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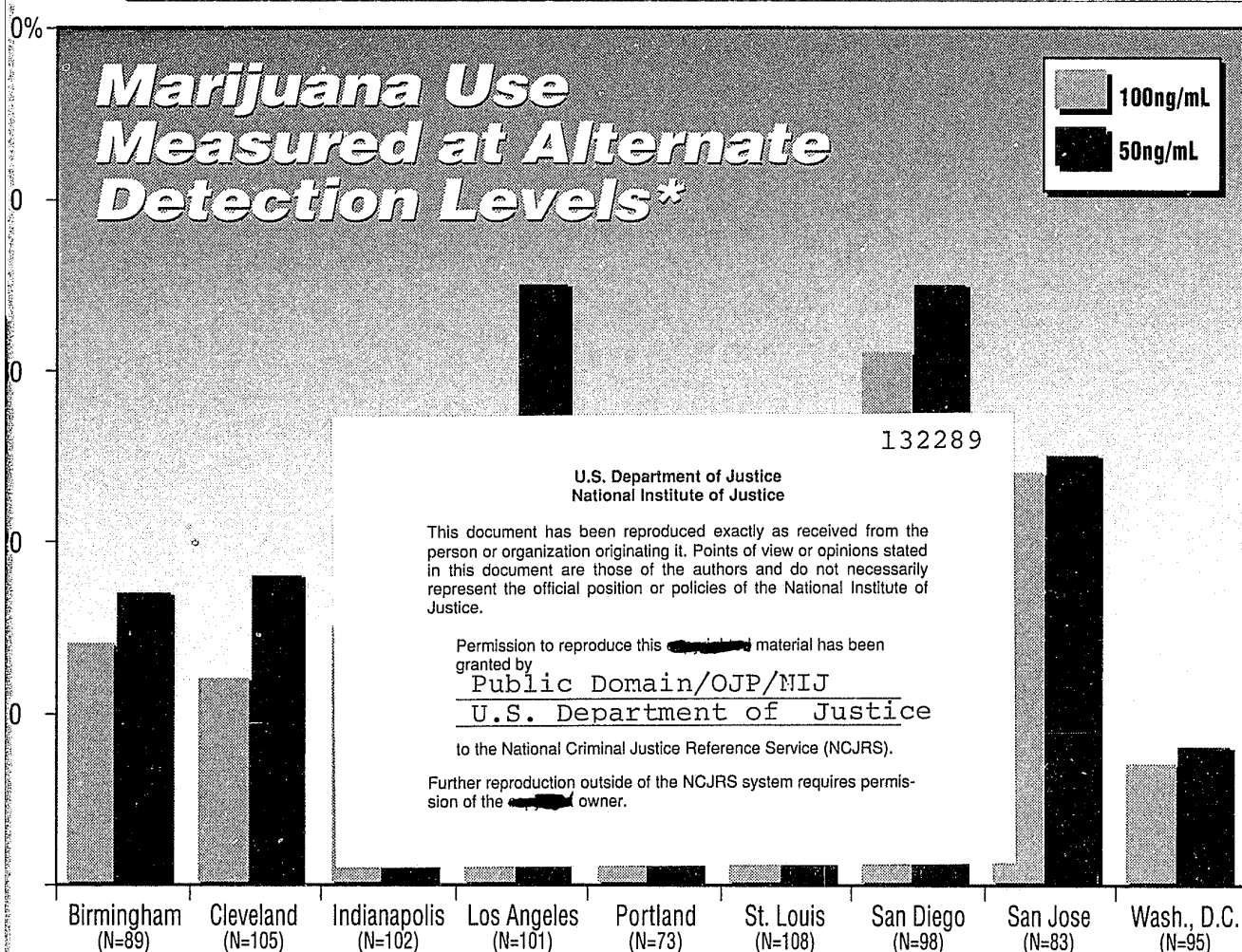
Research in Brief

Charles B. DeWitt, Director

Second Quarter 1991

DUF

Drug Use Forecasting



Source: National Institute of Justice/Drug Use Forecasting Program

* Positive by urinalysis, male juvenile arrestees/detainees, January through March 1991 (see page 10 for discussion)

Drug Use Forecasting

Drug Use Forecasting Quarterly Report is published by the National Institute of Justice. *DUF* presents data collected each quarter through the Drug Use Forecasting Program and analyzes issues of interest to local, State, and national policymakers and researchers. To obtain additional copies of this publication or to be placed on the *DUF* mailing list, please call the National Criminal Justice Reference Service Clearinghouse toll-free at 1-800-666-3332. For further information about the DUF Program, write to Joyce O'Neil, Drug Use Forecasting Program Director, National Institute of Justice, 633 Indiana Avenue NW., Room 880, Washington, D.C. 20531.

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The Assistant Attorney General, Office of Justice Programs, establishes the policies and priorities, and manages and coordinates the activities of the Bureau of Justice Assistance, Bureau of Justice Statistics, National Institute of Justice, Office of Juvenile Justice and Delinquency Prevention, and the Office for Victims of Crime.

Methodology

DUF data are collected in booking facilities throughout the United States. For approximately 14 consecutive evenings each quarter, trained local staff obtain voluntary and anonymous urine specimens and interviews from a new sample of booked arrestees.¹ In each site, approximately 225 males are sampled. In some sites, female arrestees and juvenile arrestees/detainees are also sampled. Response rates are consistently high, with more than 90 percent of the arrestees approached agreeing to be interviewed. Approximately 80 percent of those interviewed provide urine specimens.

To obtain samples with sufficient distribution of arrest charges, DUF interviewers, where possible, limit the number of male booked arrestees who are charged with the sale or possession of drugs. Because such persons are likely to be using drugs at arrest and are undersampled, DUF statistics frequently are minimum estimates of drug use in the male arrestee population. With the exception of Omaha, males charged with driving offenses generally are excluded from the sample due to DUF's emphasis on more serious crimes. (In Omaha, all male arrestees brought to the booking facility are included in the DUF sample to obtain a sample of sufficient size.) Because they are fewer in number, all adult female arrestees and all juvenile arrestees/detainees brought to the booking center or detention facility during the data collection period are included in the DUF sample, regardless of charge.

