U.S. Department of Justice
Office of Justice Programs

Estimating the Costs of Drug Testing for a Pretrial Services Program

Bureau of Justice Assistance

MONOGRAPH

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Bureau of Justice Assistance
633 Indiana Avenue, N.W., Washington, D.C. 20531
(202) 272-6838

U.S. Department of Justice
Office of Justice Programs
Bureau of Justice Assistance

Office of the Director

Washington, D.C. 20531

The Bureau of Justice Assistance administers the Drug Testing and Intensive Supervision (DTIS) Program to demonstrate the contributions of pretrial drug testing as part of an overall criminal justice strategy to combat drug abuse. This program is being implemented in five jurisdictions (Tucson and Phoenix, Arizona; Portland, Oregon; Milwaukee, Wisconsin; and Prince George's County, Maryland) in response to the increasing interest in the identification, screening and supervision of drug abusers entering our criminal justice system. Initial results from these demonstration sites conclude that such testing/supervision: 1) increases the effectiveness of traditional pretrial screening methods to identify drug abusers; 2) enhances the ability of the judicial officers to make more informed pretrial decisions; 3) provides for more close supervision of the arrestee if released during the pretrial stage; 4) can contribute to more effective use of available detention facilities; and 5) serves as a viable alternative for detention through a court-supervised program focused on the arrestees' drug abuse patterns.

This monograph is prepared to assist jurisdictions which have started pretrial drug testing or plan to start such an effort by discussing costs associated with various critical elements of that effort. The document presents issues and considerations which should help interested jurisdictions make appropriate decisions that are cost-effective and responsive to their needs.

I hope this publication and others to follow will be of assistance in implementing a successful pretrial drug testing effort.

Sincerely,

Charles P. Smith
Director
Bureau of Justice Assistance

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Acknowledgements

The saying, "time is money," applies to this document more so than the title implies. We know the costs of implementing a pretrial drug testing program can be high; if done incorrectly, they can be enormous. Still, more and more jurisdictions are contemplating the implementation of such a program, and thus, the need for this manual. We recognize that the drug testing technology (not to mention case law) will in all likelihood change significantly in the not-to-distant future; we, therefore, encourage readers to be more attentive to the procedures described rather than the dollar amounts suggested in reading through this manual.

Many professionals have helped in the development and preparation of this document and merit our thanks. First, my peers at the Resource Center have helped through their comments and critiques of each draft to ensure that the final product is of use to practitioners, our primary audience. Special thanks go to Angie Bailey for patiently correcting, printing and distributing countless drafts of this document. Jay Carver, Director of the D.C. Pretrial Services Agency, provided many helpful comments, particularly emphasizing the costs resulting from poorly planned programs. Cary Harkaway, Senior Program Specialist for the Multnomah County Community Corrections Division, and Kim Holloway, Pima County Pretrial Services Director, challenged some of our original assumptions regarding factors relating to costs and pointed out several other factors that we had not initially considered. Several members of Kim's staff, particularly Shelby Myer, kindly researched their records at our behest.

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John Clark
Project Coordinator
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Introduction

In 1984, the National Institute of Justice awarded a contract to the D.C. Pretrial Services Agency to begin a project of drug testing of adult arrestees. The purpose of the project was to test the effectiveness of drug testing as both a tool to assess the risks posed by arrestees of failure to return for court appearances and of being rearrested prior to disposition of the initial case and as a means of reducing those risks for arrestees placed on non-financial conditional release.[1]

In 1987, the Bureau of Justice Assistance (BJA), seeking to replicate and test the newly established "D.C. model" in other jurisdictions, entered into a cooperative agreement with the Pretrial Services Resource Center. The Resource Center agreed to identify from among applicants three sites to implement drug testing within their pretrial programs and to provide technical assistance to those sites during the life of the award.[2] The three sites selected were Pima County (Tucson), Arizona; Multnomah County (Portland), Oregon; and New Castle County (Wilmington), Delaware. The following year three more sites were added: Prince George's County, Maryland; Maricopa County (Phoenix), Arizona; and Milwaukee County, Wisconsin.

Through the experiences of these seven sites, more can now be said about the costs associated with implementing a pretrial drug testing project. Many pretrial programs are looking closely at the experiences of these seven jurisdictions as they consider drug testing for their own systems. As jurisdictions await the results of research being conducted in the selected sites on the effectiveness of pretrial drug testing,[3] as well as a resolution of a constitutional challenge,[4] questions are being raised about some other issues relating to pretrial drug testing -- such as costs -- that are also important for deciding whether this kind of program would be appropriate for and of benefit to a jurisdiction.

The intent of this monograph is to provide some answers to the questions about costs. Until the research is completed and the benefits and shortcomings of drug testing become better defined, planners and policymakers can use this guide to roughly estimate how much it would cost to implement and operate such a program in their jurisdiction. If a decision to proceed with implementation is ultimately made, then more specific cost planning should ensue. The monograph assumes that pretrial drug testing programs will follow the D.C. model; that is, arrestees would be tested before their first appearance in court, the results of the tests would be used in determining release conditions and the defendants placed on supervised release would be monitored with drug testing.[5]

Part I discusses the jurisdictional factors that come into play in estimating costs. They include the size of the arrestee population, the rate of drug abuse in the jurisdiction, the release rate of the jurisdiction, the length of time it takes a case to reach disposition and the salaries the jurisdiction pays its employees.

Part II focuses on the policy and procedural factors that will affect the cost of testing. They include the size of the population that will be targeted for testing, the number of drugs for which the program will test, the scheme of sanctions for violation of the testing condition the jurisdiction will pursue and whether the jurisdiction contracts with an outside laboratory to perform the tests or sets up its own lab.

Part III presents cost models to illustrate how the different jurisdictional and procedural factors are translated into calculations to estimate costs. A worksheet is provided along with these models to allow those considering this program to make cost estimations for their own jurisdictions.

Throughout this monograph, many of the experiences and approaches of the seven testing sites are included to demonstrate how the sites considered these factors in making or adjusting their cost calculations. The lessons learned from their experiences are valuable to any jurisdiction contemplating a testing program.

Part I: Jurisdictional Factors Bearing on Costs of Testing

A. Size of Arrestee Population

The first jurisdictional factor examined is the size of the arrestee population. How many arrestees are brought into the system each year? Most jurisdictions have data on arrest rates; therefore, this factor should be relatively easy to discern. It may be more difficult, however, to define projected increases in arrest rates in the coming years. For example, many cities are currently experiencing large increases in the number of drug arrests as police respond to mounting community concerns about drug use. Pretrial services officials in Pima County, Arizona, for instance, projected a 10 percent increase in the number of felony arrests as they calculated their most recent budget, based on increases in the previous years.

A jurisdiction may opt to target for testing only a segment of the arrestee population. Since this is a policy decision, the impact of this is discussed in Part II.

B. Rate of Drug Abuse in the Jurisdiction

The "positive" rate, or the percentage of the target population that will test positive for drug use upon arrest, will affect costs. A program in a jurisdiction where 80 percent of arrestees test positive will be more costly than in a similar jurisdiction where 40 percent are positive, since more arrestees in the former jurisdiction will be placed in drug monitoring as a condition of release than in the latter jurisdiction.

How does a jurisdiction planning to implement a program make an estimate of the positive rate? This is difficult since many will not have precise data concerning the rate of drug use in the arrestee population. Also, the use of drugs within an arrestee population can fluctuate greatly over a short period of time. For instance, if police intensify enforcement efforts aimed at drug users, the number of arrestees testing positive will also increase. In addition, the use of drugs, such as crack cocaine and PCP, can increase dramatically within a geographical area in a relatively short period of time.

Since most pretrial programs inquire about drug use during the interviews with arrestees, responses to interview questions might be viewed as a good resource for estimating the positive rate. However, research has shown that arrestees/offenders who are drug users routinely deny use during interviews with criminal justice officials.[6] When the D.C. Pretrial Services Agency was making its budget calculations in 1984, it relied on the data received from defendant interviews to estimate the positive rate. It was soon discovered that this approach led to a significant underestimation of the actual positive rate, and an increase in the budget was required. Therefore, jurisdictions attempting to estimate the positive rate should not place great weight on arrestee interviews.

