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National Institute of Justice

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Charles B. DeWitt, Director

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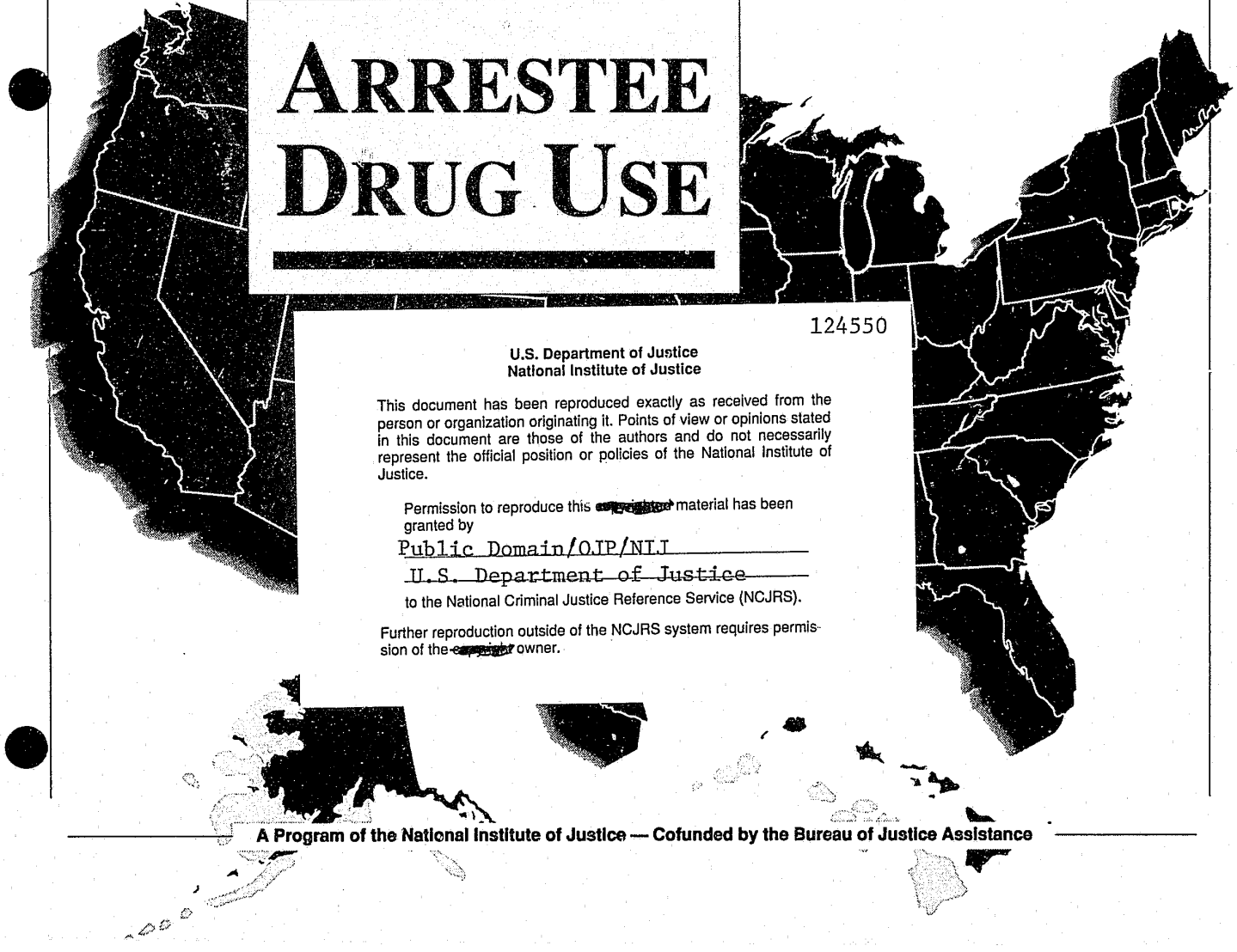
DUF

DRUG USE FORECASTING

JANUARY TO MARCH 1990

ARRESTEE DRUG USE



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Drug Use Forecasting (DUF) Research Update

In 1987, the National Institute of Justice began the Drug Use Forecasting (DUF) program in New York City. By 1990, 23 cities had entered the program. DUF is designed to provide each city with estimates of drug use among arrestees and information for detecting changes in drug use trends. The DUF program provides the country with the first objective measure of recent drug use in this deviant segment of the population. The information can be used to plan the allocation of law enforcement, treatment, and prevention resources, as well as to gain an indication of the impact of local drug use reduction efforts.

