



DEWS  **Drug Early Warning System**
Working Together to Identify & Respond to Emerging Drug Trends in Maryland

**Juvenile Offender Population Urinalysis
Screening Program (OPUS)**

Detention Study

March – June 2003

**Report Prepared
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ABSTRACT

The Juvenile OPUS Study was implemented by the Center for Substance Abuse Research (CESAR) in June 1998 as a urinalysis monitoring program for juveniles processed by the Department of Juvenile Services. The project goals are to monitor changes in drug use and to identify emerging drugs of abuse among the juvenile offender population.

For the March-June 2003 Detention Study, 291 youths who were processed in one of the five DJS detention facilities provided a urine specimen. Forty-one percent of the youths tested positive for at least one drug, primarily marijuana (37%). PCP (phencyclidine) was detected in 2% of all juveniles, while cocaine was detected in another 2% of all juveniles, and amphetamines were detected 1% of all juveniles (Table 3).

Prior research has indicated that offender urinalysis results provide advance warning of drug epidemics in the general population. OPUS is designed to provide insight into emerging drug trends among the juvenile offender population. It should be noted that OPUS drug use patterns may not be typical of the general youth population.

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Juvenile Offender Population Urinalysis Screening (OPUS)

I. PROJECT OVERVIEW

Juvenile OPUS is one component of Maryland's Drug Early Warning System (DEWS), and is supported by a grant from the Governor's Office of Crime Control & Prevention.

The Juvenile OPUS Study was implemented by the Center for Substance Abuse Research (CESAR) in June 1998 as a urinalysis monitoring program for juveniles processed by the Department of Juvenile Services (DJS). The project goals are to monitor changes in drug use and to identify emerging drugs of abuse among the juvenile offender population.

The Juvenile OPUS Project takes place in two venues: Detention and Intake. Once a year the Detention Study obtains urine specimens only from youths newly admitted to the DJS's five detention facilities (Alfred D. Noyes Children's Center, Charles H. Hickey Jr. School, Cheltenham Youth Facility, J. DeWeese Carter Youth Facility, and Thomas J. Waxter Children's Facility). The Intake Study obtains interviews and urine specimens from youths being assessed in the DJS county offices.

This report presents results from the Detention Study conducted between March and June 2003. A final table compares the urinalysis test results collected for the OPUS Detention Study in the last seven data collection periods.

Prior research has indicated that offender urinalysis results provide advance warning of drug epidemics in the general population. OPUS is designed to provide insight into emerging drug trends among the juvenile offender population. It should be noted that OPUS drug use patterns may not be typical of the general youth population.

II. METHODS

- Trained nursing and detention staff obtained voluntary and anonymous urine specimens from youths detained in Maryland's five DJS detention facilities.
- The only youths included were those who had been admitted to the facility within the last 72 hours and who had not been transferred from another secure facility.
- A voluntary and anonymous urine specimen was collected and sent to a laboratory¹ to be screened for 11 drugs: amphetamines, barbiturates, benzodiazepines, cocaine, lysergic acid diethylamide (LSD)², marijuana, methadone, methaqualone, opiates, phencyclidine (PCP), and propoxyphene. The amphetamine-positive urine specimens were confirmed for amphetamines, methamphetamines, and MDMA by GC/MS (Gas Chromatography/Mass Spectrometry). The LSD-positive urine specimens were confirmed by HPLC (High Performance Liquid Chromatography).
- A candy bar was offered to respondents as an incentive for participation.

¹ American Medical Laboratories, Chantilly, VA

² Beginning September 2002, urine specimens were tested for LSD.

III. FINDINGS

Response Rates and Characteristics of Tested Juveniles

- 94% of the 311 youths approached provided a urine specimen (Table 1).
- The majority of the tested juveniles were male (87%) (Table 2).
- 75% of the tested youths were 15 years or older; 29% were 17 or older (Table 2).
- The most common charge was a property offense (32%), followed by personal (29%), and miscellaneous offenses (19%) (Table 2).

Table 1. Response Rates, by Detention Facility

Facility	Number of youths approached	Percentage of youths who provided a specimen
	<u>n</u>	<u>%</u>
Carter	69	99
Cheltenham	112	97
Hickey	45	71
Noyes	54	94
Waxter	31	100
Total	311	94%

Source: Center for Substance Abuse Research (CESAR), University of Maryland, College Park, Juvenile OPUS Detention Study Report, September 2003.

