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Research in Brief

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DUF

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DRUG USE FORECASTING

Fourth Quarter 1991

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 toll-free at 1-800-851-3420. 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.

Publication date: March 1993

The National Institute of Justice is a component of the Office of Justice Programs, which also includes the Bureau of Justice Assistance, Bureau of Justice Statistics, 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.

Twelve of the DUF sites collect data from male juvenile arrestees/detainees. In each of the juvenile facilities, with the exception of Birmingham, Denver, and Indianapolis, 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 Birmingham, Denver, and Indianapolis, 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.

¹The 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 is 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). Currently, the program 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 12 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.

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												
Chicago	77	68	8/91	85	7/88	31	70	20	0	19	3	
Philadelphia	72	70	8/91	84	4/89	24	62	13	0	10	3	
San Diego	72	66	6/87	85	1/89	30	46	27	14	17	1	
Manhattan	70	69	4/90	90	6/88	22	60	14	**	11	3	
Miami	66	66	11/91	75	8/88	20	62	20	0	3	0	
St. Louis	65	42	7/90	69	4/89	13	59	8	0	6	2	
Houston	65	55	11/90	71	4/90	12	57	13	0	4	0	
Birmingham	64	56	8/90	75	7/88	14	53	14	0	7	0	
Atlanta	63	62	1/91	64	7/91	4	57	9	0	0	0	
Los Angeles	62	56	10/90	77	4/88	19	49	12	4	12	3	
Dallas	60	50	11/90	72	6/88	16	51	17	1	6	1	
Portland	59	54	1/89	76	8/88	17	36	26	3	12	0	
Cleveland	57	49	5/90	70	8/89	10	52	8	0	4	1	
Detroit	57	45	9/90	69	10/88	17	43	20	0	9	0	
New Orleans	56	54	1/91	76	4/89	9	50	8	**	3	**	
Ft. Lauderdale	56	56	8/90	71	3/88	15	44	24	0	2	0	
Kansas City	56	39	9/90	64	5/89	9	40	15	0	**	6	
Washington, D.C.	54	53	5/90	72	2/89	8	42	11	0	7	2	
San Jose	54	49	8/90	65	8/89	18	39	20	3	6	2	
San Antonio	54	43	9/90	63	3/90	24	37	22	0	18	0	
Denver	48	35	8/90	58	2/90	10	32	19	**	1	0	
Indianapolis	44	33	9/90	62	9/89	8	20	24	0	1	0	
Omaha	40	22	8/90	57	7/88	9	23	22	**	2	0	
Phoenix	28	28	10/91	67	4/90	10	18	9	3	4	**	

Source: National Institute of Justice/Drug Use Forecasting Program

Note: Positive by urinalysis, October through December 1991.

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

** Less than 1%.

Research Update

Fourth Quarter 1991 Results Findings from adult booked arrestees

During the fourth quarter of 1991, all 24 DUF sites collected data from male booked arrestees, and 21 of the sites collected data from female booked arrestees.