Are reliable resources available, then, which can be useful in estimating the positive rate? One excellent resource is the Drug Use Forecasting (DUF) project. This federally sponsored research effort currently tests arrestees in 18 cities around the country on a quarterly basis for a wide spectrum of drugs.[7] Each quarter, 300 to 350 new arrestees in each city are asked to provide a urine specimen. Results of the tests are not forwarded to court officials, but are used to measure drug use trends in the arrestee population. Any jurisdiction that participates in the DUF project is provided with a very reliable tool for estimating the positive rate. For instance, Phoenix, Arizona, officials used the DUF results during their cost planning process in projecting the positive rate. The DUF results that were available at that time showed that 42 percent of arrestees tested positive, and officials used this figure as their estimate. In the first four months of testing, 45 percent of targeted arrestees had tested positive.

When Prince George's County, Maryland, officials were attempting to project a positive rate for that jurisdiction during their cost planning stage, they looked at drug test result data from the District of Columbia, which borders the county. Data from D.C. at that time showed that 70 percent of arrestees were testing positive, and county officials used that figure as their estimate. In the first several months of operation in that jurisdiction, exactly 70 percent of arrestees were testing

positive. The data on drug use being generated by the seven testing sites and the cities participating in the DUF project can be useful to other jurisdictions seeking to estimate the positive rate. A jurisdiction could examine several of the testing sites that share many similar characteristics with the jurisdiction (e.g., arrest rates (especially for drug charges), admissions to drug treatment programs, drug-related admissions to hospital emergency rooms and medical examiners' records relating to drug overdose deaths) and make projections based on that examination.

C. Rate of Non-Financial Release

The rate of non-financial release, alluded to here as the release rate, refers to the percentage of arrestees who are released from custody non-financially at or immediately following the first appearance in court. All else being equal, a jurisdiction that releases 80 percent of arrestees will have different drug testing costs than one that releases 20 percent, since monitoring costs will parallel the higher release rates. The pretrial services program should have accurate, up-to-date figures concerning the release rate.

The experiences of the seven testing sites suggest that a pretrial drug testing program will almost certainly have an impact on the decisions made at the initial bond-setting hearing. The sites have experienced a decrease in the number of defendants released on their own recognizance with no conditions and an increase in the number of defendants placed on conditional release as the drug tests identify more defendants as being at risk due to previously unidentified drug use. In Pima County, Arizona, for instance, officials experienced a 70 percent decrease in own recognizance releases and over a 300 percent increase in conditional releases, thereby requiring the assignment of additional staff to supervision activities. Therefore, when calculating the release rate, it is important to include the overall non-financial release rate, not just the rate of conditional release.[8]

D. Case Disposition Time and Case Dismissal Rate

Another jurisdictional factor is the amount of time it takes a case to reach disposition. A defendant in a jurisdiction where felony cases average six months to reach disposition could be exposed to the drug monitoring condition for a shorter period than in a jurisdiction that takes one year.

Conversely, procedural factors, such as whether the defendant will be required to report for monitoring during the entire life of the case, will affect the length of time in monitoring. Indeed, the experiences of the seven sites is that very few defendants will remain in testing for the full life of the case unless there is an early disposition. The reasons for this will be discussed in Part II.

In some jurisdictions, early case disposition can be anticipated. For instance, in Pima County, Arizona, the first prosecutorial review of cases in its target population (felony arrestees) takes place anytime up to 20 days after arrest. Within that time period, approximately 50 percent of the cases are dismissed. Therefore, Pima County Pretrial Services officials estimate that half of the target population will reach final disposition within three weeks.

E. Job Classification/Salary Scales

One important factor to be addressed is how much employees in the jurisdiction are to be paid. Many jurisdictions must have positions classified by county or state personnel departments. These classifications will then dictate the salary levels. Receiving such classifications during a cost-exploration stage may be difficult but will be necessary.

Also, the fringe benefit rate of a jurisdiction must be included in any estimation of personnel costs, as well as any forecasted salary increases, job re-classifications, changes in benefits, etc.

Policy decisions will affect the way the program is staffed. Therefore, staffing issues are discussed in Part II.

F. Office Expenses and Renovations

Another factor affecting overall cost is the availability of office space. Will additional office space be required, and if so, will rent have to be paid for that space? If rent is required, is the program responsible for that cost, or does a government agency pay? Have assurances been received from the court, jail or other agency that rent-free space will be available? In New Castle County, Delaware, officials were advised that space would be available in the courthouse at no cost for the program, and they prepared their budget accordingly. That space, however, did not materialize, and the program was suddenly faced with the unanticipated cost of rent.

Also, renovations may be required to office space to accommodate a drug testing lab or other office activities. In Milwaukee County, Minnesota, for instance, extensive renovations were necessary to install the plumbing and electrical wiring required for the testing equipment.

G. Hours of Coverage

What hours will the program need to cover? If the pretrial services program and the court operate 24 hours a day, 7 days a week, will the drug testing component also operate during those hours? In Multnomah County, Oregon, the pretrial interviewing staff work around the clock, and arrestees can be released during any hour. Therefore, the specimen collection staff must also be on duty for extended hours. In jurisdictions where courts only operate during normal business hours, less coverage may be adequate.

Part II: Policy and Procedural Factors Bearing on the Costs of Testing

The policies and procedures that the program follows in implementing its drug testing function will have an impact on costs. This monograph will not address how those policies and procedures should be decided, rather, how such policies can affect cost.

A. The Target Population

A program must decide whether to target for testing all arrestees who are eligible for non-financial release or a segment of that population.[9] It would be more costly to test all arrestees, for instance, than to target only those charged with felonies. Both Maricopa County, Arizona, and Pima County, Arizona, target only felony cases. A jurisdiction could decide similarly to limit the target population and thereby reduce costs.[10]

B. The Drug Screen

The drug screen, or the drugs for which the program tests, will affect costs. For instance, it costs more to test for five drugs than for three. To determine which drugs to target, the program should look to the sources described in the discussion of drug use rates (Part I-B) to get an idea of which drugs tend to be more prevalent. However, due to the rapid changes in drug use trends, it is also wise to factor in the cost of periodically "spot checking" for other drugs not in the primary target.

When the Pima County Pretrial Services program began its testing operations, it used a five-drug screen. After several months of testing, it was determined that PCP and barbiturates were showing positive in less than two percent of arrestees. Officials, therefore, decided to adopt a three-drug screen. It was estimated that this decision would reduce overall testing costs by about 15 percent.

C. Initial Frequency of Testing

A third policy factor bearing on the cost of testing is the initial frequency defendants placed in ongoing monitoring as a condition of release will be tested. A program that tests releasees two times a week will obviously spend more than a similar program that tests only once a week. In Prince George's County, Maryland, releasees are tested two times a week upon entrance into the monitoring program. The other six sites begin the monitoring process with testing once a week and have found this frequency to be adequate.

D. Compliance/Violation Policies

Costs will be affected by the response of the program (and the court) to compliance with and violations of the drug monitoring condition. If defendants' releases are revoked after a first infraction (whether it is a positive result or a missed appointment), they will be in monitoring for much shorter periods than if sanctions short of revocation are utilized.

Once this policy is defined, an estimation must be made as to how many defendants will require sanctions and for what reasons. A defendant who reports but tests positive may require more costly administrative sanctions (e.g., increased frequency of testing, referral to treatment) than a defendant who fails to report for any monitoring appointments. The costs of those missed tests are spared if the defendant does not report. Other defendants may report faithfully and test negative on each occasion. A policy may be established to drop the testing requirement, or reduce the frequency of testing, for those defendants who are in compliance after a specified period of time. Of course, if revocation of release is the sanction that is ultimately imposed for those who do not comply with the condition, then the costs of incarceration need to be taken into consideration. Also, the costs of treatment[11] and additional court time to conduct violation hearings must be borne by some party, and these costs should be considered as well.

It is difficult to present a general "rule of thumb" that can be used by all jurisdictions in estimating the level of compliance and, thereby, the impact of these policies on costs. The number of defendants that will never report for testing appointments, that will report but test positive and that will complete testing due to continued negative results is very

difficult to estimate during a cost planning stage. The level and quality of existing supervision efforts by the program and the success of the program in keeping defendants in compliance with other release conditions is a useful indicator. The response of the court historically in acting on condition violations should also be considered. Still, these are not definitive indicators, and caution should be used in estimating the impact of compliance and violation response schemes on costs.