Table 2. Demographic Characteristics of Tested Respondents³
(n=291)

Characteristic	%
<u>Gender</u>	
Male	87
<u>Race/Ethnicity</u>	
Black	62
White	28
Hispanic	4
Other	<1
<u>Age</u>	
13 or younger	8
14	17
15	25
16	22
17 or older	29
	} 75%
<u>Charge</u>	
Property	32
Personal	29
Miscellaneous	19
Drug-related	16
Status	4

Note: Property offenses include arson, burglary, breaking and entering, larceny/theft, stolen property, stolen vehicle, fraud, and threat to property. Personal offenses include murder, assault, robbery, domestic assault, sexual assault/rape, sex offenses, kidnapping, threat to person, and reckless endangerment. Drug-related offenses include drug, tobacco, and alcohol possession and sale, DUI/DWI, under the influence, drug manufacturing, and drug paraphernalia. Status offenses include truancy, CINS, home detention, run away, possession of alcohol (citation), curfew, tobacco violation, failed placement, and school suspension. Miscellaneous offenses include weapons, probation/parole, warrant, resisting arrest, public peace/disorderly, trespassing, prostitution, manufacturing explosives, telephone/computer misuse, and traffic violations.

Source: Center for Substance Abuse Research (CESAR), University of Maryland, College Park, Juvenile OPUS Detention Study Report, September 2003.

³ Race information was missing for twelve juveniles, age information was missing for seven juveniles, and charge information was missing for twenty-eight juveniles.

IV. FINDINGS

Urinalysis Test Results (Table 3)

- 41% of the youths (39% of males, 51% of females) tested positive for at least one drug, primarily marijuana.
- 36% of males and 41% of females tested positive for marijuana.
- PCP was detected in 2% of all juveniles. Of the six juveniles who tested positive for PCP, four were male, and five were age 16 or over. Three were charged with a property offense, one was charged with a drug-related offense, and two juveniles were missing offense information. Four of the six also tested positive for marijuana.
- Cocaine was detected in 2% of all juveniles. Of the five juveniles who tested positive for cocaine, their ages ranged from 15 to 17, and four were male. Two were charged with a drug-related offense, two were charged with a miscellaneous offense, and one was charged with a property offense. Three tested positive for more than one drug.
- Amphetamines were detected in 1% of all juveniles. The ages of the four juveniles who tested positive for amphetamines ranged from 15 to 17, and two were male. Two were charged with a personal offense, one was charged with a property offense, and one was charged with a status offense. One tested positive for more than one drug. All four youths reported that they were using stimulants by prescription.
- Two youths tested positive for MDMA. One youth was a 17-year-old male charged with drug possession. One youth was a 14-year-old male charged with breaking and entering. Both youths were positive for marijuana and were not taking any prescription medications.
- One youth tested positive for opiates. The youth was a 17-year-old female charged with drug possession. She was also positive for cocaine and reported to be taking an Albuterol inhaler.

Table 3. Urinalysis Test Results, by Gender⁴

	Males (n=253)	Females (n=37)	Total (n=290)
	<u>%</u>	<u>%</u>	<u>%</u>
Positive For:			
Marijuana	36	41	37
PCP	2	5	2
Cocaine	2	3	2
Opiates	-	3	<1
Amphetamines	<1	5	1
MDMA	<1	-	<1
Any Drug (of 11)	39	51	41

Note: Urine specimens were analyzed for 11 drugs: amphetamines, barbiturates, benzodiazepines, cocaine, LSD, marijuana, methadone, methaqualone, opiates, PCP, and propoxyphene. The amphetamine-positive urine specimens were confirmed for amphetamines, methamphetamines, and MDMA by GC/MS. The LSD-positive urine specimens were confirmed by HPLC.

Source: Center for Substance Abuse Research (CESAR), University of Maryland, College Park, Juvenile OPUS Detention Study Report, September 2003.

⁴ Percentages for “Any Drug (of 11)” are based on 289 cases due to an insufficient quantity of urine in one specimen to test for LSD and in another specimen to test result for any drugs. Percentages for other drug results are based on 290 cases since they are unaffected by the insufficient urine for the LSD confirmation.