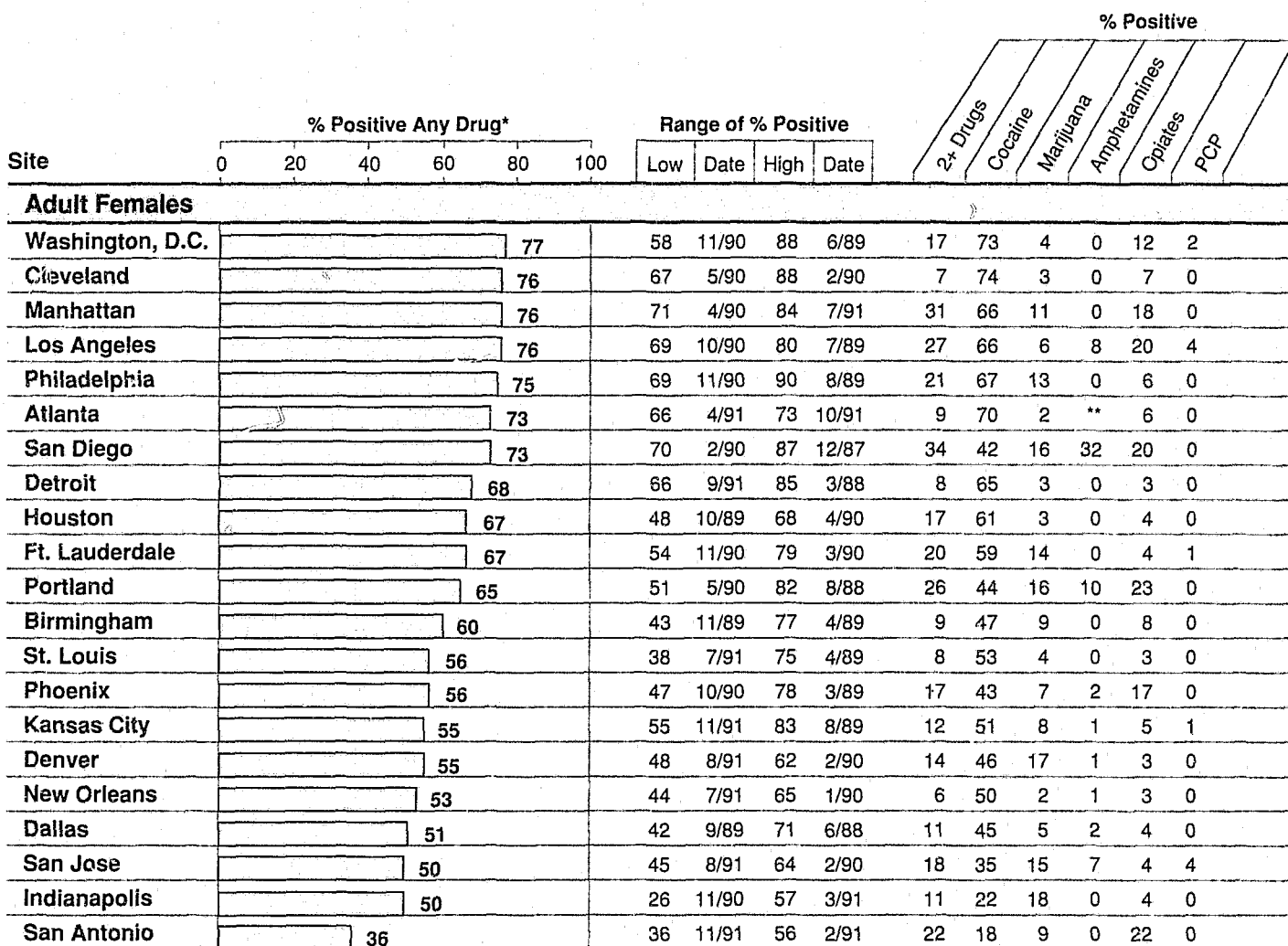
The percentage of male booked arrestees testing positive for any of the 10 drugs

tested ranged from 28 percent in Phoenix to 77 percent in Chicago. In the majority of sites, cocaine remained the most prevalent drug. Exceptions were Indianapolis and Omaha, where marijuana use and cocaine use were about the same.

For female arrestees, the percentage of drug positives ranged from 36 percent in San Antonio to 77 percent in Washington,

D.C. In all sites except Indianapolis and San Antonio, cocaine was the most prevalent drug among females. In Indianapolis, female arrestees were as likely to test positive for marijuana (18 percent) as cocaine (22 percent). In San Antonio, female arrestees were as likely to test positive for opiates (22 percent) as cocaine (18 percent).

Drug Use by Female Booked Arrestees



Source: National Institute of Justice/Drug Use Forecasting Program

Note: Positive by urinalysis, October through December 1991.

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

** Less than 1%.

Research Update

Juvenile arrestees/detainees

During the fourth quarter of 1991, Denver became the 12th DUF site to collect data from male juvenile arrestees. The overall percent positive for Denver juveniles was 36 percent, the highest percent positive for juveniles this quarter. Denver also recorded the highest multiple drug use among juvenile males (16 percent). The lowest overall drug use was found in St. Louis (5 percent). (Data from Kansas City and San Antonio are not included because of insufficient sample sizes.)

Trends in Drug Use Among Arrestees

Pages 6, 7, and 8 show trends in marijuana use for arrestees in 18 DUF sites. The graphs contain the percent positive for

marijuana as measured by urinalysis for adult males, adult females, and juvenile males.

Marijuana use among male arrestees decreased steadily. In all sites, the percent positive for marijuana during 1991 was lower than marijuana use in 1988. For example, marijuana use among male arrestees in New Orleans during 1988 averaged 50 percent. During the fourth quarter of 1991, marijuana use in New Orleans decreased to 8 percent. Similarly, marijuana use among female arrestees in New Orleans decreased from 33 percent during the first quarter of 1988 to 2 percent during the third and fourth quarters of 1991.

Data from male juvenile arrestees/detainees also showed a decline in

marijuana use. The decline was especially evident in Portland and St. Louis. In San Diego, however, marijuana use among male juveniles, although showing some decline, was unstable across all quarters, closing the fourth quarter at 25 percent.

Each quarter, DUF will continue to present trends in drug use among arrestees.

DUF Data From St. Louis

The report on pages 9-11 examines DUF findings in St. Louis over a 3-year period. The use of DUF data to inform local policy is one goal of the DUF program, and this report is a model of how DUF data can be shared with local officials to guide drug policy.