Eleven of the DUF sites collect data from male juvenile arrestees/detainees. In each of the juvenile facilities, with the exception of Indianapolis and Birmingham, only those youngsters who are detained by the criminal justice system are available for interviewing. Arrestees who are released to their parents or released for other reasons are not included in the DUF juvenile sample. In Indianapolis and Birmingham, however, all juvenile arrestees are available for interviewing. For juveniles in each of the sites, excluding Washington, D.C. and St. Louis, the catchment area encompasses the county. In Washington, D.C., youngsters arrested and detained in the District of Columbia are included in the sample, and in St. Louis only male juveniles arrested and detained in the city of St. Louis are included.

All urine specimens are sent to a central laboratory for analysis. The specimens are analyzed by EMITTM for 10 drugs: cocaine, opiates, marijuana, PCP, methadone, benzodiazepines, methaqualone, propoxyphene, barbiturates, and amphetamines. All positive results for amphetamines are confirmed by gas chromatography to eliminate positives that may be caused by over-the-counter drugs. For most drugs, the urine test can detect use in the previous 2 to 3 days. Exceptions are marijuana and PCP, which can sometimes be detected several weeks after use.

¹ The DUF sample is based on arrestees brought into the booking facility. Arrestees released before booking are not part of the DUF sample.

Drug Use Forecasting (DUF) Research Update

The National Institute of Justice Drug Use Forecasting (DUF) Program was designed to measure recent drug use among booked arrestees as well as trends in drug use among this segment of the population. The DUF procedures include obtaining an anonymous, voluntary interview and urine sample from booked arrestees (see Methodology, page 2). The program currently collects data from male booked

arrestees in 24 sites across the United States. In 21 of those sites, data from female booked arrestees are also collected, and in 11 sites male juvenile data are obtained. The DUF program is cofunded by the Bureau of Justice Assistance (BJA). Due to site differences in arrest and booking practices, comparisons of drug use across sites are not encouraged.

Second Quarter 1991 Results Findings from adult booked arrestees

During the second quarter of 1991, each DUF site collected data from male booked arrestees, and 21 of the sites collected data from female booked arrestees.

The percentage of male booked arrestees testing positive for any of the 10 drugs

Drug Use by Male Booked Arrestees*

Site	% Positive Any Drug*	Range of % Positive				% Positive					
		Low	Date	High	Date	2+ Drugs	Cocaine	Marijuana	Amphetamines	Opiates	PCP
Adult Males											
Manhattan	79	69	4/90	90	6/88	29	64	24	0	16	2
Philadelphia	77	72	11/90	84	4/89	33	65	19	**	13	4
San Diego	76	66	6/87	85	1/89	42	45	42	19	15	**
Chicago	75	71	5/90	85	7/88	40	60	26	0	23	11
Miami	65	65	6/91	75	8/88	16	57	20	0	1	0
Houston	64	55	11/90	71	4/90	17	54	19	0	4	0
Atlanta	63	62	10/90	63	4/91	19	56	22	**	4	0
New Orleans	63	54	1/91	76	4/89	24	51	27	0	6	2
Washington, D.C.	63	53	5/90	72	2/89	19	54	13	**	10	4
Los Angeles	62	56	10/90	77	4/88	21	40	23	7	7	4
Birmingham	61	56	8/90	75	7/88	15	52	14	0	6	0
Ft. Lauderdale	60	56	8/90	71	3/88	14	40	28	0	1	0
Detroit	57	45	9/90	69	10/88	17	41	21	0	9	0
St. Louis	57	42	7/90	69	4/89	21	39	29	0	6	3
Cleveland	56	49	8/90	70	8/89	12	42	18	0	2	**
Dallas	56	50	11/90	72	6/88	13	42	21	2	3	**
Portland	56	54	1/89	76	8/88	16	24	32	8	8	0
San Jose	56	49	8/90	65	8/89	22	28	24	7	9	14
Denver	54	35	8/90	58	2/90	11	24	36	**	**	0
Phoenix	50	44	10/90	67	5/90	16	21	32	4	6	0
Kansas City	49	39	9/90	64	5/89	14	34	22	**	2	7
San Antonio	46	43	9/90	63	3/90	17	28	19	0	11	0
Omaha	40	22	8/90	57	7/88	7	9	34	0	1	0
Indianapolis	39	33	9/90	62	9/89	8	19	19	0	4	0

Source: National Institute of Justice/Drug Use Forecasting Program

* Positive by urinalysis, April through June 1991. Drugs tested for include cocaine, opiates, PCP, marijuana, amphetamines, methadone, methaqualone, benzodiazepines, barbiturates, and propoxyphene

** Less than 1%

Research Update

tested ranged from 39 percent in Indianapolis to 79 percent in Manhattan. Cocaine remained the most prevalent drug in the majority of sites. Exceptions were Portland, Denver, Phoenix, and Omaha where marijuana use was higher than any other drug. In Indianapolis, male arrestees were as likely to test positive for marijuana as for cocaine (19 percent).

For female arrestees, the percentage of drug positives ranged from 39 percent in San Antonio to 78 percent in Cleveland. In all sites but Portland, cocaine was the most prevalent drug among females. In

Portland, however, females tested positive for marijuana and cocaine at the same rate (32 percent).

Juvenile arrestees/detainees

The percentage of juvenile male arrestees/detainees testing positive for drugs ranged from 14 percent in St. Louis to 35 percent in San Diego (data from Kansas City and San Antonio are not included because of insufficient sample sizes). In four of the sites—Indianapolis, Portland, San Diego, and San Jose—marijuana was clearly the dominant drug. In Birmingham, Cleveland,

St. Louis, and Washington, D.C., however, cocaine was the prevalent drug. Results for juveniles in Los Angeles indicate similar rates of use for marijuana and cocaine, 18 and 15 percent, respectively.