The experiences of the seven sites may provide a useful "rule of thumb." In their experiences, defendants average about 10 tests during the monitoring period. Many will have significantly more tests, and many will have none at all. After 10 tests, most defendants will have either been released from the program due to continued compliance, removed from the program after sanctioning for positive results or failure to appear, rearrested on new charges or had their cases adjudicated.

E. In-house vs. Contract Lab

The decision of whether to conduct the testing "in-house" or through a contract with an outside laboratory will affect costs. No broad statement can be made about the costs associated with these approaches, since many different factors will affect the cost of either approach. For the in-house lab, for instance, several of the factors discussed so far, such as salary structure and office rental needs, will affect the cost of operating that lab. An additional factor that will affect the cost of an in-house lab is the selection of the testing equipment. Some testing systems are more expensive to purchase and/or operate than others. Some systems must be operated by skilled, higher paid laboratory technicians; others can be operated by less skilled workers. Travel to training sessions may be required in order to learn to operate certain systems. Some systems require expensive plumbing and electrical renovations to office space; others require none. Some operate more efficiently in high volume situations and are not cost-efficient with low volume testing.[12]

A program that plans on utilizing an in-house testing facility and anticipates a high volume of testing may get a discount from the vendors of the chemicals and other supplies required to perform the tests or even receive testing equipment free-of-charge. In Prince George's County, Maryland, for instance, the forecasted volume of testing was high enough that the vendor provided the testing system at no charge. The D.C. Pretrial Services Agency has also received several pieces of equipment from its vendor at no cost due to the volume.

The costs of contracting with an outside lab will also be dependent on several factors. For example, the contract lab may be required to purchase additional testing equipment to handle the increase in volume of specimens to be tested. That cost may be passed along to the pretrial program, either by charging the program directly for the cost of the equipment or by charging higher prices per test so that the added costs to the lab can be absorbed. Also, most labs have long-term contracts with companies that supply the chemicals required to conduct the tests. When these contracts expire, there can be a sizable increase in the cost of those chemicals to the lab. Those costs might be passed on to the pretrial program.

A contract lab may charge a program more if special requests, such as a speedier turnaround time for reporting drug test results, are made. Labs may offer better prices if a certain volume is assured. If there are several labs in the area capable of meeting the needs of the program, the competition may lower prices.

The decision of whether to start an in-house testing facility versus contracting with a laboratory will have cost implications that go beyond the price of the equipment and supplies or the fee charged by the lab. A program considering an in-house facility must assess its ability to accurately and efficiently perform the tasks associated with a testing program. Can dependable staff be hired and trained for collecting and testing specimens, recording results and providing courtroom testimony? In selecting the testing equipment, has the technology been upheld in court as reliable? Likewise, if a contract lab is to be used, great care must be taken in its selection. Does the lab meet appropriate licensing requirements? What are the credentials of the staff of the lab?[13]

Also, a decision to select a certain piece of equipment because it is the least expensive or to contract with the lab that offers the lowest bid may be a more costly decision in the long run if the test results are not accepted in court as reliable. Not only might the reputation of the pretrial program suffer (a heavy price in and of itself), but the program may become embroiled in costly litigation if the reliability and accuracy of the results cannot be clearly demonstrated.

It is important for a jurisdiction considering a pretrial testing program to explore all of the costs associated with both the in-house and contract labs. The approaches of the seven sites illustrate that no one approach is correct. Programs that utilize in-house testing facilities include D.C., New Castle County, Prince George's County and Milwaukee. Multnomah County and Maricopa County have contracted with Treatment Alternatives to Street Crime (TASC) Programs to conduct their tests. Pima County has contracted with a private lab.

F. Approach to Retesting/Confirmation

As a general rule, all samples that test positive should, at minimum, be retested using the same testing technology. It may be desirable, or in some cases necessary, to have samples confirmed by using an alternate testing method of equal or greater sensitivity.[14]

Techniques for confirmation include Gas Chromatography (GC), Gas Chromatography/Mass Spectrometry (GC/MS), High Performance Liquid Chromatography (HPLC) and Thin Layer Chromatography (TLC).[15] The method considered by experts to be the "single most defensible technique" of confirmation is GC/MS.[16] The cost of this method can be high, with prices ranging from $25 to $100 per confirmation test. The other techniques are less costly but suffer from weaknesses not experienced by GC/MS. For instance, in Multnomah County, the testing program originally contracted with a separate lab to perform confirmation by GC for $10 per test. When several specimens that were identified on the original test as positive for cocaine were not confirmed by GC, officials switched to confirmation by GC/MS at $25 per test. Since the switch, the site has yet to experience any specimens that have not been confirmed by GC/MS.

A decision must be made on how to handle a sample that tests positive. A program may establish a policy of performing a confirmation test only if a defendant's release is in jeopardy of being revoked because of positive results. This approach is used in Multnomah County. Another option is to perform a confirmation test if the result is contested by the defendant. Prince George's County has adopted this approach. A third option is to conduct a confirmation on every sample that tests positive. Due to the high costs, none of the sites have yet taken this approach.

Each of these approaches will have different costs associated with them. Since it is generally more feasible to conduct confirmation by alternate technology at an outside lab,[17] the jurisdiction should explore those costs with available labs before deciding on the appropriate approach.

G. Information Processing

The additional information processing needs required for the operation of a drug testing program will have cost implications. In order to supervise the drug monitoring condition, for instance, the existing information system would have to be expanded to include drug test result information from both the pre-initial appearance test and all monitoring tests (this information would also have to reflect if the defendant did not, for whatever reason, submit a specimen and if the defendant reported using any medication that might interfere with the test), compliance information (supervision notes, warnings given to the defendant, violation notices sent to the court, results of court hearings) and the dates on which the defendant must report for testing appointments. Management reports on the testing program activities should include statistics on the positive rate, the rate of collection of specimens and compliance and violation rates. If the project is undergoing an evaluation to assess the effectiveness of testing, information would also have to be collected on defendant demographics, charge information, criminal history and case outcome.

If the volume of testing is small enough, a carefully planned manual information system may be all that is required and should not involve great cost. Automated systems will generally cost more. However, a program that has an existing automated information system that can easily be enhanced for drug testing data will have lower costs than a program that must construct such a system.

The D.C. pretrial program, for instance, had a mainframe system in place before the implementation of the drug testing program. Officials were able to enhance the mainframe program without great cost. In Milwaukee, an existing computer software package was readily adaptable to drug testing data. Officials in Pima County, Multnomah County and New Castle County used a manual information system prior to the implementation of the drug testing project and switched to PC-based systems for the project. Prince George's County officials converted from a manual system to a mainframe system upon implementation of the testing project.

H. Staffing

There are a variety of responsibilities with a drug testing program that extend beyond the normal interviewing and supervision functions of a pretrial services agency. These responsibilities include collecting urine specimens, testing specimens, presenting results at the bond-setting hearing, placing released defendants in the monitoring program, providing supervision to those in monitoring, preparing compliance and violation reports, providing courtroom testimony at violation proceedings, processing test result information, providing quality control in specimen handling and testing, and processing test result-related information, as well as managing the project.[18]

Several of the policy and procedural factors discussed will have an impact on staffing decisions. Whether to conduct the testing in-house or by contract lab will play a role in those decisions.

Implementing an in-house testing program will require more staff than if a contract lab is responsible for sample collection and/or testing. A program that plans for a large volume of testing because of the size of its targeted population and sanction scheme will have to be staffed accordingly. As noted earlier, programs which must provide extended hours of coverage will have greater staffing needs. A program with an automated system may need to employ a computer programmer and data entry staff.

However, there are often existing resources that can be tapped. Each of the seven testing sites have made extensive use of existing personnel. Staff of other departments within the pretrial program, such as budgeting, computer programming and data processing, are called upon to absorb additional duties related to the testing program. Other staff, such as those assigned to interviewing and supervision functions, have been given greater responsibilities. Additional duties are also absorbed by the program's managerial staff.