Drug Use by Juvenile Male Arrestees/Detainees

Site	% Positive Any Drug*	Sample Size (N)	% Positive					
			2+ Drugs	Cocaine	Marijuana	Amphetamines	Opiates	PCP
Juvenile Males								
Birmingham	16	88	1	2	4	2	4	0
Cleveland	23	64	2	22	3	0	0	0
Denver	36	102	16	19	33	0	0	0
Indianapolis	10	103	0	1	7	0	1	0
Los Angeles	27	133	11	16	17	**	2	6
Portland	17	65	2	6	11	2	0	0
St. Louis	5	76	0	5	0	0	0	0
San Diego	34	101	8	6	25	8	0	2
San Jose	16	79	0	1	14	1	0	0
Washington, D.C.	18	87	3	13	9	0	0	0

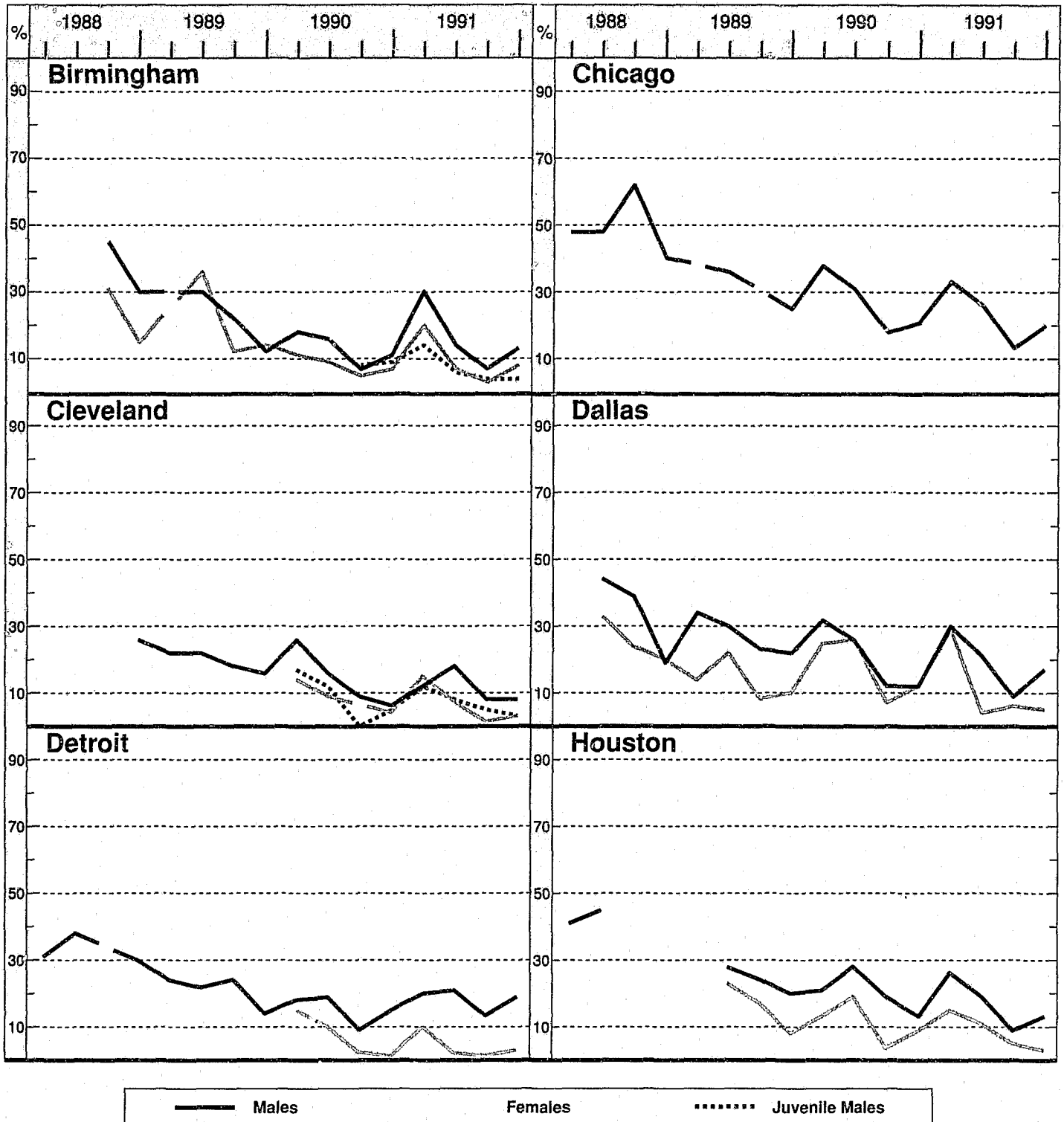
Source: National Institute of Justice/Drug Use Forecasting Program

Note: Positive by urinalysis, October through December 1991.

