five-day detection window for urine testing. Some people consider hair testing to be less invasive than urine testing. It also has the advantage of easy retesting. Currently, however, the turn-around time is longer than other techniques. Hair testing technology is more costly per sample than urine testing and is used less often.

Breathalyzer devices detect recent alcohol use by measuring blood alcohol level. Alcohol use is difficult to assess because of technological limitations and the metabolic properties of alcohol that make detection difficult unless testing occurs within a few hours of alcohol use.

New single test kits using saliva have recently become available to test for alcohol use. Advancement in the science of drug testing will add more technologies in the future, and some of them may be less intrusive and more efficient.

On-Site and Off-Site Testing

On- and off-site drug testing options are available to detention programs. Turn-around time for test results, size of the facility, and budgetary or staff constraints determine which testing strategy is preferable. One does not automatically preclude the other. For example, a program might want to do most of its testing on-site and send only positive samples to a laboratory for confirmation. Conversely, a program may want to have all testing performed by a service laboratory and reserve on-site testing for emergency or quick turn-around tests. Generally, high-volume urine testing requires laboratory testing.

The detention programs visited use a variety of laboratories for off-site testing including a health department facility, a probation department laboratory and a coroner's laboratory. Commercial laboratories are also suitable for testing. Most laboratories provide mailing services for clients who are located outside a metropolitan area. Laboratories usually supply all materials needed to collect,

prepare, and mail urine samples. This includes sample cups, lids, labels, and boxes or bags for shipping.

The availability of a second testing technique if confirmation is necessary is a significant benefit of off-site laboratories; however, a longer turn-around time is probable. Delays in receiving results can reduce the effect of treatment or intervention. Detention programs considering urine testing need to identify a desirable turn-around time and determine if their laboratory can meet that standard.

On-site testing systems are ideal for targeted drug monitoring, quick results, and qualitative or semiquantitative screening of specific clients. On-site urine testing equipment is compact, about the size of a personal computer, and may be expensive to purchase. However, the manufacturers may lease the equipment at a nominal charge if reagents to run the urine tests are purchased from the company.

Staffing is a consideration for on-site testing programs. Most juvenile detention facilities with on-site testing use available staff to run on-site equipment. Some manufacturers of on-site testing equipment offer training, which qualifies selected staff in detention as technicians. Designating selected staff members as urine testing technicians is an issue that each detention center should address. A few programs reported that probation officers and detention staff were finding that running testing equipment is burdensome because of their full schedules. One program solves this problem by working jointly with a nearby university to establish a work-study program in conjunction with the school's technician training program. Under this program, the university pays a percentage of the cost, and a technician works part-time in the detention facility.

On-site urine testing provides advantages for several of the detention programs reviewed. The quick turn-around time for results is essential to some programs. Immediate feedback is extremely important for many intervention strategies, especially when working with high-risk juveniles.

For diagnostic purposes, testing for a broad range of drugs upon admission to the detention facility is recommended. After an initial determination of the scope of drug use, subsequent testing can focus on those drugs detected in the initial screen or other drugs that might be prevalent in a geographic area. Focusing on specific drug use can save both time and money, especially if on-site testing is used.

Cut-off Levels and Limits of Detection

Urine testing program personnel need to be familiar with the detection limits following drug use, which are described in Table Two. As seen in the following table, the periods for successful detection differ from substance to substance. This information is essential for program counselors to evaluate accurately an individual's prior and present drug use. Knowing the duration of the detection period of individual drugs also helps to determine the frequency of random testing most appropriate for each client.

Table Two
Approximate Limits of Detection
of Drug Use by Urinalysis*

<u>Drug</u>	<u>Duration of Detectability</u>
Alcohol	12 hours or less
Amphetamines	48 hours
Barbiturates	1 to 7 days
Cannabinoids (marijuana, hashish)	3 to 27 days
Cocaine (coke, crack)	2 to 3 days
Lysergic Acid Diethylamide (LSD)	1 to 3 days
Opiates (heroin, morphine)	48 hours
Phencyclidine (PCP)	8 days
Synthetic Narcotics (China White, Fentanyl)	1 to 5 days

*This chart adapted from the Journal of the American Medical Association, 257 (22) p. 3112.

The determination of cut-off levels for quantitative results is important. The cut-off level is the amount of drug metabolite in the urine that constitutes a positive result. A cut-off level that is too high will produce a false negative. For example, an individual might have an actual level of 50 ng/mL of marijuana metabolite (THC) present. A cut-off level of 100 ng/mL would result in the client testing negative for marijuana use. On the other hand, a cut-off level of 20 ng/mL would yield a positive result and a more accurate reflection of actual recent drug use. Establishing appropriate cut-off levels is important to reduce denial. Recommended cut-off levels are listed in Table Three.

Table Three

**Recommended Cut-Off Levels
in Nanograms per Milliliter**

<u>Drug</u>	<u>Cut-Off Level</u>
Amphetamines/Methamphetamine	1000 ng/mL
Cocaine Metabolites	300
Cannabinoids (THC)	50
Opiates	300
PCP	25

To maximize impact, positive results require follow-up. The case-management plan needs to reflect the evidence of recent drug use and the commitment to deter further use. Counselors should have some flexibility to individualize programs to meet the needs of the juvenile. Drug test results should not affect legal charges or sentencing decisions.

Conclusions and Recommendations

Significant intervention must take place to prevent repeat offenses and to prevent the juvenile from graduating to the adult criminal justice system. Providing a system of drug use detection and intervention may be an important step in preventing recidivism.

Juvenile detention centers can detect drug use by urine testing detainees during the intake process. The results of urine tests offer a valuable tool for assessing the needs of detained juveniles. Knowledge of drug use allows appropriate intervention and treatment options to be incorporated into case-management plans.

Juvenile detention facilities with drug testing programs find the results useful for individualizing the care of detainees, making appropriate plans for their entry back into the community, and establishing drug use patterns for the community. Drug use is viewed as an important component in the overall medical and psychological profile of each juvenile.

Initiating a urine drug testing program in a detention facility is a challenging yet rewarding enterprise. As urine testing has become more common in juvenile justice systems, many problems have been solved, and many questions have been answered. The issues discussed in this document are important considerations in initiating a drug testing program. A drug testing program provides valuable information about the detainee population for the best possible prognosis for re-entry into the community.

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