Method

DUF data are collected in central booking facilities in participating cities throughout the United States. For approximately 14 consecutive days each quarter, trained local staff obtain voluntary and anonymous urine specimens and interviews from a new sample of arrestees. In each site, approximately 225 males are sampled. In some sites, approximately 100 female arrestees are also interviewed.

To obtain samples with a sufficient distribution of arrest charges, DUF interviewers limit the number of male arrestees in the sample who are charged with the sale or possession of drugs. Because such persons are most likely to be using drugs at time of arrest and are undersampled, DUF statistics are minimum estimates of drug use in the male arrestee population. All female arrestees, regardless of charge, are included in the DUF sample because of the small number of female arrestees available.

Urine specimens are analyzed by EMIT™ for 10 drugs: cocaine, opiates,

Drug Use by Male Arrestees*

City	% POSITIVE ANY DRUG* (0 20 40 60 80 100)	RANGE OF % POSITIVE LOW	LOW DATE	HIGH	HIGH DATE	% POSITIVE* 2+ DRUGS	COCAINE	MARIJUANA	AMPHETAMINES	OPIATES	PCP
Males											
Philadelphia	80	79	8/88	84	4/89	30	70	19	0	8	1
San Diego	80	66	6/87	85	1/89	50	45	37	30	17	6
New York	79	76	4/89	90	6/88	36	67	24	0	20	4
Chicago	75	71	11/89	85	7/88	46	59	38	0	27	10
Houston	70	61	1/88	70	7/89	18	57	21	**	6	0
Los Angeles	70	63	10/89	77	4/88	28	54	19	0	16	5
Birmingham	69	60	11/89	75	7/88	21	50	18	0	6	0
Dallas	66	57	12/88	72	6/88	20	44	32	0	7	0
Cleveland	65	62	11/89	70	8/89	22	49	26	0	4	1
Portland	64	54	1/89	76	8/88	21	24	40	13	10	0
San Antonio	63	49	12/89	63	3/90	26	30	39	2	17	1
St. Louis	62	56	10/88	69	4/89	18	48	26	0	4	2
Ft. Lauderdale	61	61	3/90	71	3/88	18	47	27	0	**	0
New Orleans	60	58	1/88	76	4/89	22	51	20	**	6	3
Phoenix	60	53	10/87	67	1/88	20	27	38	9	5	**
Indianapolis	60	50	2/89	62	9/89	19	22	48	0	3	0
Wash., D.C.	59	57	11/89	72	2/89	24	49	12	**	15	6
Denver	59	Data Not Available				16	30	37	1	3	**
San Jose	58	58	2/90	65	8/89	23	32	26	8	8	8
Kansas City	57	54	11/88	64	5/89	12	38	26	**	2	**

Source: National Institute of Justice/Drug Use Forecasting Program

* Positive urinalysis, January through March 1990. Drugs tested for include cocaine, opiates, PCP, marijuana, amphetamines, methadone, methaqualone, benzodiazepines, barbiturates, and propoxyphene

** Less than 1%

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Drug Use Forecasting (continued)

marijuana, PCP, methadone, benzodiazepines (Valium), methaqualone, propoxyphene (Darvon), barbiturates, and amphetamines. 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 prior 2 to 3 days. Exceptions are marijuana and PCP, which can sometimes be detected several weeks after use.

First Quarter Results January to March, 1990

During the first quarter of 1990, Denver initiated data collection as part of the DUF project (see back cover). Additionally, Cleveland added female arrestees to its data collection efforts. The results for these new sites appear below.

More than half the male arrestees in each DUF city tested positive for a drug at time of arrest. The range of positives was from 57 percent in Kansas City to 80 percent in Philadelphia and San Diego. Among female arrestees, the range of drug use was 44 percent in San Antonio to 88 percent in Cleveland.

Multiple drug use was highest among male arrestees in San Diego (50 percent) and Chicago (46 percent), and among females in Portland (36 percent) and San Diego (34 percent).