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

** Less than 1%.

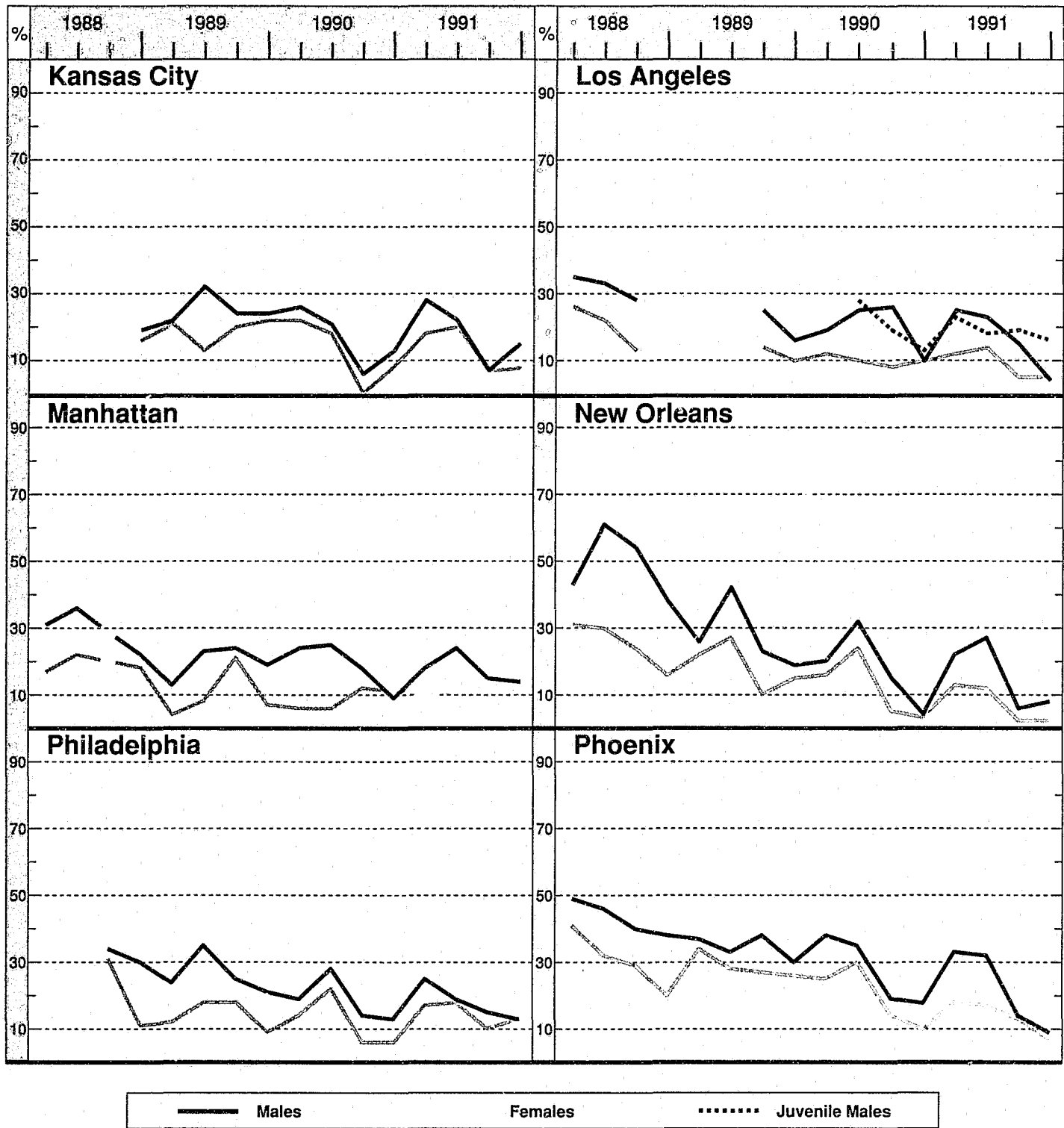
Trends in Marijuana Use Among Booked Arrestees



Source: National Institute of Justice/Drug Use Forecasting Program

Note: Positive by urinalysis. Gaps on the graph represent periods when data were not collected.