Part III: Cost Models/Worksheet

Two cost models, "Jurisdiction A" and "Jurisdiction B," are presented to illustrate how the factors discussed in Parts I and II can be used to estimate drug testing costs. A worksheet accompanies these models which jurisdictions interested in estimating their own costs are encouraged to use. An additional copy of the worksheet, minus the references to the two model jurisdictions, appears in Appendix C. Jurisdictions A and B have recorded the appropriate information in Table I.

TABLE I
Models

	Jurisdiction A	Jurisdiction B	Your Jurisdiction
Jurisdictional Factors			
Size of Arrestee Population	15,000/YR	15,000/YR	_____
Positive Rate	70%	50%	_____ %
Release Rate	60%	40%	_____ %
Case Disposition Time	6 Months	4 Months	_____
Office Expenses	$20,000/YR	No Rent Required	_____
Office Renovations	$20,000	None	_____
Hours of Coverage	18	12	_____
Procedural Factors			
Target Population	15,000/YR	8,000/YR	_____
Size of Drug Screen	5	3	_____
Initial Testing Frequency	2 X/WK	1 X/WK	_____
Compliance Policy (# of Monitoring Tests)*	10	10	_____
Lab	In-house Lab	Contract Lab	_____
Confirmation	GC/MS	GC	_____
Info. Sys.	Enhance Mainframe	Add PC	_____
Staffing	Assign 18 FTE	Assign 4 FTE	_____

*Recall from the discussion in Part II on the impact of the compliance/violation policies that the experiences of the seven sites suggest that an average of 10 tests are conducted on each defendant during the monitoring period. Although it is unlikely that all sites would have the same experience, that number is used here to demonstrate how the anticipated number of monitoring tests will be factored into the calculation.

With the information presented in Table I, Jurisdictions A and B now begin the process of estimating the costs of a pretrial drug testing program in their own jurisdictions.

TARGET POPULATION (Part II-A, p. 7)

1. As indicated in Table I, both Jurisdictions A and B have an arrestee population of 15,000 per year. Jurisdiction A has made the policy decision to target all arrestees for testing. Jurisdiction B has decided to target only felony arrestees, who number 8,000 per year.

JURISDICTION A:	15,000/YR
JURISDICTION B:	8,000/YR
YOUR JURISDICTION:	_____

SIZE OF DRUG SCREEN (Part II-B, p. 7)

2. Jurisdiction A has decided to test for five separate substances, and B has chosen a three-drug screen.

JURISDICTION A:	5
JURISDICTION B:	3
YOUR JURISDICTION:	_____

IN-HOUSE vs. CONTRACT LAB (Part II-E, p. 8)

Cost Per Screen

3. After surveying all local contract labs and meeting with representatives of drug testing equipment vendors, Jurisdiction A has decided to set up an in-house lab using the "XYZ" testing system. The equipment vendor has calculated that the chemicals and other supplies needed to conduct tests for the jurisdiction on system XYZ will average $1 per test.

   Jurisdiction B also surveyed all local labs and met with representatives of equipment vendors and decided to contract with a private lab. This lab would assume the responsibility for all collection and testing of specimens and will charge $2.50 per test.

   To calculate the cost of each screen using the selected testing technology or approach, MULTIPLY THE COST OF EACH INDIVIDUAL TEST BY THE SIZE OF THE DRUG SCREEN (LINE 2).

JURISDICTION A:	$1 x 5 = $5.00
JURISDICTION B:	$2.50 x 3 = $7.50
YOUR JURISDICTION:	$___ x ___ = $___

Cost of Testing Equipment

4. In Jurisdiction A, the vendor of the XYZ testing system has quoted a price of $50,000 to purchase the system. Since Jurisdiction B is using a contract lab which has the necessary equipment, that jurisdiction has no testing equipment costs. (Equipment purchasing cost is a start-up cost, to be budgeted only in the first year of operation.)

JURISDICTION A:	$50,000
JURISDICTION B:	No Costs
YOUR JURISDICTION:	$_____

INFORMATION SYSTEM (Part II-G, p. 9)

5. Jurisdiction A has decided to enhance its existing mainframe computer system, and Jurisdiction B will switch from a manual to a PC-based system. Since Jurisdiction A is already tied into the county's mainframe system and has an experienced mainframe programmer on staff, its information system costs will be limited to the purchase of three additional terminals at a cost of $2,000 each, for a total of $6,000. Jurisdiction B will purchase one personal computer, one printer and a software package, for a total of $3,000. (Computer equipment is also a start-up cost.)

JURISDICTION A:	$6,000
JURISDICTION B:	$3,000
YOUR JURISDICTION:	$_____

OFFICE EXPENSES AND RENOVATIONS (Part I-F, p. 4)

6. According to Table I, Jurisdiction A pays $20,000 a year for rent of office space, and Jurisdiction B pays no rent.

JURISDICTION A:	$20,000
JURISDICTION B:	No Costs
YOUR JURISDICTION:	$_____

7. As indicated in Table I, Jurisdiction A would need $20,000 for the renovation of the rented office space. Jurisdiction B had no renovation costs. (These are first year costs only.)

JURISDICTION A:	$20,000
JURISDICTION B:	No Costs
YOUR JURISDICTION:	$_____

ESTIMATING THE COST PER SCREEN OF PRE-INITIAL APPEARANCE TESTING

8. Multiply the size of the target population by the cost per screen. MULTIPLY LINES 1 AND 3.

JURISDICTION A:	15,000 x $5 = $75,000
JURISDICTION B:	8,000 x $7.50 = $60,000
YOUR JURISDICTION:	_____ x $_____ = $_____

ESTIMATING THE COST PER SCREEN OF MONITORING TESTING

9. The first step is to estimate the NUMBER of defendants who will test positive at the pre-initial appearance test. MULTIPLY LINE 1 (THE TARGET POPULATION) BY THE POSITIVE RATE IN TABLE I. **(Part I-B, p. 3)**

JURISDICTION A:	15,000 x 70% = 10,500
JURISDICTION B:	8,000 x 50% = 4,000
YOUR JURISDICTION:	_____ x __% = _____

10. The next step is to estimate how many defendants who do test positive at the pre-initial appearance test will be released and placed in monitoring. MULTIPLY LINE 9 BY THE RELEASE RATE IN TABLE I. **(Part I-C, p. 4)**

JURISDICTION A:	10,500 x 60% = 6,300
JURISDICTION B:	4,000 x 40% = 1,600
YOUR JURISDICTION:	_____ x __% = _____

11. To estimate the total NUMBER of monitoring screens conducted during a year, MULTIPLY LINE 10 BY 10 (or whatever number is used to estimate the average number of monitoring appointments for each defendant). **(Part II-D, p. 7)**

JURISDICTION A:	6,300 x 10 = 63,000
JURISDICTION B:	1,600 x 10 = 16,000
YOUR JURISDICTION:	_____ x __ = _____

12. Multiply the cost per screen by total number of monitoring screens conducted during a year for the total yearly COSTS of the monitoring screens. MULTIPLY LINES 3 AND 11.

JURISDICTION A:	63,000 x $5 = $315,000
JURISDICTION B:	16,000 x $7.50 = $120,000
YOUR JURISDICTION:	_____ x $___ = $_____

APPROACH TO RETESTING/CONFIRMATION (Part II-F, p. 9)

13. Jurisdiction A has adopted the policy to confirm by alternate technology only in circumstances where a defendant's release may be revoked because of a positive result; that is, all administrative sanctions have been exhausted and the program has requested a revocation hearing before the court. Only the most recent specimen that tests positive will be confirmed. Jurisdiction A estimates that 10 percent of all defendants placed in monitoring will require a confirmation test using this policy. Jurisdiction B performs confirmation in each instance in which the defendant contests the test results and has estimated that 25 percent of defendants placed in monitoring will fall into this category. To estimate the NUMBER of confirmation tests, MULTIPLY THE NUMBER OF DEFENDANTS IN MONITORING (LINE 10) BY THE PERCENT OF DEFENDANTS REQUIRING CONFIRMATION.