Cocaine use among male arrestees was higher than the use of any other drug in all cities but Portland, Indianapolis, Denver, Phoenix, and San Antonio. In those cities, marijuana was the most prevalent drug. Similarly, cocaine use was the most prevalent drug among female arrestees in all DUF cities excluding Indianapolis and San Diego. In Indianapolis, females were most likely to test positive for marijuana, while females in San Diego were most likely to test positive for amphetamines.

PCP continued to be found in only a few cities. In Chicago, 10 percent of the male arrestees tested positive for PCP. Among female arrestees, PCP use was highest in San Jose—22 percent. In all other cities, the percent positive for PCP was less than 10 percent.

Drug Use by Female Arrestees*

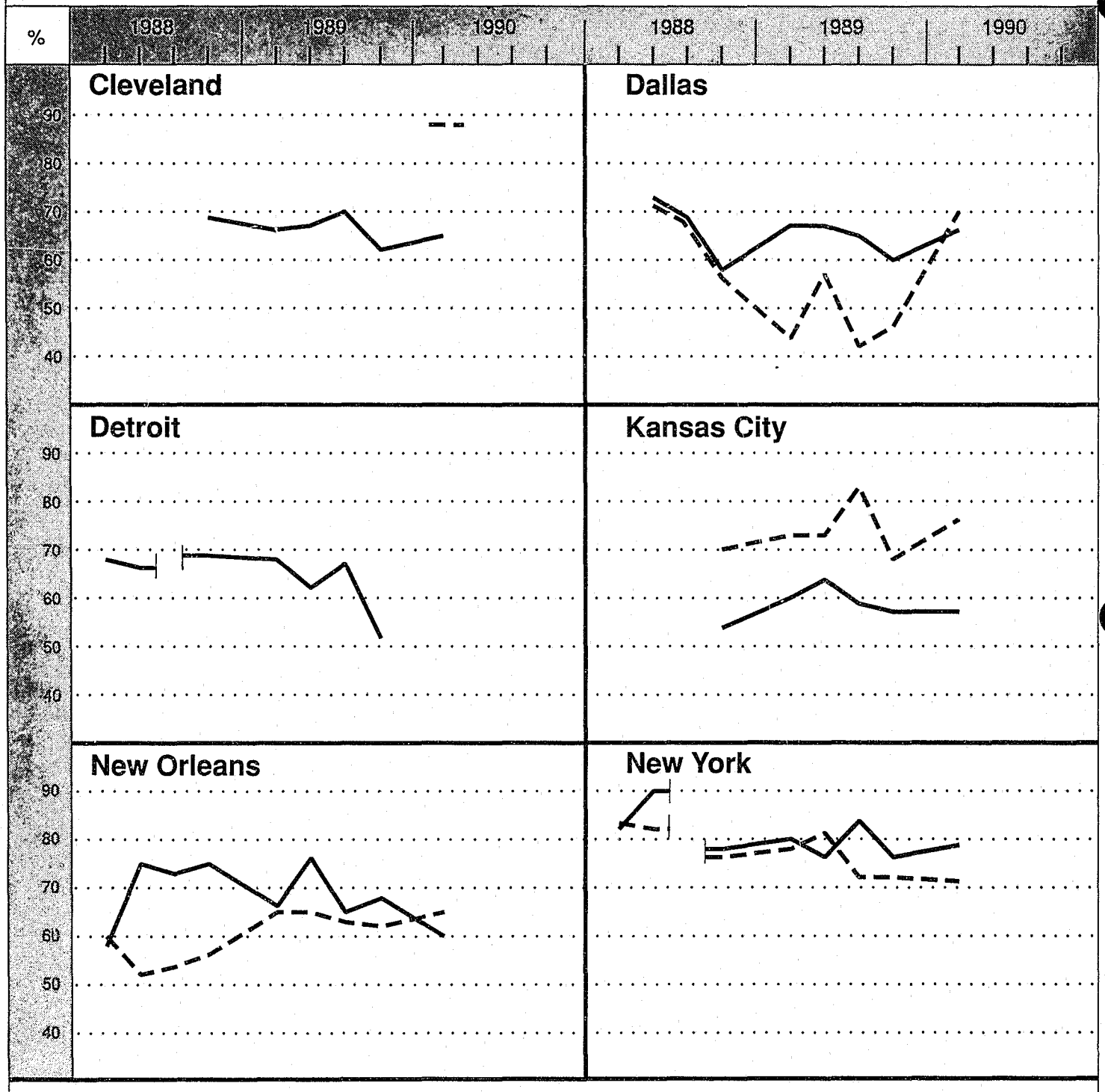
City	% POSITIVE ANY DRUG* (0 20 40 60 80 100)	RANGE OF % POSITIVE LOW	LOW DATE	HIGH	HIGH DATE	% POSITIVE* 2+ DRUGS	COCAINE	MARIJUANA	AMPHETAMINES	OPIATES	PCP