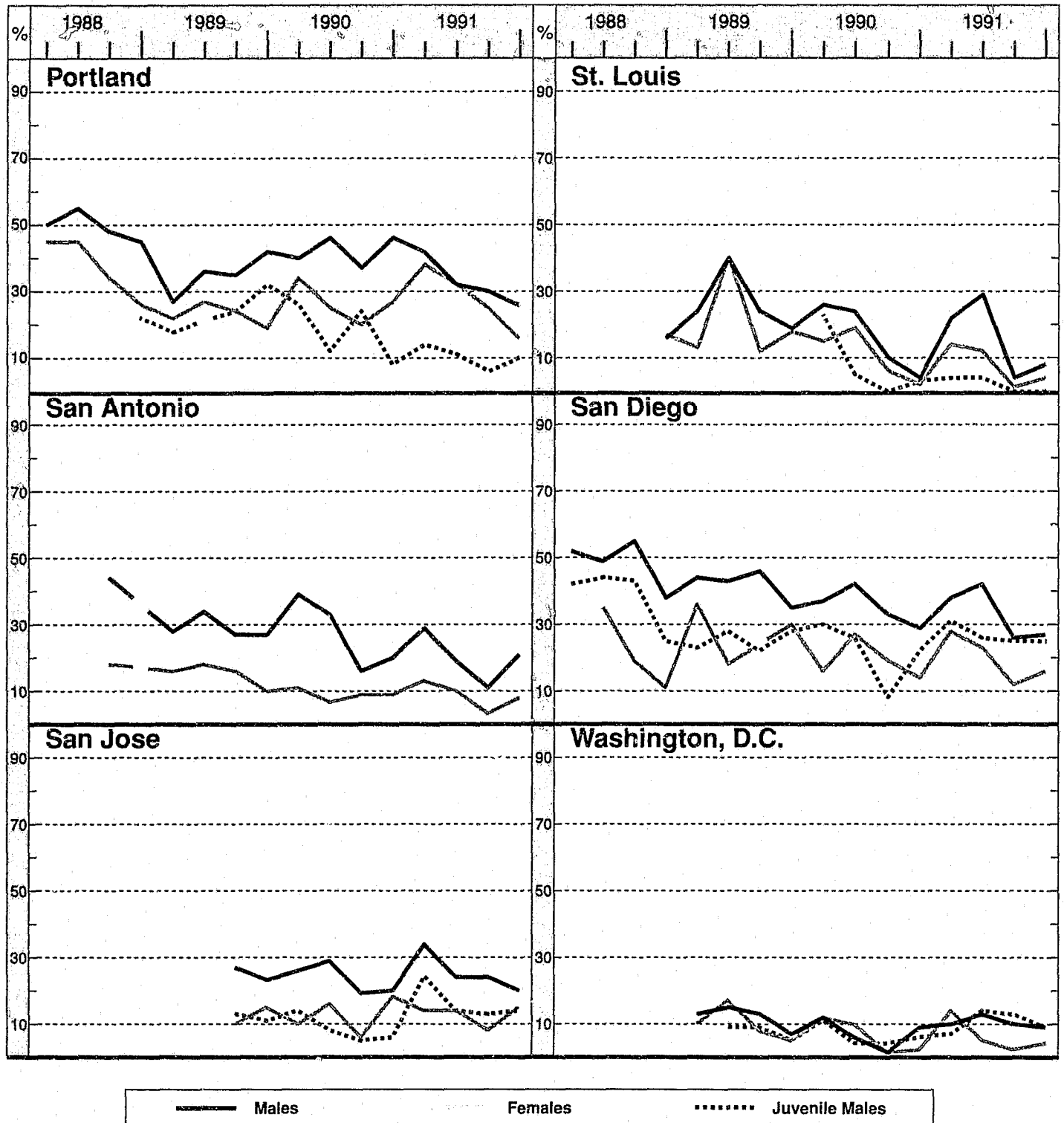
Trends in Marijuana Use Among Booked Arrestees



Source: National Institute of Justice/Drug Use Forecasting Program

Note: Positive by urinalysis. Gaps on the graph represent periods when data were not collected.

Trends in Marijuana Use Among Booked Arrestees



Source: National Institute of Justice/Drug Use Forecasting Program

Note: Positive by urinalysis. Gaps on the graph represent periods when data were not collected.

Drug Use Forecasting in St. Louis: A 3-Year Report

by Scott H. Decker, Ph.D., Drug Use Forecasting Site Director in St. Louis and Professor and Chair of the Department of Criminology and Criminal Justice at the University of Missouri—St. Louis

Concern over drug use has grown during the past decade. The significance of the drug problem has attracted more attention during the past few years. Much concern has focused on the use of crack, a derivative of cocaine. The discovery of the process to convert cocaine into crack led to the availability of this powerful narcotic to broader groups in the population (*U.S. News and World Report*, August 19, 1991, pp. 44–53). Crack has had powerful consequences for poor, inner-city areas of America where large numbers of individuals used this drug. Consequences of increased drug use were seen in several areas. Three major consequences were a rapid increase in drug treatment needs and perceived increases in drug-related property crime and drug-related violent crime.

The Federal Government responded to this crisis in a variety of ways. The National Institute of Justice (NIJ) created the Drug Use Forecasting (DUF) Program in 1987 to monitor the drug problem. The DUF program grew out of a pilot research project initiated in 1984 in New York City. The DUF program has three primary goals—identify the level of drug use among arrestees, determine what drugs are being used in specific jurisdictions, and track changing drug use patterns. Arrestees were chosen as the focus for this program because they represent a population—by definition—of persons more likely to experiment with drugs than the general population. Because of their previous criminal acts, arrestees are assumed to try new substances before these drugs reach

the general population. They are likely to be the first to try new drugs and the last to give them up. For this reason, arrestees are a group whose drug use is worth monitoring so as to project future drug use by the general population.