JURISDICTION A:	6300 x 10% = 630
JURISDICTION B:	1600 x 25% = 400
YOUR JURISDICTION:	____ x __% = ___

14. As seen from Table I, Jurisdiction A has chosen to confirm positive results by Gas Chromatography/Mass Spectrometry while Jurisdiction B has opted for the Gas Chromatography technique. The figures of $25 per test for GC/MS and $10 for GC are used for demonstration purposes only. To estimate the COST of confirmation tests, MULTIPLY LINE 13 BY THE COST PER TEST OF THE CHOSEN TECHNIQUE.

JURISDICTION A:	630 x $25 = $15,750
JURISDICTION B:	400 x $10 = $10,000
YOUR JURISDICTION:	____ x $__ = $____

STAFFING (Part II-H, p. 10)

15. As indicated in Table I, Jurisdiction A will require the equivalent of 18 full-time staff positions while 4 will be required in Jurisdiction B. Jurisdiction A will be conducting testing in-house and is, therefore, responsible for all specimen collection and testing for 16 hours each day. In Jurisdiction B, these responsibilities will be assumed by the contract lab. Jurisdiction A has estimated that 6,300 defendants will be placed in its monitoring program in a year while Jurisdiction B estimates only 1,600 (Line 9). By using the Sample Job Descriptions outlined in Appendix B, these jurisdictions have developed the following staffing plans.

JURISDICTION A:

Position	Salary	Number Required	Total Salary
Testing Tech.	$18,000	x 3	= $54,000
Collection Tech.	$15,000	x 6	= $90,000
Supervision Officer	$20,000	x 5	= $100,000
Data Processor	$15,000	x 3	= $45,000
Project Supervisor	$25,000	x 1	= $25,000
Total		18	$314,000
Benefits at 25% = .25 x 314,000			= $78,500
Grand Total			**$392,500**

JURISDICTION B:

Position	Salary	Number Required	Total Salary
Supervision Officer	$18,000	x 2	= $36,000
Data Processor	$15,000	x 1	= $15,000
Project Supervisor	$22,000	x 1	= $22,000
Total		4	$73,000
Benefits at 25% = .25 x 73,000			= $18,250
Grand Total			**$91,250**

YOUR JURISDICTION:

Position	Salary	Number Required	Total Salary
_____	$____	x ___	= $_____
_____	$____	x ___	= $_____
_____	$____	x ___	= $_____
_____	$____	x ___	= $_____
_____	$____	x ___	= $_____
_____	$____	x ___	= $_____
_____	$____	x ___	= $_____
Total		___	$_____
Benefits			= $_____
Grand Total			= $_____

ADDING UP THE COSTS

Start-Up Costs

16. Purchasing testing equipment and computer equipment and making office renovations are costs usually incurred only in the first year of operation. To calculate these one time costs, ADD LINES 4, 5 AND 7.

JURISDICTION A: $50,000 + 6,000 + 20,000 = $76,000
JURISDICTION B: 0 + $3,000 + 0 = $ 3,000
YOUR JURISDICTION: $____ + $____ + $____ = $_____

Yearly Operational Costs

COST PER SCREEN OF PRE-INITIAL APPEARANCE AND MONITORING TESTING

17. ADD LINES 8 AND 12.

JURISDICTION A: $75,000 + $315,000 = $390,000
JURISDICTION B: $60,000 + $120,000 = $180,000
YOUR JURISDICTION: $____ + $_____ = $_____

COST OF CONFIRMATION

18. RECORD THE FIGURE FROM LINE 14.

JURISDICTION A: $15,750
JURISDICTION B: $10,000
YOUR JURISDICTION: $_____

STAFFING

19. RECORD THE FIGURE FROM LINE 15.

JURISDICTION A:	$392,500
JURISDICTION B:	$91,250
YOUR JURISDICTION:	$_____

OFFICE EXPENSES

20. RECORD THE FIGURE FROM LINE 6.

JURISDICTION A:	$20,000
JURISDICTION B:	No Costs
YOUR JURISDICTION:	$_____

TOTAL YEARLY OPERATIONAL COSTS

21. ADD LINES 17, 18, 19 AND 20

JURISDICTION A:	$818,250
JURISDICTION B:	$281,250
YOUR JURISDICTION:	$_____

TOTAL COST FOR FIRST YEAR OF OPERATION

22. ADD LINES 16 AND 21

JURISDICTION A:	$894,250
JURISDICTION B:	$284,250
YOUR JURISDICTION:	$_____

There is a substantial difference in the total costs of operation between Model Jurisdictions A and B, even though both have the same size arrestee population. This illustrates that estimating costs is much more complex than simply comparing arrestee populations. Clearly, jurisdictional differences between A and B, such as projected positive rates, release rates and office expenses, led to some of the cost differential. Policy decisions made within the jurisdictions, such as on the size of the target population, also affected the final costs.

Since the policy and procedural decisions a jurisdiction makes can have a major impact on costs, various options should be explored. Additional copies of the worksheet in Appendix C should be made so that the costs of these options can be estimated. For instance, after researching all the costs associated with both the in-house and the contract lab, one may wish to complete one copy of the worksheet using the costs that would be incurred with the in-house lab and then compare that with another copy that records the costs of a contract lab. It bears repeating, however, that any decisions about approaches equipment, etc., should not be driven by whichever worksheet records the lowest total amount. In the long run, what appears to be the least costly approach may result in being the most costly.

These models do not incorporate the costs of other expenses involved in a pretrial drug testing program, such as treatment, court time for compliance or revocation proceedings, and jail space for defendants whose release has been revoked; those costs are extra. Jurisdictions interested in implementing a pretrial drug testing program must involve all system actors to reach agreement on how these costs would be met.

Conclusion

At the outset, it was mentioned that cost is one of the "other" issues that can be explored while legal issues are being resolved and the latest round of research on the effectiveness of pretrial drug testing is completed.

There are several other issues, more basic than approximating costs, that must also be explored. A jurisdiction considering this program should first ask itself, "Why do we want pretrial drug testing?" Is it viewed as a risk assessment tool, a jail reduction tool or, perhaps, both? How would these goals be accomplished? Could a drug testing program be successfully integrated into the existing pretrial services program? Is the information currently provided by the pretrial services program respected enough by the court so that drug test results will not receive inappropriate consideration? Are the pretrial program staff sufficiently schooled in the supervision of released defendants so as not to be overwhelmed by the added supervision responsibilities required with drug monitoring? Will the rest of the system actors support the pretrial drug testing program? What drug treatment resources are currently available? What impact would drug testing have on those resources?

Before a decision is made to begin a pretrial drug testing program in a jurisdiction, each of these issues must be thoroughly addressed. It is only after these issues have been resolved that a jurisdiction should begin to look at costs.

Appendix A: Program Announcement

Drug Testing and Intensive Supervision (DTIS) Program

(Issued Spring 1988)

Introduction

For judges and magistrates, bail-setting is a critical and difficult process, usually conducted hurriedly and often with inadequate information about the arrestee, victim or crime. Inappropriate release or inadequate supervision of releasees may result in additional harm or trauma to victims, in other crimes being perpetrated by releases or in justice delayed when the arrestees fail to appear for court. If, on the other hand, the court unnecessarily detains the defendant at the bail-setting stage, similarly undesirable effects will occur, such as crowded jail conditions with harmful effects on jail inmates and staff and expensive civil litigation.

In recognition of this dilemma, pretrial services agencies have been established to assist judicial officers in this crucial process. Such agencies gather verified information on arrestees, evaluate the information obtained based on research related to potential flight and/or pretrial crime, and make recommendations to judicial officers regarding appropriate conditions of release or detention.

In determining the appropriate information to be provided judicial officers and its relative value in the release decision, pretrial programs have been appropriately cautious. Working within statutory guidelines, programs have examined factors such as community ties, employment and prior criminal record to assess the value of such information in predicting flight or danger.

Pretrial agencies have also been cautious in their inclusion of new types of information provided to judicial officers, requiring the demonstration of a clear relationship to pretrial conduct. One such new area is drug usage information.

The relationship between drug usage and criminal activity has long been theorized; in fact, decisions concerning pretrial release and sentencing routinely consider self-reported drug usage. In the pretrial area specifically, it appears that research currently underway may support the hypothesis that a correlation exists between positive drug test results and increased levels of pretrial misconduct. This research, funded by the National Institute of Justice (NIJ), is examining and evaluating the urine testing program conducted by the D.C. Pretrial Services Agency, whereby arrestees are routinely tested for drug usage prior to their initial appearance. Test results are made available to the court in setting conditions of release, which may include further urine testing during the pretrial period.