Females											
Cleveland	88	Data Not Available				29	80	14	0	4	0
Wash., D.C.	85	70	2/89	88	6/89	33	78	12	**	20	6
Philadelphia	81	77	1/89	90	7/89	28	64	14	0	16	0
Ft. Lauderdale	79	56	12/89	79	3/90	22	60	28	0	1	0
Kansas City	76	68	10/89	83	8/89	23	66	22	5	1	0
Portland	76	57	11/89	82	8/88	36	43	34	20	19	0
Los Angeles	73	72	7/88	80	7/89	30	59	12	0	16	**
New York	71	71	1/90	83	2/88	31	67	6	0	24	4
Dallas	71	42	9/89	71	3/90	29	57	25	0	15	0
San Diego	70	70	1/90	87	12/87	34	34	16	38	18	4
St. Louis	69	45	11/88	75	4/89	16	54	15	0	7	0
Phoenix	69	54	7/88	78	3/89	31	30	25	8	16	**
Houston	66	48	10/89	66	1/90	30	56	13	5	11	0
Birmingham	66	43	11/89	77	4/89	33	40	11	0	6	0
New Orleans	65	46	11/87	65	1/90	26	57	16	0	14	0
San Jose	64	59	12/89	64	2/90	24	31	10	5	20	22
Denver	62	Data Not Available				15	46	15	4	3	0
Indianapolis	56	42	9/89	56	2/90	18	18	35	0	10	0
San Antonio	44	43	12/89	55	9/89	20	18	11	4	17	0