In Washington, D.C., the percentage of juveniles testing positive for marijuana increased from 7 percent during the first quarter of 1991 to 14 percent during the second quarter of 1991. Marijuana use among juveniles in the other sites either remained at approximately the same percentage or decreased slightly from first quarter findings.

Drug Use by Female Booked Arrestees*

Site	% Positive Any Drug*	Range of % Positive				% Positive					
		Low	Date	High	Date	2+ Drugs	Cocaine	Marijuana	Amphetamines	Opiates	PCP
Adult Females											
Cleveland	78	67	5/90	88	2/90	15	76	7	0	4	4
Washington, D.C.	78	58	11/90	88	6/89	20	73	5	0	10	1
Los Angeles	77	69	10/90	80	7/89	31	62	14	9	18	2
Philadelphia	75	69	11/90	90	8/89	23	62	18	**	8	**
Manhattan	74	71	4/90	83	2/88	31	65	11	0	18	2
Portland	72	51	5/90	82	8/88	35	32	32	14	18	0
San Diego	71	70	2/90	87	12/87	36	33	23	25	19	3
Detroit	70	67	9/90	85	3/88	17	65	2	0	15	0
Kansas City	67	56	9/90	83	8/89	22	56	20	1	3	4
Atlanta	66	66	4/91	71	10/90	12	63	11	0	3	0
Birmingham	66	43	11/89	77	4/89	31	40	7	1	19	0
St. Louis	62	45	11/88	75	4/89	21	57	12	0	12	2
Ft. Lauderdale	60	54	11/90	79	3/90	14	48	18	0	2	0
Houston	60	48	10/89	68	4/90	22	49	11	**	8	0
Phoenix	60	47	10/90	78	3/89	26	42	17	4	18	**
New Orleans	58	46	11/87	65	1/90	17	47	12	0	7	1
San Jose	56	48	8/90	64	2/90	23	34	14	8	6	14
Denver	54	52	11/90	62	2/90	19	36	22	2	2	0
Dallas	52	42	9/89	71	6/88	12	46	4	4	6	1
Indianapolis	52	26	11/90	57	3/91	25	27	20	1	15	0
San Antonio	39	36	6/90	56	2/91	19	24	10	3	15	0

Source: National Institute of Justice/Drug Use Forecasting Program

* Positive by urinalysis, April through June 1991. Drugs tested for include cocaine, opiates, PCP, marijuana, amphetamines, methadone, methaqualone, benzodiazepines, barbiturates, and propoxyphene

** Less than 1%

Research Update

DUF-Related Research

During 1991, the National Institute of Justice funded a number of research projects designed to enhance the use of Drug Use Forecasting data in local policy, planning, and program development. The first three awards summarized below responded to DUF solicitations in the National Institute of Justice Fiscal Year 1991 Research Plan; the final four were part of the competitive research solicitation for DUF sites.

Demonstrating the Use of DUF Findings: Portland, Oregon and Denver, Colorado. LINC, Inc. will develop model procedures to increase local use of DUF data in Portland and Multnomah County, working directly with both DUF staff and local decisionmakers. Special analyses of DUF data will be developed for Portland policy officials. The transferability of the procedures will then be tested in Denver with the cooperation of local DUF staff.

Expanding the Applications of DUF Data. The Urban Institute will analyze more than 20,000 juvenile arrestee urinalysis results for Washington, D.C. Researchers will examine the results to determine their relationships and predictive potential with other drug-related adolescent problems, e.g., homelessness, teen pregnancies, and school drop-outs. The model developed

for the analysis will then be tested on the DUF sample of juveniles in D.C. (This award was made in conjunction with the Office of Juvenile Justice and Delinquency Prevention.)

Expanding the Applications of DUF Data in New York City. Narcotic and Drug Research, Inc. (NDRI) will examine DUF data in combination with other drug use and crime indicators in New York City. Researchers will work with the New York City Office of Drug Abuse Policy, criminal justice officials, and other local policymakers to expand the use of DUF data and examine its potential as a leading indicator of change in drug use trends.

Analysis of Statewide Drug Use Forecasting Data. Illinois Treatment Alternatives for Special Clients (TASC), Inc. will analyze and compare DUF findings from Chicago with those from seven other counties where a DUF-like program is being conducted with State funds. The research will examine regional differences and urban, suburban, and rural patterns of drug use.

Assessing the Need for Treatment: Developing a Model for Policy. Using DUF data, the St. Louis Police Department will estimate drug treatment needs of the arrestee population in St. Louis and three

other DUF sites. Researchers will compare self-reported need for treatment and treatment history with urine results and demographic and behavioral characteristics. They will also examine estimates of arrestee treatment needs by applying DUF findings to citywide arrest data.

Juvenile Drug Use Patterns Utilizing Hair and Urine Analyses. The Cleveland Violent Crime Task Force will compare urinalysis, hair analysis, and self-reports of drug use in juvenile DUF samples. Because hair analysis can detect drug use over longer periods of time than urinalysis, findings from this research will increase our understanding of the extent of drug use among juveniles.

Maximizing the Use of DUF Results for Planning and Policymaking. The San Diego Association of Governments will conduct a survey of all DUF project directors and key decisionmakers at each DUF location on how DUF findings are shared and used, followed by on-site studies in three jurisdictions. Researchers will develop a manual on effective ways to use DUF statistics for local planning and resource allocation.

NIJ will publish the findings from these research projects as they become available.