Nationally, drug use by arrestees may be much more prevalent than has been assumed; other NIJ research indicates that over half of those arrested in two major cities over the past two years had used drugs just prior to arrest. Additional NIJ research involves periodic testing for drug use among new arrestees in some 20 cities to more accurately assess levels of usage throughout the country.

The serious problem of drug abuse among crime defendants is balanced in part by the technical and administrative resources and experience at the disposal of the criminal justice system. Intensive monitoring of drug-using offenders has long been championed by Treatment Alternatives to Street Crime (TASC) Programs as an effective way to significantly reduce criminal activity. Finally, credible and timely information to identify and monitor drug users is now available through the use of urine testing technology.

In July 1987, the Bureau of Justice Assistance (BJA), under the Detection and Monitoring of Drug-using Arrestees (DMDA) Program, selected three jurisdictions to demonstrate drug abuse detection and monitoring practices developed and implemented in the District of Columbia and to determine the feasibility of their use in other jurisdictions. BJA now intends to demonstrate these practices in additional sites under the Drug Testing and Intensive Supervision (DTIS) Program. It is for this purpose that the following program plan is announced.

Proposal Guidelines

The following guidelines have been prepared for sites seeking DTIS project funding. There are two categories: Qualifying Prerequisites and Selection Criteria.

The **Prerequisites** describe conditions that jurisdictions must satisfy in order to be considered as a demonstration site.

The **Selection Criteria** describe the issues and practices that sites should address in their applications. Proposals should respond thoroughly to these criteria and include rationales for the proposed approach. Responses to these criteria and information collected through on-site visits will form the basis for the recommendations made by the Pretrial Services Resource Center to BJA for site selection.

Prerequisites

A. Documentation of the level and type of drug usage that exists in the criminal justice population to establish firm evidence of the nature of the drug abuse problem in the jurisdiction. Information from such sources as reference laboratories, medical examiners' offices, emergency room admissions, Drug Abuse Warning Network (DAWN) and local treatment facilities should support criminal justice system-based data.

B. Existence of a non-adversarial agency that routinely provides magistrates or judges with background information on arrestees for bail-setting purposes. Such information should be accompanied by specific recommendations as to appropriate conditions of release.

C. Existence of a non-law enforcement agency that by statute or court rule supervises persons conditionally released before trial and notifies the court of compliance with pretrial release conditions.

D. Specific documentation of all available drug treatment resources existing in the jurisdiction with linkage to the criminal court system and/or resources that would be available for treatment purposes.

E. Documentation by letter from the chief or presiding judge of the jurisdiction of the court's knowledge of the DTIS Program and willingness to participate in the event of a grant award.

F. Willingness to participate in an independent program assessment to be supported by the Bureau of Justice Assistance and administered by the Pretrial Services Resource Center.

Selection Criteria

Applicants should address the following issues in their applications:

A. Population to be tested:

The proposal should identify the target population for the DTIS Program and explain why that group is appropriate. Since it is expected that drug test results will be made part of pretrial reports being generated by the agency, the population to be tested should not exceed that for which such reports are prepared. To provide test information without other background information relevant to bail-setting would be improper and potentially misleading.

B. Chain of custody of urine samples and test data:

The proposal should provide a step-by-step description of the procedure by which urine samples would be obtained from defendants and proposed methods for ensuring secure handling of samples (including prevention of misidentification of samples) and test results.

The proposal should detail the steps in the chain of custody from the point of contact with defendants, through transportation of the sample to the testing facility, to laboratory analysis and reporting of test results, to those responsible for recommending release conditions. The proposal should also describe procedures to be employed when collecting and testing samples obtained post-release from those being monitored during the pretrial period. The location of all proposed urine collection sites should be described.

C. Testing procedures:

The proposal should describe the testing technology and equipment that would be used to test for drug use. Many factors will influence the choice of technology/equipment: size of the population to be tested, ability to furnish test results prior to initial bail-setting, cost of equipment and reagents, access to existing equipment in the jurisdiction, required staff training and proficiency checks, the existence of an accredited lab in the area and the reliability and capacity of the various equipment available. The proposal should also provide all available documentation regarding the level of reliability expected with the planned testing technology.

Whether in-house or contracted laboratory services are proposed for initial or confirmatory testing procedures, the proposal should provide information on planned lab staff skill levels and professional certification (particularly for the technical director position), proficiency testing procedures and lab accreditation.

D. Retesting and confirmatory testing:

The proposal should describe procedures for retesting and for independent confirmatory testing of samples found positive for certain drugs prior to the initial appearance or during post-release monitoring and the circumstances under which each form of testing would take place. The sensitivity of the technology to be used for confirmatory testing must, by toxicological definition, be equivalent to or greater than that used in the initial, or presumptive, test. Also, any confirmatory testing method must be based on chemical principles different than that of the initial test.

E. Impact of "positive" test on the pretrial report recommendation:

It is intended that drug test results be incorporated in the current recommendation to the releasing official for use in determining conditions of release at the initial bail hearing. The proposal should outline how test results -- particularly positive results -- would be taken into account in conditional release recommendations provided to the court. While it is anticipated that in no instance would a positive urine test alone result in a recommendation against release, it is important that drug test results be included in the existing recommendation scheme. Proposals should describe the current recommendation scheme including criteria on which recommendations are made and how that scheme would incorporate drug test result information.

F. Procedures for monitoring conditionally released defendants for further drug use:

It is anticipated that arrestees identified as drug users at the initial test and/or interview will be required to submit to urine testing as a condition of non-financial release, unless direct referral to treatment is ordered. The proposal should describe the extent of court-ordered drug testing planned during the pretrial period, including the frequency of required tests and how that frequency might be altered due to positive or negative test results. In addition, the proposal should describe current supervised release activities.

G. Responses to violations of pretrial drug testing requirements:

No system of drug use surveillance (or any form of release supervision) during the pretrial period is viable if clarity does not exist regarding agency responses and court sanctions. The proposal should review what courses of action would be anticipated in the instance of repeated positive test results or failure to appear for required post-release testing. For example, the supervising agency might impose more restrictive release conditions, refer individuals to treatment programs or seek bail revocation or incarceration through contempt-of-court procedures. Planned responses for escalation and de-escalation of release conditions should be outlined, as well as the circumstances in which they would be applied by the supervising agency or sought from the court.

H. Drugs to be targeted:

The technology currently exists for identifying a wide range of drugs through urinalysis. The proposal should list those drugs that would be targeted by the program. The proposal should discuss the factors leading to the decision of which drugs to test, focusing on how the identification of each targeted drug might aid in risk assessment and supervision. For example, the District of Columbia does not test for marijuana usage for two reasons: the evidence that marijuana usage correlates with increased likelihood of failure to appear or of rearrest has not been demonstrated and the cost for such a test is higher than for other drugs.

Also, since jurisdictions may lack reliable information on the most prevalent drugs of abuse in their criminal justice population, the proposal should describe the means by which the initial drug target list might be adjusted following program implementation.

I. Procedures to limit the use of drug test results:

Strict protocol should govern access to and use of individual drug test result records. The proposal should describe procedures to ensure that pretrial drug test results will not be used in the charging decision, in the adjudication of guilt or innocence, or in probation/parole revocation proceedings. The proposal should list the agencies/actors proposed to have access to test information on individual defendants and discuss how such information would be used by those agencies/actors.

J. Staffing:

The proposal should provide a staffing plan for the drug testing and monitoring process. Projected effects on staffing of other agencies in the court system should also be detailed if funds are requested for such staff. The staffing plan should include brief job descriptions for proposed positions. If resumes of persons slated to fill DTIS project positions are available, they should be included. The staffing plan should also describe any special staff training that would be necessary.

K. Information system:

Supervised conditional release programs must employ a routine information system of monitoring and documenting the conditions-related performance of individual releasees. Proposals should describe the manual or automated information system currently used for supervision purposes and how it would be adapted to the monitoring of drug abusing releasees. If a new or substantially revised information system is anticipated, that system should be described. Quality control and security procedures should also be described.