Source: National Institute of Justice/Drug Use Forecasting Program

* Positive urinalysis, January through March 1990. Drugs tested for include cocaine, opiates, PCP, marijuana, amphetamines, methadone, methaqualone, benzodiazepines, barbiturates, and propoxyphene

** Less than 1%

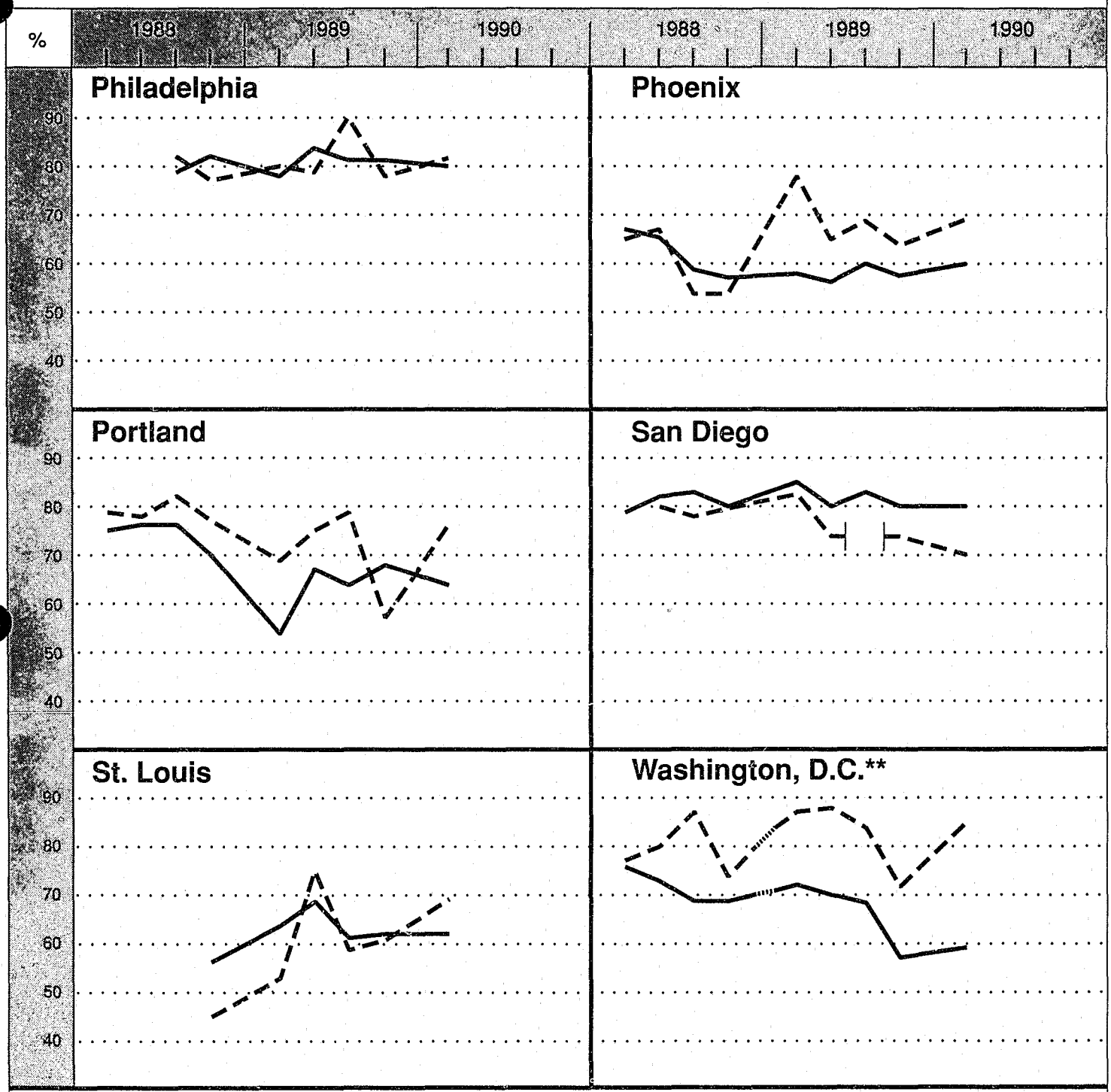
Drug Use Trends Among Arrestees*



Source: National Institute of Justice/Drug Use Forecasting Program

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

Drug Use Trends Among Arrestees* (continued)



Source: National Institute of Justice/Drug Use Forecasting Program

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

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

Arrestees Talk About "Ice"

Reports of "ice", a smokable form of methamphetamine, received a great deal of media attention during the summer of 1989. Has ice made inroads among the arrestee population? To assess the extent of ice use among arrestees, DUF interviewers asked the arrestees if they had ever heard about ice, how they had heard about it, and whether they had ever used it.

Except for male arrestees in San Jose, more than half of all arrestees in the DUF sample reported having heard about ice (see table to the right). In San Jose, only 42 percent of the males stated that they had heard about ice. Of those arrestees who had heard of ice, the majority reported that their information came from the media, including newspapers, radio, and television. The second most likely source of ice information was through friends of the arrestees. Less than 7 percent of the arrestees reported hearing about ice from a drug dealer.

Female arrestees in Los Angeles were most likely to report having tried ice—5 percent. Among all other arrestees, less than 4 percent reported ever having tried it. These self-report results are consistent with urinalysis findings. That is, the percent positive for amphetamines as measured by urinalysis remains low. In those cities where amphetamine use is found, e.g., San Diego, the percent positive has remained fairly stable for the last year (see *Research in Action*, "Drug Use Forecasting—October to December 1989").

The use of ice among arrestees appears to be limited, but the continued monitoring of self-reports as well as urinalysis results will allow us to assess whether ice will become a drug of choice among the arrestee population.