Drug Use by Juvenile Male Arrestees/Detainees*

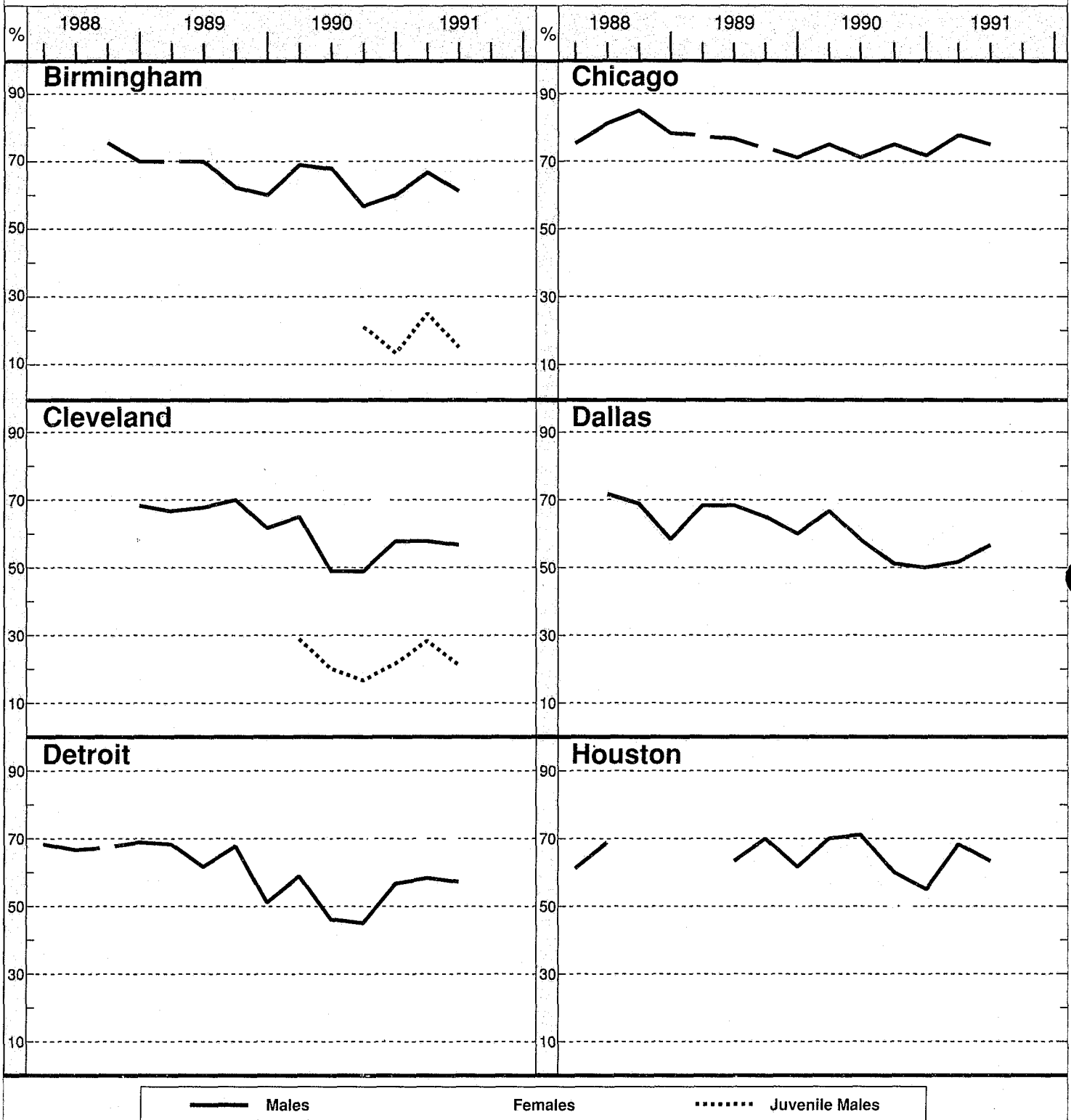
Drug Use by Juvenile Male Arrestees/Detainees							% Positive					
Site	% Positive Any Drug*					Sample Size (N)						
	0	20	40	60	80		100	2+ Drugs	Cocaine	Marijuana	Amphetamines	Opiates
Juvenile Males												
Birmingham	<div><div></div></div> 15					80	4	10	6	0	1	0
Cleveland	<div><div></div></div> 21					92	3	14	8	0	1	0
Indianapolis	<div><div></div></div> 16					107	**	**	13	**	0	0
Los Angeles	<div><div></div></div> 27					130	8	15	18	0	0	2
Portland	<div><div></div></div> 16					71	3	6	11	1	1	0
St. Louis	<div><div></div></div> 14					104	2	10	4	0	0	0
San Diego	<div><div></div></div> 35					99	5	7	26	3	3	1
San Jose	<div><div></div></div> 18					92	4	2	14	2	1	5
Washington, D.C.	<div><div></div></div> 28					97	5	18	14	0	0	1

Source: National Institute of Justice/Drug Use Forecasting Program

* Positive by urinalysis, April through June 1991. Drugs tested for include cocaine, opiates, PCP, marijuana, amphetamines, methadone, methaqualone, benzodiazepines, barbiturates, and propoxyphene