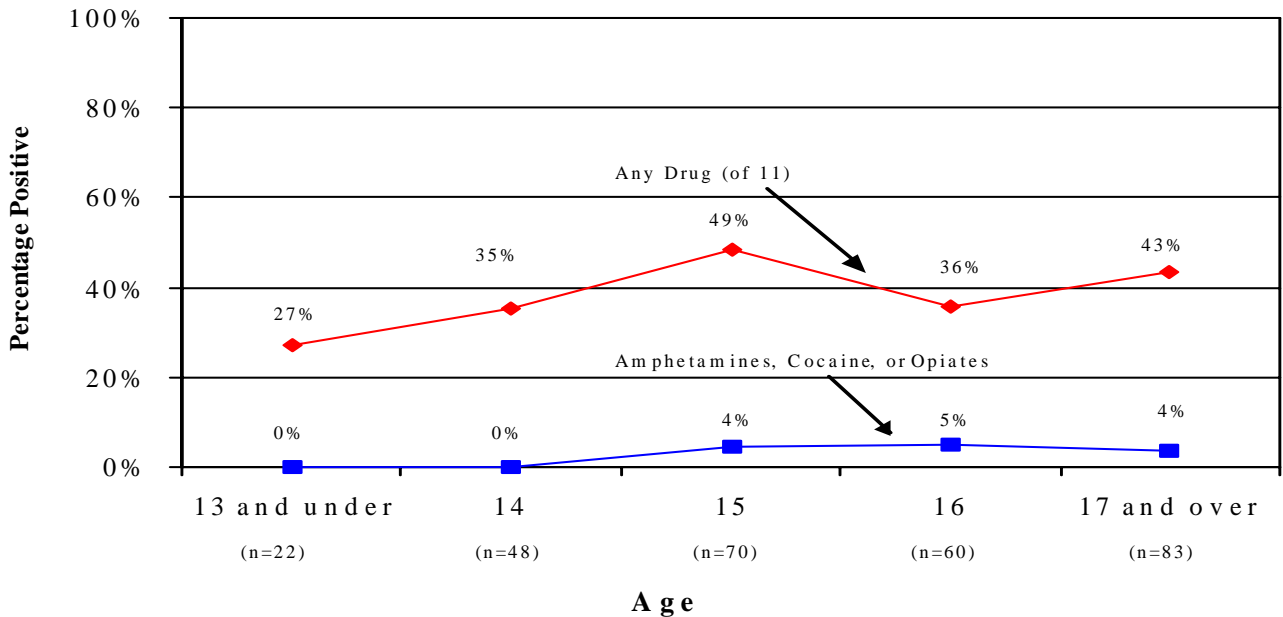
V. FINDINGS

Correlates of Testing Positive for Drugs

- The percentage of youths who tested positive for any drug (of 11), primarily marijuana, increased with age, up to age 15, and leveled off. Of youths 17 and older, almost half (43%) tested positive for any drug. Five percent or less of juveniles 15 and older tested positive for amphetamines, cocaine, or opiates (Figure 1).
- Almost seventy percent of the juveniles charged with a warrant offense tested positive for any drug. Almost half of the youths charged with either a drug-related offense (48%) or a probation violation (46%) tested positive for any drug (Table 4).
- Youth tested at the Hickey detention facility had higher positive rates (63%) for any drug than youth from other facilities. Approximately half of the juveniles tested at Cheltenham and Waxter detention facilities tested positive for any drug (Table 5).
- Noyes positive rates for any drug were much lower (10%) than all other facilities. Additional analyses, which controlled for age and charge differences, could not account for Noyes' lower drug positive rates (Table 5).

Figure 1. Percentage Positive for Any Drug (of 11), or Positive For Amphetamines, Cocaine, or Opiates, by Age

(n = 283 Juvenile Detainees)⁵



Note: Urine specimens were analyzed for 11 drugs: amphetamines, barbiturates, benzodiazepines, cocaine, LSD, marijuana, methadone, methaqualone, opiates, PCP, and propoxyphene. The amphetamine-positive urine specimens were confirmed for amphetamines, methamphetamine, and MDMA by GCMS. The LSD-positive urine specimens were confirmed by HPLC.

Source: Center for Substance Abuse Research (CESAR), University of Maryland, College Park. Juvenile OPUS Detention Study Report, September 2003.

⁵ Percentages for 16-year-olds positive for “Any Drug (of 11)” are based on 59 cases due to insufficient quantity in one specimen to confirm for LSD. This makes n=282 when analyzing drug positives for “Any Drug (of 11)”.

Table 4. Percentage Positive for Marijuana and Any Drug, by Charge⁶

Charge	Percentage Positive for Marijuana	Percentage Positive for Any Drug (of 11)
Warrant (13)	62%	69%
Drug-related (42)	45%	48%
Probation (13)	46%	46%
Miscellaneous (23)	39%	39%
Personal (77)	31%	36%
Property (84)	30%	36%
Status (10)	20%	30%
Total (262)	36%	40%

Note: Urine specimens were analyzed for 11 drugs: amphetamines, barbiturates, benzodiazepines, cocaine, LSD, marijuana, methadone, methaqualone, opiates, PCP, and propoxyphene. The amphetamine-positive urine specimens were confirmed for amphetamines, methamphetamines, and MDMA by GC/MS. The LSD-positive urine specimens were confirmed by HPLC.

Personal offenses include murder, assault, robbery, domestic assault, sexual assault/rape, sex offenses, kidnapping, threat to person, and reckless endangerment. Property offenses include arson, burglary, breaking and entering, larceny/theft, stolen property, stolen vehicle, fraud, and threat to property. Drug-related offenses include drug, tobacco, and alcohol possession and sale, DUI/DWI, under the influence, drug manufacturing, and drug paraphernalia. Status offenses include truancy, CINS, home detention, run away, possession of alcohol (citation), curfew, tobacco violation, failed placement, and school suspension. Miscellaneous offenses include weapons, resisting arrest, public peace/disorderly, trespassing, prostitution, manufacturing explosives, telephone/computer misuse, and traffic violations.