"Ice" Information From Arrestees*

Site		% ever heard about ice	Source of information about ice				% ever used ice
			Media	Friend	Dealer	Other	
Birmingham	M	82	63	17	1	16	**
	F	70	60	15	4	21	1
Dallas	M	66	59	27	6	8	**
	F	69	60	31	1	8	0
Denver	M	87	71	16	2	11	2
	F	79	68	17	2	14	1
Chicago	M	50	63	27	0	9	**
Cleveland	M	84	69	14	**	17	3
	F	78	50	30	2	18	2
Ft. Lauderdale	M	70	65	24	2	7	0
	F	66	52	30	3	15	3
Indianapolis	M	67	70	18	3	8	**
	F	52	82	11	4	4	0
Los Angeles	M	56	72	19	2	8	2
	F	68	60	32	4	5	5
New York	M	67	64	22	1	12	**
	F	58	66	19	5	10	0
Philadelphia	M	74	65	19	2	8	**
	F	59	56	12	3	28	**
Phoenix	M	70	67	21	2	8	1
	F	81	67	19	3	10	3
Portland	M	70	64	17	4	15	2
	F	73	58	29	1	12	**
San Jose	M	42	81	11	0	8	0
	F	56	74	13	0	13	1
San Diego	M	65	68	17	2	12	2
	F	78	72	17	3	8	**
Wash., D.C.	M	56	87	4	3	5	**
	F	64	75	12	4	9	0

Source: National Institute of Justice/Drug Use Forecasting Program

*Data based on voluntary self-reports, January through March 1990

**Less than 1%

DUF Estimates of Drug Use Applied To UCR

Since initiating the Drug Use Forecasting program, we have given careful consideration to the representativeness of the DUF samples in each city. Arrestees in the DUF sample are selected from among persons being processed in each city's central booking facility. These facilities are hectic, often chaotic, environments where jail staff are under considerable time restraints to process each arrestee and prepare them for arraignment. DUF staff are trained to select a "convenience sample" from persons available during the data collection period.

We recognize that this procedure might result in a charge distribution of arrestees in the DUF sample that differs from the charge distribution of all arrestees in a given city. Would such a difference significantly bias the estimates of drug use derived from the DUF sample? To examine this question, we applied the DUF estimates of drug use by charge in Chicago to the total population of arrestees in that city, as reported in the FBI's Uniform Crime Report (UCR). We selected Chicago because there appeared to be differences in the charge distribution in the DUF sample compared with the charge distribution in the UCR statistics.

TABLE 1

DUF AND UCR DISTRIBUTIONS OF CHARGES IN MALE ARRESTEES, CHICAGO, 1988

CHARGE	DUF	UCR
Drug sale/possess.	26.7	14.6
Burglary	14.8	2.3
Assault	10.9	19.6
Stolen vehicle/prop.	9.9	2.7
Larceny/theft	8.6	13.6
Robbery	6.6	1.4
Weapons	3.8	3.8
Disturb. peace	2.9	17.8
Arson/prop. damage	3.0	3.3
Sexual assault	2.2	1.0
Other	10.5	20.0
TOTAL	100%	100%
(N)	(905)	(172,448)

Source: National Institute of Justice/Drug Use Forecasting and Federal Bureau of Investigation/Uniform Crime Report

TABLE 2

DUF ESTIMATES OF DRUG USE BY CHARGE APPLIED TO UCR ARRESTS IN CHICAGO, 1988

Charge	N of arrests (Chicago UCR)	% Positive (Chicago DUF)	Estimated Users in UCR Sample
Drug sale/possess.	25,223	.922	23,256
Disturb. peace	30,636	.846	25,918
Larceny/theft	23,397	.833	19,490
Burglary	3,916	.799	3,129
Arson/prop. damage	5,690	.778	4,427
Assault	33,790	.758	25,613
Robbery	2,394	.750	1,796
Weapons	6,545	.676	4,424
Stolen vehicle/prop.	4,605	.644	2,966
Sexual assault	1,798	.600	1,079
Other*	34,454	.737	25,393
TOTAL	172,448		137,491

Source: National Institute of Justice/Drug Use Forecasting and Federal Bureau of Investigation/Uniform Crime Report

*All charges having less than 20 cases in the 1988 Chicago DUF sample are grouped in the "other" category

Table 1 presents the charge distribution in the DUF sample for all 905 male arrestees tested in 1988 (see *Research in Action* "1988 Drug Use Forecasting Annual Report") and for the 172,448 arrests recorded in the FBI's UCR for Chicago in that year. Compared with the UCR, the DUF sample overrepresented persons charged with burglary, drug offenses, robbery, and stolen property/ vehicles.