** Less than 1%

Drug Use Trends Among Booked Arrestees*

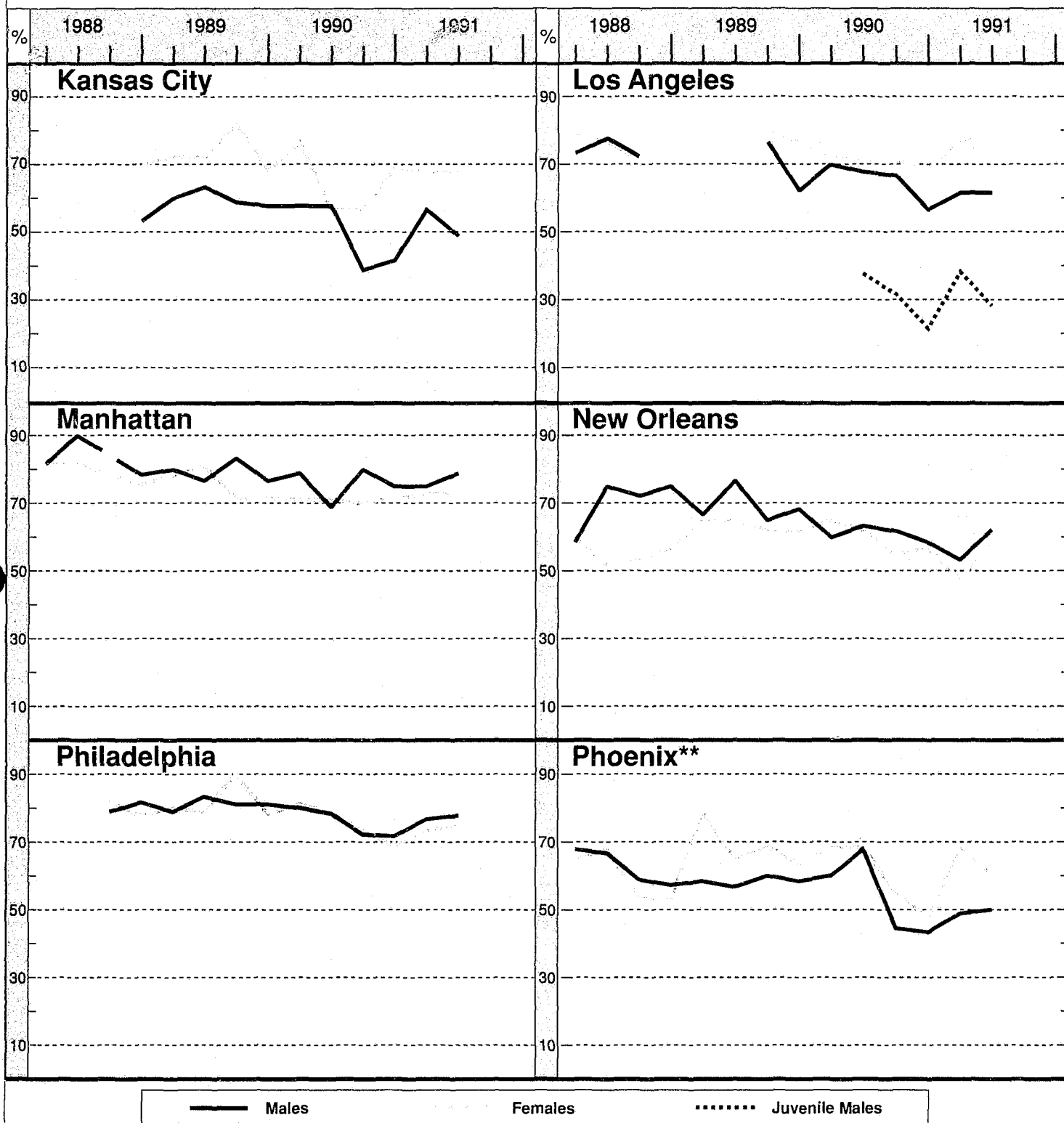


Source: National Institute of Justice/Drug Use Forecasting Program

Note: Gaps on graph represent periods when data were not collected

* Positive by urinalysis. Drugs tested for include cocaine, opiates, PCP, marijuana, amphetamines, methadone, methaqualone, benzodiazepines, barbiturates, and propoxyphene

Drug Use Trends Among Booked Arrestees*



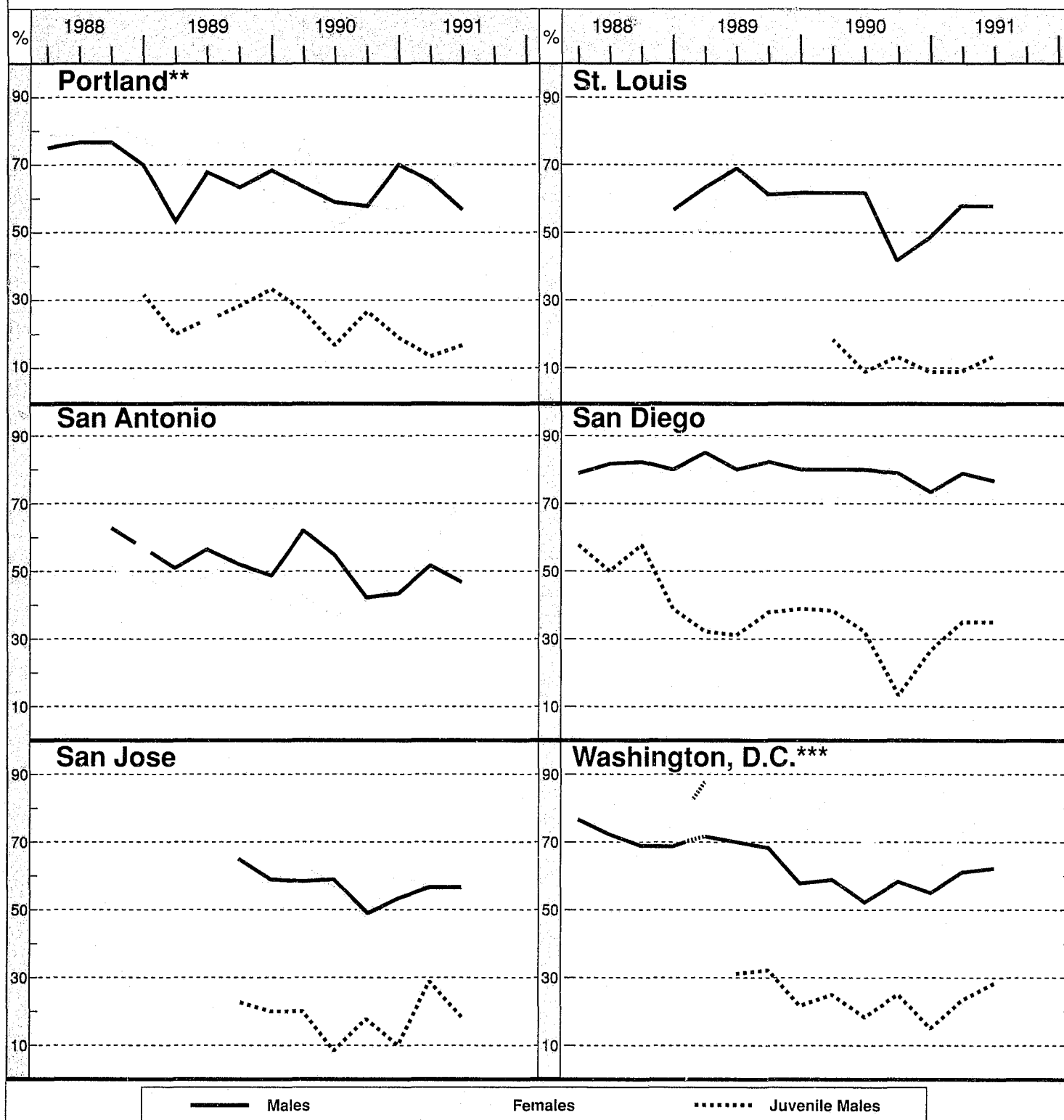
Source: National Institute of Justice/Drug Use Forecasting Program