The DUF procedure has been well established, and DUF data have taken their place among other drug use indicators, such as the Drug Abuse Warning Network (DAWN), the Household Survey, and the High School Survey.

In September 1988, St. Louis became the 20th site to participate in the DUF program. Since then, DUF has expanded to 24 sites. Data were first collected in St. Louis during the first 2 weeks of October 1988. Since then, interviewing has taken place during the first 2 weeks of every quarter (January, April, July, and October).

Drug Use Trends

This section, covering the period October 1988 through October 1991 (13 quarters), discusses trends in drug use in St. Louis. During this period, drug use trends, as

measured by urinalysis test results from arrestees, have shown considerable variation. The sections that follow present urinalysis results for any drug, cocaine, and marijuana. Throughout, male use is distinguished from female use.

Trends in any drug use

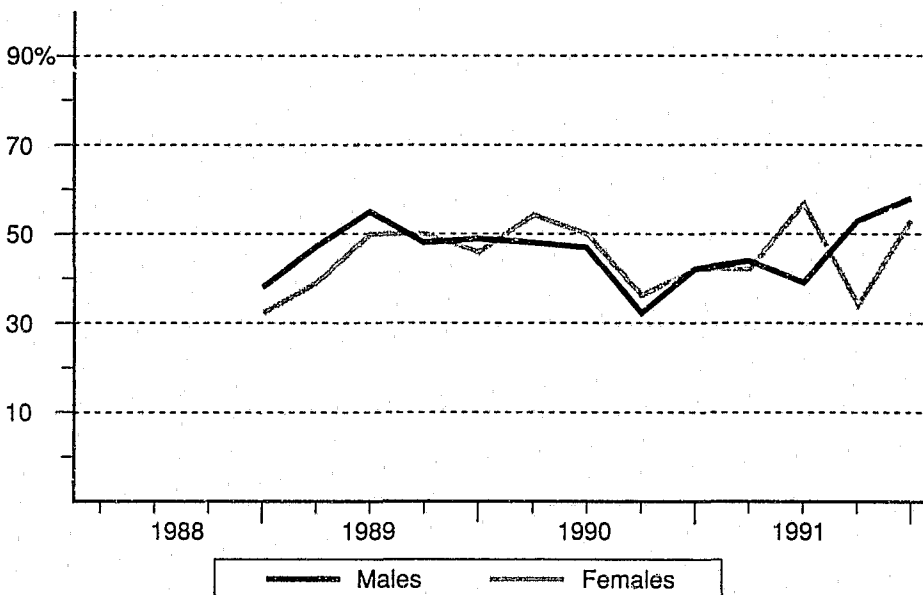
Trends in use for any drug (see back cover) appeared to be somewhat stable, with an annual decline in summer use (July testing period). Because of high levels of use, cocaine drove the trend line for both males and females. October 1991 data revealed that 65 percent of males tested positive for any drug—a record level—while 56 percent of females tested positive for any drug, the third highest level recorded for females and nearly a 30-percent increase over the preceding quarter, July 1991. Regardless of variations from the overall stable trends in drug use, arrestee drug use remains at high levels.

Trends in cocaine use

Figure 1 presents trends in arrestee cocaine use during the past 3 years. Throughout the 13 quarters of testing in St. Louis,

Figure 1

Trends in Cocaine Use Among Booked Arrestees in St. Louis



Note: Excerpts from "Drug Use Forecasting in St. Louis: A 3-Year Report." January 1992. To receive a copy of the entire report, write to Scott Decker, University of Missouri—St. Louis, 598 Lucas Hall, 8001 Natural Bridge Road, St. Louis, MO 63121.

Drug Trends in St. Louis

cocaine remained the drug of choice for arrestees by a considerable margin. The urinalysis test did not distinguish between methods of ingestion, but self-reported information gained through the DUF interviewing indicated that smoking rock or crack cocaine accounts for a majority of cocaine use. No clear trend in cocaine use was seen over the testing period.

Generally, the summer of 1988 is regarded as the time when large quantities of crack became available in St. Louis. DUF testing began too late to measure levels of cocaine use prior to the introduction of crack here. However, the first three quarters showed a clear upward trend in cocaine use by both males and females. The next distinguishable pattern occurred with the leveling off of cocaine use by both males and females in July 1989. For the year following that period (through June 1990), cocaine use among arrestees remained steady. However, a drop in cocaine use was observed for both males and females in July 1990. Positive urinalysis results for both males and females dropped approximately 15 percent, from nearly 50 percent positive to just under 35 percent positive.

The final four quarters of testing did not show a clear trend, as male and female results differed for the first time, and significantly so in April and July 1991. The results from October 1991 increased dramatically for both males (59 percent positive) and females (53 percent positive). Summer cocaine use in 1989 and 1990 for both males and females and in 1991 for females showed measurable declines. However, there is still a seasonal trend in cocaine use by adult arrestees.