Source: Center for Substance Abuse Research (CESAR), University of Maryland, College Park, Juvenile OPUS Detention Study Report, September 2003.

⁶ Percentages for “Any Drug (of 11)” are based on 261 cases due to missing charge information for twenty-eight juveniles and an insufficient quantity of urine in one specimen to test for LSD. Percentages positive for marijuana are based on 262 cases since they are unaffected by the insufficient urine for the LSD confirmation.

Table 5. Percentage Positive for Marijuana and Any Drug, by Facility⁷

	Carter (n=68)	Cheltenham (n=108)	Hickey⁸ (n=32)	Noyes⁹ (n=51)	Waxter (n=31)	Total (n=290)
Positive For:						
Marijuana	38%	40%	63%	8%	42%	37%
Any Drug (of 11)	40%	46%	63%	10%	55%	41%

Note: Urine specimens were analyzed for 11 drugs: amphetamines, barbiturates, benzodiazepines, cocaine, LSD, marijuana, methadone, methaqualone, opiates, PCP, and propoxyphene. The amphetamine-positive urine specimens were confirmed for amphetamines, methamphetamines, and MDMA by GC/MS. The LSD-positive urine specimens were confirmed by HPLC.

Source: Center for Substance Abuse Research (CESAR), University of Maryland, College Park, Juvenile OPUS Detention Study Report, September 2003.

⁷ Percentages for “Any Drug (of 11)” are based on 289 cases due to an insufficient quantity of urine in one specimen to test for LSD. Percentages for marijuana positives are based on 290 cases since they are unaffected by the insufficient urine for the LSD confirmation.

⁸ Although the drug positive rates are higher in Hickey than in other sites, analyses indicate that this is not a result of age or their prevalence of drug-related offense charges.

⁹ Although the drug positive rates are lower in Noyes than in other sites, analyses indicate that this is not a result of age, gender, or charge.

VI. OPUS DETENTION STUDY RESULTS OVER SEVEN TIME PERIODS (Table 6)

This section presents comparisons of the urinalysis results of Detention Studies across seven data collection periods. Prior OPUS reports may be accessed at www.dewsonline.org or by contacting CESAR directly (301-403-8329).

- Results from the seven data collection periods were stable.
- In all time periods, youths were most likely to test positive for marijuana.
- Marijuana positive urinalysis results ranged from 37% to 45% over the seven data collection periods.

Table 6. Urinalysis Test Results Over Seven Data Collection Periods

	February- May 1999 (n=545)	January- May 2000 (n=802)	September- November 2000¹⁰ (n=555)	March-June 2001 (n=409)	September- November 2001 (n=483)	March- June 2002 (n=426)	March- June 2003 (n=290)¹¹
<u>Positive For:</u>							
	<u>%</u>	<u>%</u>	<u>%</u>	<u>%</u>	<u>%</u>	<u>%</u>	<u>%</u>
Marijuana	39	42	43	41	41	45	37
Cocaine	2	1	3	3	3	5	2
Opiates	2	1	2	2	1	2	**
Amphetamines	1	1	4	4	1	1	1
PCP	**	**	2	2	1	2	2
Benzodiazepines	1	**	1	1	**	**	**
Propoxyphene	**	**	**	1	**	**	**
MDMA	**	**	**	2	**	**	**
Any Drug (of 11)	42%	43%	48%	46%	43%	47%	41%

Note: Urine specimens were analyzed for 11 drugs: amphetamines, barbiturates, benzodiazepines, cocaine, LSD, marijuana, methadone, methaqualone, opiates, PCP, and propoxyphene. The amphetamine-positive urine specimens were confirmed for amphetamines, methamphetamines, and MDMA by GC/MS. The LSD-positive urine specimens were confirmed by HPLC.

**Occurred in zero or less than one percent. Barbiturate and methadone positives occurred in zero percent or less than one percent across all data collection periods and have been omitted from the table.

Source: Center for Substance Abuse Research (CESAR), University of Maryland, College Park, Juvenile OPUS Detention Study Report, September 2003.

¹⁰ In the data collection period for September-November 2000, only four detention facilities participated in this study—Carter, Cheltenham, Noyes, and Waxter.

¹¹ Percentages for “Any Drug (of 11)” are based on 289 cases due to an insufficient quantity of urine in one specimen to test result for LSD. Percentages for other drug test results are based on 290 cases since they are unaffected by the insufficient urine for the LSD confirmation.