Note: Gaps on graph represent periods when data were not collected

* Positive by urinalysis. Drugs tested for include cocaine, opiates, PCP, marijuana, amphetamines, methadone, methaqualone, benzodiazepines, barbiturates, and propoxyphene

** Prior to 1991, site did not test for all 10 drugs (listed above)

Drug Use Trends Among Booked Arrestees*



Source: National Institute of Justice/Drug Use Forecasting Program

Note: Gaps on graph represent periods when data were not collected

* Positive by urinalysis. Drugs tested for include cocaine, opiates, PCP, marijuana, amphetamines, methadone, methaqualone, benzodiazepines, barbiturates, and propoxyphene

** Prior to 1991, site did not test for all 10 drugs (listed above)

*** 1988 Washington, D.C. data based on arrestees tested by D.C. Pretrial Services Agency. Drugs tested for the agency include cocaine, opiates, PCP, amphetamines, and methadone. Data collected after 1988 are from the DUF program

What Is the Extent of Opiate Use Among Booked Arrestees?

Since opiate use has long been associated with serious criminal behavior, assessing the extent of opiate use among booked arrestees is important for criminal justice officials, treatment providers, and Federal agencies that monitor trends in drug use. Data from the DUF program indicate fairly low and stable use of opiates among booked arrestees. When we examined the percent positive for opiates over time, the highest opiate use was found among male booked arrestees in Chicago, Manhattan, San Antonio, and San Diego and among female arrestees in Manhattan, Portland, San Antonio, San Diego, and Washington, D.C. Although opiate use was most likely to be found in the sites noted above, the percent positive for opiates was fairly low: 30 percent or less of the arrestees tested positive for opiates

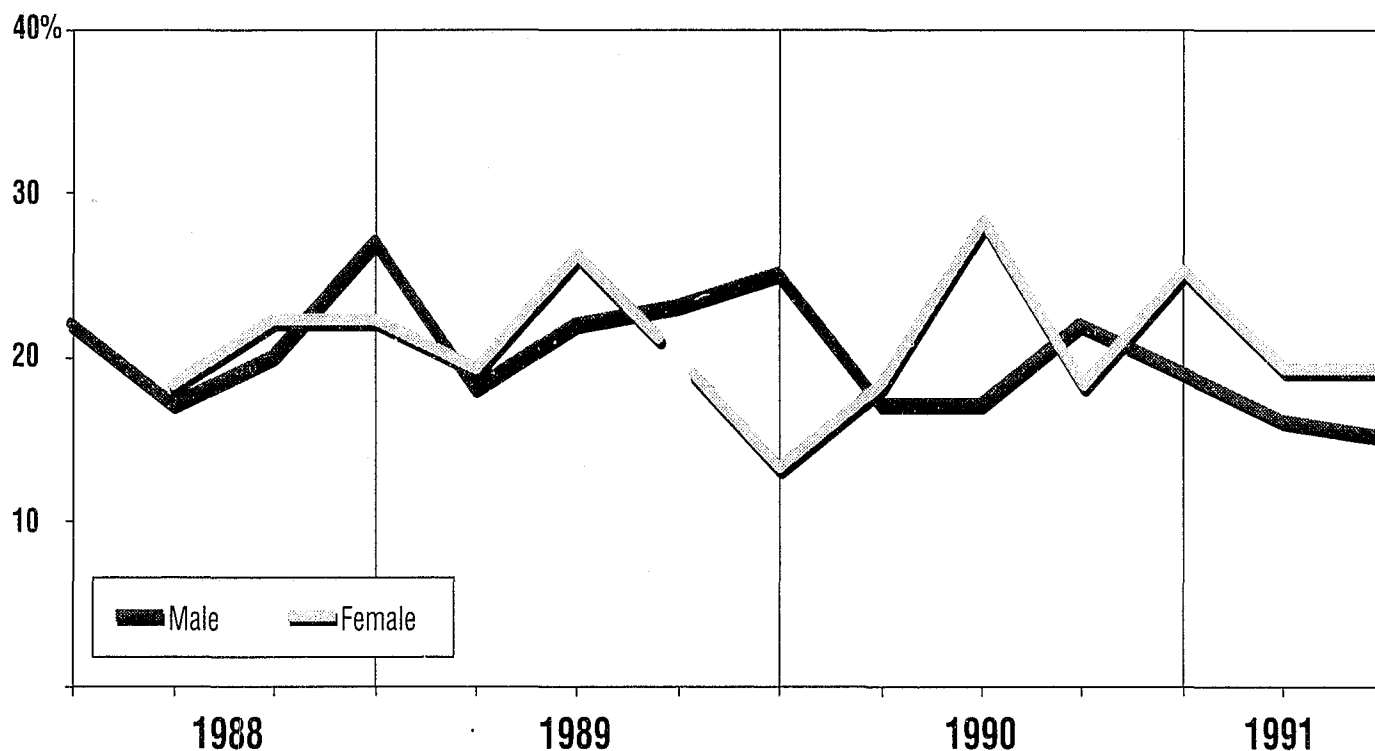
from 1988 through the second quarter of 1991. For example, the percent positive for arrestees in San Diego during this time ranged from 15 to 27 percent for males and from 13 to 28 percent for females (see chart below). Similarly, opiate use among arrestees in Manhattan (see back cover) fluctuated slightly, but has remained at or below 30 percent since 1988.