The results presented here indicate that cocaine use continues at high rates among arrestees. Enforcement, interdiction, and treatment have yet to significantly affect arrestee cocaine use in St. Louis.

Trends in marijuana use

DUF results for marijuana use showed several trends, especially the general decline in use over the 3 years of DUF

testing since October 1988 (see page 8). Male and female urinalysis results generally produced a very consistent pattern, differing by only a few percentage points in most instances. Most noticeable were the peaks and valleys in marijuana use. Whereas peaks generally occurred during April, valleys often occurred during July or October. This suggests a strong seasonal pattern to the availability of marijuana, with supplies most plentiful in spring and scarce in late summer and fall. The decline in marijuana use observed during July 1991 showed that both male use and female use were at lowest recorded levels. Results for October 1991 remained low, with 8 percent of males and 4 percent of females testing positive. The results indicate that marijuana use by arrestees is unstable, has a strong seasonal trend, and generally has declined over the 3-year DUF testing period.

Drug Dependency and Treatment Issues

Table 1 presents findings on self-reported drug use (age of first use, lifetime dependency, and current dependency) for alcohol, marijuana, crack, cocaine, opiates, and PCP. Because these data are based on arrestee self-reports, we are able to

include data on alcohol. (Data aggregated October 1988 through July 1991.)

The majority of the sample reported using alcohol (94 percent) and marijuana (83 percent). Self-reports for crack (25 percent), cocaine (21 percent), opiates (11 percent), and PCP (3 percent) were generally lower. For alcohol and marijuana, the average age of first use was 16. Cocaine, crack, opiates, and PCP generally were used by respondents in their early to midtwenties. The average age of first use for crack was 26, reflecting the recent introduction of the drug in St. Louis.

The highest percent of arrestees, 13 percent, reported past dependency on alcohol. Eight percent of the total DUF sample reported past dependency on crack. Generalizing the results of this group of over 300 arrestees to the entire arrestee population indicates that several thousand arrestees have been dependent on crack at some point in their lives. Five percent, nearly 200 arrestees, of the DUF sample reported dependency on crack at the time of the interview, representing an important concern for courts, jails and prisons, and treatment providers. An ongoing DUF study is examining the size and characteristics of this population.

Table 1

Self-Reported Use of Drugs Among Booked Arrestees in St. Louis

	% Ever Used	Median Age of First Use	% Ever Dependent	% Currently Dependent
Alcohol	94	16	13	8
Marijuana	83	16	5	2
Crack	25	26	8	5
Cocaine	21	24	2	1
Opiates	11	22	4	1
PCP	3	21	1	*

Note: Data based on voluntary self-reports, male and female booked arrestees, October 1988 through July 1991.

* Less than 1%.

Drug Trends in St. Louis

Ten percent of the St. Louis DUF sample indicated a need for drug treatment. The majority of those self-reporting this indicated a need for cocaine treatment. The level of multiple drug use also demonstrates the need for drug treatment within this population.

Charge at Arrest and Drug Use

This section discusses the relationship between offense types and drug use for twelve offense categories and one miscellaneous category (see table 2). A previously seen drug pattern was evident across the different offense categories: regardless of offense, cocaine remained the most commonly used drug, with lower use levels for opiates, marijuana, and PCP. Those charged with drug sale or possession were most likely to test positive for any drug (75 percent). They were also the group most likely to test positive for two or more drugs. Arrestees charged with prostitution tested positive at similarly high levels. Seventy-three percent of all those charged with prostitution tested positive

for any drug, 63 percent tested positive for cocaine, and 23 percent tested positive for two or more drugs. These are the highest levels for any nondrug offense. Because of the threat that prostitutes pose for transmitting HIV, their drug use is of particular concern.

Other offense categories tested positive for drugs at high levels as well. In particular, property offenses such as property damage (63 percent), larceny (63 percent), and burglary (62 percent) had the second and third highest drug positives. Property offenses generally had higher drug positives than did violent offenses. The link between drugs and crime type generally is not well understood. Many argue that drug addicts commit a large portion of all property crime, a theory not challenged by these findings. On the other hand, many argue that there is a link between drugs and violent crime, homicide in particular. Fifty-eight percent of the 41 homicide cases included in the DUF sample in St. Louis tested positive for any drug. Forty-seven percent of all homicide arrestees tested positive for cocaine.

There is apparently a relationship between drug use and crime, especially for robbery and assault. Sixty-five percent of all robbery arrestees tested positive for any drug, and 55 percent tested positive for cocaine. Furthermore, more robbery arrestees tested positive for PCP than for any other offense type. Robbery appears, from these results, to be related to drug use. The drug test results for assault arrestees, however, more closely mirrored those for property offenses because assault arrestees tested positive at generally lower levels than robbery or homicide arrestees. Arrestees in the other offense categories also were likely to test positive for any drug. Forty-seven percent of the "other" offense category, which included those not specifically mentioned in table 2, tested positive for any drug, whereas 14 percent tested positive for two or more drugs. This suggests that ordinance violators and those arrested for minor infractions are at higher risk for drug use than previously assumed.