L. Budget:

Anticipating an award date of April 1, 1988, proposals should include a detailed budget for start-up and normal operating costs for a 15-month period only (April 1, 1988 - June 30, 1989). Extended federal support for this program cannot be anticipated. Budgets should cover all facets of pretrial drug testing and monitoring for which monies are sought. Particular attention should be given to developing accurate estimates of the expense of the drug testing function (e.g., test equipment, supplies and chemical reagents, maintenance contracts, staff training) and whether testing would be conducted in-house or under contract to an outside laboratory.

M. Timetable:

Proposals should include a schedule for all start-up activities necessary prior to beginning drug testing and monitoring procedures. Tasks would include such items as completion of a procedural manual for drug testing, completion of a memorandum of understanding between all involved system actors, staff hiring, creation of a DTIS project information system and reporting mechanism for test results and post-release monitoring, establishment of in-house laboratory or outside testing services, and so on. Drug testing programs should be operational within 90 days of the grant award date, projected as April 1, 1988.

N. Coordination with other agencies:

Creation of a pretrial drug testing and monitoring program requires coordination among all agencies involved in or affected by program operations. Such agencies should be notified of program purpose, scope, information dissemination, agency responsibilities and timetable. Proposals should indicate which agencies would be involved in planning and implementation if a grant is received and whether those agencies have been fully informed regarding the proposal for DTIS Program funding.

Appendix B: Sample Job Descriptions

Note: The sample job descriptions listed below describe the types of duties that must be performed in an in-house testing facility. If a contract lab is used, the pretrial services program would not need a testing technician and, if the contracted lab was to be responsible for specimen collection as well as testing, a collection technician.

Drug Testing Technician

Duties and Responsibilities:

- o Demonstrate proficiency in the analysis of urine specimens utilizing the _____ technology;
- o Ensure calibration and maintenance of testing equipment in strict accordance with established protocol;
- o Maintain accurate and complete records of all specimens analyzed;
- o Maintain inventory of all lab supplies.

Specimen Collection Technician

Duties and Responsibilities:

- o Directly observe the submission of urine specimens to prevent tampering with the specimen;
- o Maintain strict chain-of-custody procedures in handling urine specimens.

Supervision Officer

Duties and Responsibilities:

- o Evaluate and assign all defendants referred by the court for appropriate placement in a program;
- o Provide treatment referrals for defendants requesting and/or ordered to be placed in treatment;
- o Move defendants from one phase of monitoring program to another in accordance with compliance/violation scheme;
- o Prepare written compliance/violation reports to the court;
- o Testify in court at violation proceedings as to defendants' records of compliance or non-compliance with program requirements.

Data Processing

Duties and Responsibilities:

- o Accurately enter defendant drug test results and other supervision information into computer system.

Project Supervisor

Duties and Responsibilities:

- o Hire and train new staff;
- o Schedule staff;
- o Supervise staff, ensuring strict adherence to written procedures;
- o Maintain procedural manual, making updates as changes occur.

Appendix C: Additional Worksheet

TABLE I

JURISDICTIONAL FACTORS

SIZE OF ARRESTEE POPULATION	_____
POSITIVE RATE	_____ %
RELEASE RATE	_____ %
CASE DISPOSITION TIME	_____
OFFICE EXPENSES	_____
OFFICE RENOVATIONS	_____
HOURS OF COVERAGE	_____

PROCEDURAL FACTORS

TARGET POPULATION	_____
SIZE OF DRUG SCREEN	_____
INITIAL TESTING FREQUENCY	_____
COMPLIANCE POLICY (NUMBER OF MONITORING TESTS)	_____
LAB	_____
CONFIRMATION	_____
INFORMATION SYSTEM	_____
STAFFING	_____

1. Target Population (**Part II-A, p. 7**) _____
2. Size of Drug Screen (**Part II-B, p. 7**) _____

IN-HOUSE vs. CONTRACT LAB (Part II-E, p. 8)

3. Cost per Screen: To calculate the cost of each screen using the selected testing technology or approach, MULTIPLY THE COST OF EACH INDIVIDUAL TEST BY THE SIZE OF THE DRUG SCREEN (LINE 2).

$\$$_____ x _____ = $\$$_____

4. Cost of Testing Equipment $\$$_____
5. Information System (**Part II-G, p. 9**) $\$$_____

OFFICE EXPENSES AND RENOVATIONS (Part I-F, p. 4)

6. Expenses (Rent) $\$$_____
7. Renovation $\$$_____

ESTIMATING THE COST PER SCREEN OF PRE-INITIAL APPEARANCE TESTING

8. Multiply the size of the target population by the cost per screen. MULTIPLY LINES 1 AND 3.

_____ x $\$$_____ = $\$$_____

ESTIMATING THE COST PER SCREEN OF MONITORING TESTING

9. The first step is to estimate the NUMBER of defendants who will test positive at the pre-initial appearance test. MULTIPLY LINE 1 (THE TARGET POPULATION) BY THE POSITIVE RATE IN TABLE I. **(Part I-B, p. 3)**

_____ x _____% = _____

10. The next step is to estimate how many defendants who do test positive at the pre-initial appearance test will be released and placed in monitoring. MULTIPLY LINE 9 BY THE RELEASE RATE IN TABLE I. **(Part I-C, p. 4)**

_____ x _____% = _____

11. To estimate the total NUMBER of monitoring screens conducted during a year, MULTIPLY LINE 10 BY 10 (or whatever number is used to estimate the average number of monitoring appointments for each defendant). **(Part II-D, p. 7)**

_____ x _____ = _____

12. Multiply the cost per screen by total number of monitoring screens conducted during a year for the total yearly COSTS of the monitoring screens. MULTIPLY LINES 3 AND 11.

_____ x $\$$_____ = $\$$_____

APPROACH TO RETESTING/CONFIRMATION (Part II-F, p. 9)

13. To estimate the NUMBER of confirmation tests MULTIPLY THE NUMBER OF DEFENDANTS IN MONITORING (LINE 10) BY THE ESTIMATED PERCENTAGE OF DEFENDANTS REQUIRING CONFIRMATION.

_____ x _____ % = _____

14. To estimate the COST of confirmation tests, MULTIPLY LINE 13 BY THE COST PER TEST OF THE CHOSEN TECHNIQUE.

_____ x $_____ = $_____

15. Staffing **(Part II-H, p. 10)**

Position	Salary	Number Required	Total Salary
_____	$_____	x ___	= $_____
_____	$_____	x ___	= $_____
_____	$_____	x ___	= $_____
_____	$_____	x ___	= $_____
_____	$_____	x ___	= $_____
_____	$_____	x ___	= $_____
_____	$_____	x ___	= $_____
Total		___	$_____
Benefits			= $_____
Grand Total			= $_____

ADDING UP THE COSTS

Start-Up Costs

16. Purchasing testing equipment and computer equipment and making office renovations are costs usually incurred only in the first year of operation. To calculate these one time costs, ADD LINES 4, 5 AND 7.

$_____ + $_____ + $_____ = $_____

Yearly Operational Costs

COST PER SCREEN OF PRE-INITIAL APPEARANCE AND MONITORING TESTING

17. ADD LINES 8 AND 12.

$_____ + $_____ = $_____

COST OF CONFIRMATION

18. RECORD THE FIGURE FROM LINE 14.

$_____

STAFFING

19. RECORD THE FIGURE FROM LINE 15. $_____

OFFICE EXPENSES

20. RECORD THE FIGURE FROM LINE 6. $_____

TOTAL YEARLY OPERATIONAL COSTS

21. ADD LINES 17, 18, 19 AND 20. $_____

TOTAL COST FOR FIRST YEAR OF OPERATION

22. ADD LINES 16 AND 21. $_____

*****COST OF TREATMENT, JAIL TIME AND COURT TIME NOT INCLUDED*****

Appendix D: Testing Site Contacts

Jay Carver, Director
D.C. Pretrial Services Agency
400 F Street, N.W., 3rd Floor
Washington, D.C. 20001
202/727-2911

Cary Harkaway
Senior Program Specialist
Multnomah County Community Corrections
1120 S.W. 5th, Suite 1500
Portland, OR 97212
503/248-3980

Kim Holloway, Director
Superior Court Pretrial Services
110 W. Congress, 9th Floor
Tucson, AZ 85701-1317
602/740-3310

Al Hall
Pretrial Release Coordinator
Prince George's County Dept. of Corrections
13400 Dille Drive
Upper Marlboro, MD 20772
301/952-7121

Bob Saynor, Assistant Executive Director
Wisconsin Correctional Service
436 West Wisconsin Avenue
Milwaukee, WI 52003
414/271-2512

Terri Jackson, Director
Maricopa County Pretrial Services
101 West Jefferson
Phoenix, AZ 85003
602/261-7546

Jacqueline Wilson Senigo
Project Director
Department of Corrections
1232 King Street, Ground Floor
Wilmington, DE 19801
302/571-6497

Endnotes

1. Carver, John A., "Drugs and Crime: Controlling Use and Reducing Risk Through Testing," National Institute of Justice Reports (September/ October 1986).