Although the overall percent positive for opiates is lower than for drugs such as cocaine, the majority of arrestees who test positive for opiates also test positive for other drugs. For example, during the second quarter of 1991, 7 percent of the total sample of male arrestees tested positive for opiates. Of those who were opiate positive, 85 percent also tested positive for one or more other drugs, most frequently

cocaine. Similarly, of those females who tested positive for opiates (11 percent of the total female sample), 89 percent were positive for at least one other drug, again, most frequently cocaine. The high number of opiate users who also test positive for another drug indicates that the arrestees testing positive for opiates are probably seriously involved in drug use.

Because of the current concerns about potential increases in opiate use expressed by the Drug Enforcement Agency and other Federal agencies, DUF will continue to monitor and report findings related to opiates, thereby providing early detection of any change in opiate use among booked arrestees.

Trends in Opiate Use Among Male and Female Booked Arrestees in San Diego*



Source: National Institute of Justice/Drug Use Forecasting Program

* Positive by urinalysis. Quarterly results, 1988 through 1991. Gaps on graph represent periods when data were not collected

Estimating Marijuana Use at Alternate Detection Levels

The DUF program tests urine specimens from arrestees for 10 drugs, including marijuana. Testing procedures are conducted by a laboratory certified by the National Institute on Drug Abuse (NIDA).

The concentration of drugs in urine is measured in nanograms (billionth of a gram) per milliliter of liquid (ng/mL) of the drug or of the drug metabolite formed in the body as a result of the ingestion of a specific drug. The "cutoff level" is that concentration, stated in ng/mL, used to determine whether a specimen is positive or negative. Specimens with concentrations at or above the cutoff level are considered positive for the drug in question. All other specimens are considered negative. The drug-testing standards most often used in laboratories, including the DUF laboratory, are those established by NIDA in 1988 for testing Federal employees. The NIDA cutoff level for marijuana is 100 ng/mL.

There has been some discussion of whether a lower cutoff level for marijuana might more accurately identify drug-using offenders, particularly those who use occasionally or in small quantities. Recent research suggested that approximately one-third more marijuana users might be identified if the cutoff level for marijuana were lowered to 50 ng/mL (Visher 1991). At a 50 ng/mL cutoff, a smaller amount of the drug is needed for a specimen to be designated positive. To test the impact of alternate detection levels on the estimates of drug use, DUF samples during the first quarter of 1991 were tested at both the standard 100 ng/mL as well as the lower cutoff level of 50 ng/mL.

Table 1 shows the percent positive for marijuana at 100 ng/mL and 50 ng/mL for adult arrestees. (See front cover for findings from juvenile male arrestees.) While the difference in the percentage of specimens positive for marijuana differed across sites, increases due to the lower cutoff level were modest. For example, in Los Angeles, 25 percent of the male adult sample tested positive for marijuana when measured at 100 ng/mL, compared with 28 percent positive at 50 ng/mL. The percent positive for marijuana among female arrestees increased by 4 percent—12 percent at 100 ng/mL, compared with 16 percent at 50 ng/mL. The greatest difference in percent positives was detected among juvenile males in Los Angeles. Twenty-three percent tested positive for marijuana when

Table 1
Marijuana Use Measured at Alternate Detection Levels*

Site		Sample Size (N)	% Positive	
			100 ng/mL	50 ng/mL
Atlanta	M	293	14	18
	F	153	16	18
Birmingham	M	204	30	31
	F	95	20	20
Chicago**	M	217	33	38
Cleveland	M	224	12	16
	F	93	15	16
Dallas	M	239	30	33
	F	101	29	32
Denver	M	234	35	39
	F	102	22	26
Detroit	M	214	20	23
	F	74	10	10
Ft. Lauderdale	M	218	35	38
	F	102	16	16
Houston	M	246	26	30
	F	100	15	15
Indianapolis	M	231	38	41
	F	70	37	37
Kansas City	M	222	28	29
	F	94	18	19
Los Angeles	M	339	25	28
	F	157	12	16
Manhattan	M	248	18	23
	F	99	10	11
New Orleans	M	245	22	26
	F	85	13	16
Omaha**	M	224	36	41
Philadelphia	M	279	25	30
	F	106	17	20
Phoenix	M	251	33	36
	F	152	18	21
Portland	M	220	42	48
	F	72	38	40
St. Louis	M	227	22	25
	F	76	14	16
San Antonio	M	181	29	33
	F	61	13	18
San Diego	M	222	38	42
	F	99	28	31
San Jose	M	230	34	40
	F	99	14	15
Washington, D.C.	M	241	10	14
	F	94	14	14

Source: National Institute of Justice/Drug Use Forecasting Program

* Positive by urinalysis, booked arrestees, January through March 1991

** Chicago and Omaha do not collect data from female arrestees

M = Males
F = Females

Estimating Marijuana Use

a 100 ng/mL cutoff was used. This percentage increased to 35 percent when the cutoff level was lowered to 50 ng/mL.

Combining all sites, the analysis found that a 50 ng/mL cutoff level would have resulted in small increases in the marijuana estimates for adults and juveniles. Estimates for adult males would have increased from 27 percent at 100 ng/mL to 31 percent at 50 ng/mL. For female arrestees, the resulting increase in the estimate of marijuana use would have been 2 percent, from 18 percent at 100 ng/mL to 20 percent at 50 ng/mL, and for juveniles, the percent of marijuana positives would have increased from 17 to 21 percent.

The increase in the number of persons testing positive was greatest for juveniles (see table 2). This increase is not surprising. Assuming that adult arrestees are frequent users of marijuana as well as other drugs, lowering the detection level would not greatly impact the percent found to be positive. On the other hand, juveniles may use marijuana less frequently, and a lower cutoff level would identify more of these occasional users. To ascertain whether adult marijuana use patterns differed from those of juveniles, we compared multiple drug use among those positive for marijuana and self-reports of marijuana use for these two groups.