Findings and conclusions of the research reported here are those of the author(s) and do not necessarily reflect the official position or policies of the U.S. Department of Justice.

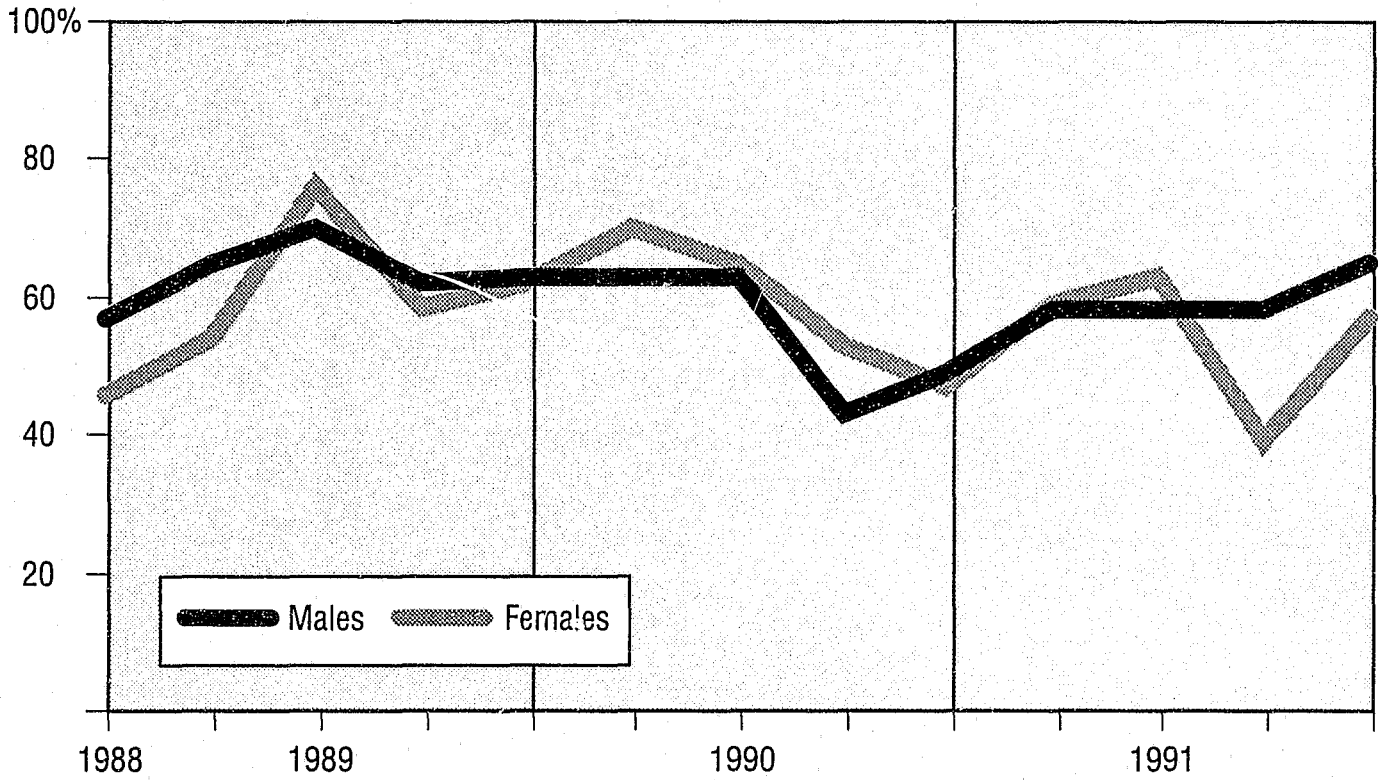
Table 2

Drug Positives by Charge at Arrest

Offense	% Positive		
	Cocaine	Opiates	Marijuana
Drug Sale/Possession (n=516)	66	12	23
Prostitution (n=153)	63	9	18
Property Damage (n=222)	63	9	18
Probation/Parole Violation (n=74)	58	9	12
Robbery (n=175)	55	6	16
Sex Offense (n=215)	53	7	19
Larceny (n=519)	52	11	15
Homicide (n=41)	47	2	22
Burglary (n=309)	47	5	20
Weapons (n=219)	37	7	22
Assault (n=762)	37	4	21
Stolen Property (n=78)	37	4	10
Other (n=1030)	34	4	15

Note: Positive by urinalysis. Data based on male and female booked arrestees in St. Louis, October 1988 through July 1991.

Trends in Drug Use Among Booked Arrestees in St. Louis



Source: National Institute of Justice/Drug Use Forecasting Program

Note: Positive by urinalysis, quarterly results, 1988 through 1991 (see page 9 for discussion).

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