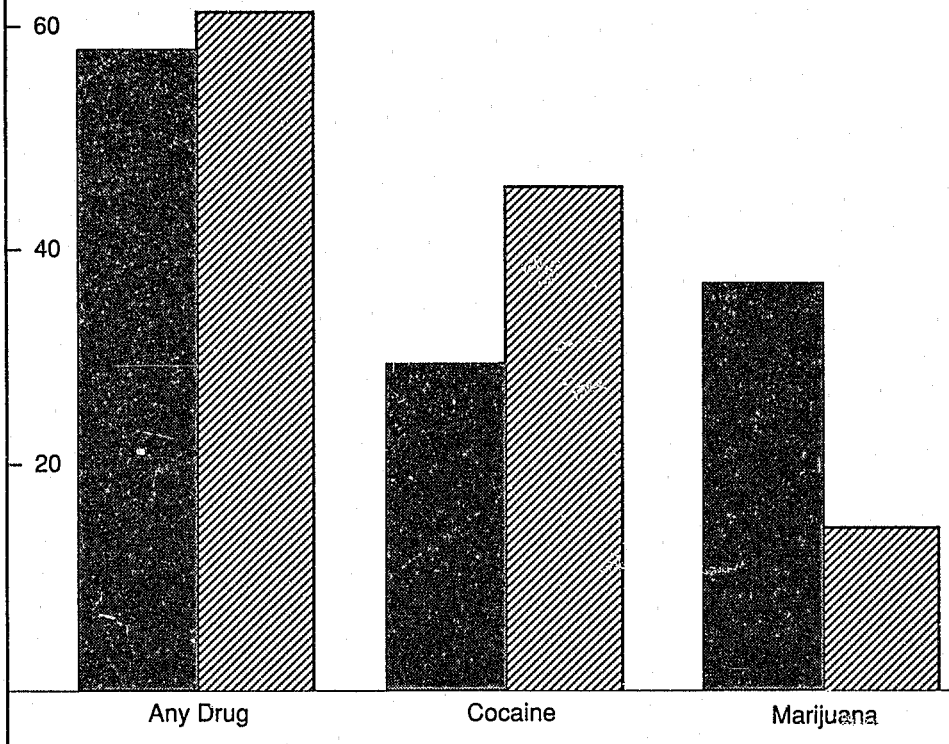
In the DUF sample, we had reported that 79.7 percent of the male arrestees in Chicago in 1988 had tested positive for a drug at arrest. Would this estimate be different if the charge distribution in the DUF sample had been the same as the distribution in the UCR statistics?

To obtain an estimate of drug use among all arrestees in Chicago (as reported by the UCR), we applied the Chicago DUF estimates of drug use by persons in each charge category to the distribution of arrest charges reported in the UCR for Chicago in 1988. For example, 92.2 percent of the arrestees in the DUF sample from Chicago who were charged with sale or possession of drugs tested positive for recent drug use. We multiplied this estimate (.922) times the 25,223 UCR arrests for drug offenses to estimate the number of these arrests in which the arrestee would have tested positive for drug use. This yielded an estimate of 23,256 drug users for this offense category.

As table 2 shows, we estimate that there were 137,491 arrestees who would test positive for a drug out of the 172,448 UCR arrests, a rate of 79.7 percent. This rate is identical to the prevalence of drug use estimated from the DUF sample of 905 persons. The robustness of the DUF sample estimate is impressive, in view of the differences in the charge distributions of the DUF and UCR samples in Chicago. Similar analyses will be conducted for other DUF sites.

The DUF program has been carefully developed to provide the most objective estimates of recent drug use obtained to date from an arrestee population. While the data collection environment has prevented DUF staff from obtaining "textbook" samples of arrestees, several analyses have provided strong empirical support for the validity and robustness of the resulting estimates of drug use.

Drug Use Among Denver Arrestees*



Denver became the 23rd DUF site in the first quarter of 1990. Fifty-nine percent of the male arrestees and 62 percent of the females tested positive for a drug at the time of arrest. Males were most likely to test positive for marijuana (37 percent), while females were most likely to test positive for cocaine (46 percent). Less than 11 percent of the male and female arrestees tested positive for other drugs (see below for list of drugs).

Source: National Institute of Justice/Drug Use Forecasting Program

*Positive urinalysis, January through March 1990. Drugs tested for include cocaine, opiates, PCP, marijuana, amphetamines, methadone, methaqualone, benzodiazepines, barbiturates, and propoxyphene

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