Of the adult arrestees who tested positive for marijuana, more than half also tested positive for another drug (52 percent of the males and 59 percent of the females).

However, among the juveniles who were positive for marijuana, only 24 percent tested positive for another drug. The lower multiple drug use among juveniles supports the likelihood of less severe drug use.

However, the findings from self-reported drug use are less clear. We selected those arrestees who tested positive for marijuana and analyzed their self-report responses. Specifically, we analyzed responses to questions about the number of days marijuana was used during the past 30 days and recent marijuana use (use in the past 72 hours). There was little difference in the median number of days during the past 30 days that arrestees reported using marijuana (7 days for adult males and females and 8 days for juveniles). Self-reported use during the past 72 hours was slightly lower for juveniles (69 percent) than for adult males and females (73 percent and 74 percent, respectively). These findings suggest that juveniles' use of marijuana based on self-reports does not differ dramatically from the self-reported use among adults.

Further research is needed to more fully understand differential marijuana use by juveniles and adults. For example, although arrestees are asked how many days they used marijuana, they were not asked about the amount of marijuana consumed on those days. The quantity of marijuana used may help explain the greater increase in juveniles testing positive when the marijuana cutoff level was lowered to 50 ng/mL. That is, if juveniles are using marijuana approximately the same number of days as adults but are using less of the drug, juvenile drug test results would be more affected by the lower cutoff level than results for adults.

DUF will continue to use the 100 ng/mL cutoff level in screening for marijuana. If NIDA standards are revised to decrease the cutoff level for marijuana, DUF will reevaluate its testing protocol.

Select Bibliography

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Table 2

Number of Booked Arrestees Positive for Marijuana at Alternate Detection Levels*

	100 ng/mL	50 ng/mL	% Change
Male Adults	1,484	1,692	+14
Female Adults	376	416	+11
Male Juveniles	154	191	+24

Source: National Institute of Justice/Drug Use Forecasting Program

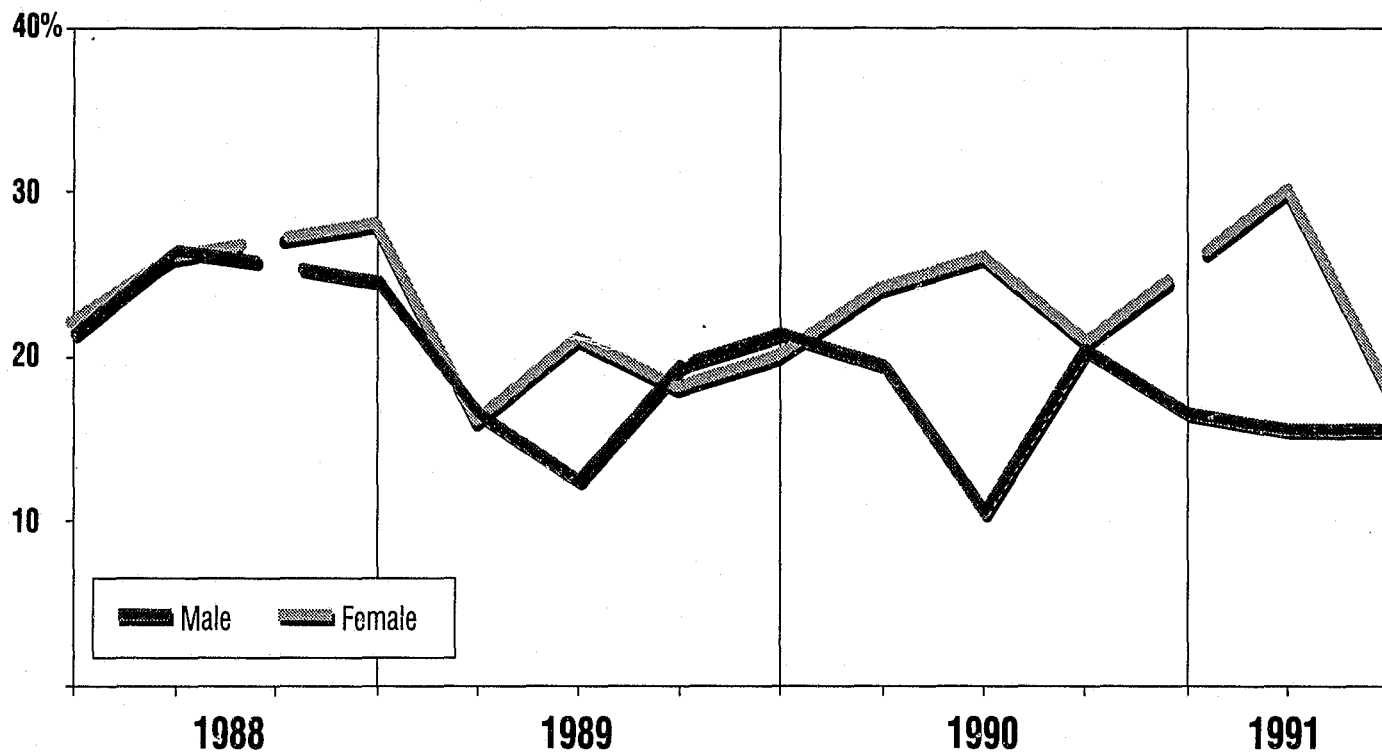
* Positive by urinalysis, January through March 1991

Reference

Visser, C.A., 1991. *A Comparison of Urinalysis Technologies for Drug Testing in Criminal Justice* (Research Report). Washington, D.C., National Institute of Justice.

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Drug Use Forecasting Program
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National Institute of Justice

Trends in Opiate Use Among Male and Female Booked Arrestees in Manhattan*



Source: National Institute of Justice/Drug Use Forecasting Program

* Positive by urinalysis. Quarterly results, 1988 through 1991. Gaps on graph represent periods when data were not collected

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