2. To solicit proposals, the Resource Center issued a Program Announcement that set forth several prerequisites that applying jurisdictions must have met in order to be considered for funding. The Program Announcement also provided the framework within which successful applicants would be required to operate. The Program Announcement appears in Appendix A.

3. The programs in operation in Pima County and Maricopa County are being assessed by Dr. Michael Gottfredson of the University of Arizona through a grant from the National Institute of Justice. The programs in New Castle County, Prince George's County and Milwaukee County are being assessed by Dr. John S. Goldkamp of Temple University through a grant from the Bureau of Justice Assistance. Dr. Stefan Kapsch of Reed College is conducting the assessment in Multnomah County, which is also funded by the Bureau of Justice Assistance. The D.C. Pretrial Services Agency's testing program has been evaluated. See Mary A. Toborg, Anthony M.J. Yezar, and John P. Bellassai, "Assessment of Pretrial Urine-Testing in the District Of Columbia: Monographs 1-6," National Institute of Justice (June 1986) (Draft).

4. In Berry v. District of Columbia (833 F.2d 1031 (D.C. circuit 1987)), the U.S. Court of Appeals remanded the case to the District Court for a full hearing on the constitutional issues involved in drug testing as a condition of pretrial release. For a discussion of the constitutional issues related to drug testing at the initial court appearance, see Cathryn Jo Rosen and John S. Goldkamp, "The Constitutionality of Drug Testing at the Bail Stage," The Journal of Criminal Law and Criminology (November 1988).

5. In this monograph, "drug testing" refers to urinalysis. Other methods of detecting drugs in the body that are currently in use or being explored include blood, hair and saliva analysis. Since urinalysis is the technique currently applied in criminal justice programs, it is that technique which is addressed here. Also, the terms "monitoring" or "drug monitoring" refer to the ongoing testing of releasees as a condition of supervised release.

6. Toborg, Monograph # 4, p. 7. See also Eric D. Wish, Mary Cuadrado and John A. Martorana, "Estimates of Drug Use in Intensive Supervision Probationers: Results From A Pilot Study," Federal Probation, Volume L (December 1986): 416.

7. The DUF Program, sponsored by the National Institute of Justice and the Bureau of Justice Assistance, is operating in the following cities: Los Angeles, CA; San Diego, CA; Portland, OR; Phoenix, AZ; Houston, TX; New Orleans, LA; Chicago, IL; Detroit, MI; Fort Lauderdale, FL; Washington, D.C.; New York, NY; Birmingham, AL; and Dallas, TX. Plans are currently underway to expand the program to San Antonio, TX; Philadelphia, PA; St. Louis, MO; Kansas City, MO; and Cleveland, OH. For the latest information on the DUF Program, contact the National Institute of Justice at 202/272-6010.

8. As stated at the outset, this monograph assumes that jurisdictions would be following the D.C. model. In the D.C. program, drug monitoring is used as a condition of non-financial release. Therefore, this monograph defines the release rate in terms of non-financial release.

9. If the target population differs substantially from the total arrestee population (Part I-A), then adjustments to the positive rate, release rate and case disposition time (Parts I-B, C, D) may be needed. For instance, if a target population of only felony arrests is selected, the release rate for felony charges may differ from the overall release rate.

10. In light of the unresolved legal issues surrounding pretrial drug testing, great care must be taken in selecting the population to be tested. Drug testing does constitute a search under the Fourth Amendment; therefore, equal protection considerations may be raised if one group within the arrestee population is targeted for this search and another group is spared. Any jurisdiction considering the implementation of a pretrial drug

testing program should consult with counsel prior to the selection of a target population.

11. A panel of drug treatment experts in 1987 estimated the following annual treatment costs: $3,000 per patient treatment slot per year for outpatient methadone maintenance; $2,300 per patient slot per year for outpatient drug-free treatment; and $14,600 per patient treatment slot for non-hospital residential drug-free treatment. See "Special Report on Meeting of Selected State Directors and Other Experts to Develop Reasonable Estimates on Drug Treatment Costs for Needle Drug Abusers," National Association of State Alcohol and Drug Abuse Directors, September 2, 1987.

12. This monograph does not describe any of the features of currently available testing systems. New technologies are becoming available in rapid fashion; therefore, a description of the features of current systems may be outdated in a short time and be of little use to readers. For this reason, this monograph also refrains from presenting the current costs of various testing systems. Interested readers should contact the vendors of the various testing systems or the Pretrial Services Resource Center to receive the most up-to-date description of features and costs.

13. For a discussion of all the factors to be considered in selecting a lab, see Robert E. Willette, "Choosing A Laboratory," Urine Testing for Drugs of Abuse, National Institute on Drug Abuse, Research Monograph Number 73 (1986): 13-19. A copy of this document may be obtained free of charge from the National Clearinghouse for Drug Abuse Information at 301/443-6500.

14. In cases involving drug testing in the criminal justice system to date, the courts have generally not required confirmation of positive results by an alternate technology. One court has ruled that an unconfirmed positive result was admissible as evidence in a contempt of court proceeding. U.S. v. Roy, Crim. No. 12098-84 (D.C. Super. Ct., 1986). Another found unconfirmed results to be "presumptively reliable and thus generally admissible into evidence in every case." Jones v. U.S., No. 86-31 (D.C. Ct. App., 1988). Other courts have ruled that test results that were retested on the same technology but not confirmed by an alternate method can be used to support sanctions in prison disciplinary proceedings. Lahey v. Kelly, N.Y. 2d 135 (N.Y. Court of Appeals, 1987); In re Johnston (Wash. Sup. Ct., No. 53580-9, 1987); Spence v. Farrier (CA8, No. 85-902, 1986); Harmon v. Auger, 768 F.2d 270, 276 (8th Cir. 1985); Jensen v. Lick, 589 F. Supp. 35 (D.N.D. 1984); Vasquez v. Coughlin, 499 N.Y.S. 2d 461 (Sup. Ct. App. Div. 1986); and Peranzo v. Coughlin, 608 F. Supp. 1504 (S.D.N.Y. 1985). However, at least one court has ruled that prison disciplinary action could not be based on a result that was not confirmed by alternate technology. Kane v. Fair, No. 136229 (Super. Ct. Mass., 1983). The testing technology employed in each of these cases is the EMIT system of the Syva Company. However, toxicologists caution that confirmation by alternate technology should be utilized whenever possible negative consequences might attach to a positive result. "Since screening tests are subject to interferences, all specimens that test positive must be confirmed by an independent, more specific procedure." Blanke, Robert V., "Accuracy in Urinalysis," Urine Testing for Drugs of Abuse, National Institute on Drug Abuse, Research Monograph Number 73 (1986): 43. Also, federal guidelines on federal employee drug testing programs mandate confirmation of all positive results by gas chromatography/mass spectrometry. "Mandatory Guidelines for Federal Workplace Drug Testing Programs," U.S. Department of Health and Human Services, published in the Federal Register, Vol. 53, No. 69 (April 11, 1988): 1970-1989. Any jurisdiction considering the implementation of a drug testing program should review the most recent case law on the need for confirmation.

15. Michael E. Peat, "Analytical and Technical Aspects of Testing for Drug Abuse: Confirmatory Procedures," Clinical Chemistry, 34 (1988): 471-473.

16. Peat, p. 472.

17. Willette, p. 14.

18. See Appendix B for sample job descriptions for staffing a pretrial drug testing program.