

# 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, February—June 2005**

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July 12, 2005

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This project was supported by BRYN-2004-1207, awarded by the U.S. Department of Justice through the Governor's Office of Crime Control and Prevention. The Assistant Attorney General, Office of Justice Programs, coordinates the activities of the program offices and bureaus. Points of view or opinions contained within this document are those of the author and do not necessarily represent the official position or policies of USDOJ.

## **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 February-June 2005 Detention Study, 393 youths from 8 DJS detention facilities were approached to participate. Of those approached, 363 youths provided a urine specimen. Fifty percent of the youths tested were positive for at least one drug, primarily marijuana (49%). Cocaine was detected in 3% of all juveniles tested. Opiates, oxycodone, and phencyclidine (PCP) were detected in 1% (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 Maryland 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.

Once a year the Detention Study obtains urine specimens only from youths newly admitted to DJS detention facilities. Prior to 2005, this included 5 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). In 2005, three new detention facilities were added to the study (Baltimore City Juvenile Justice Center, Lower Eastern Shore Children's Center, and Western Maryland Children's Center).

This report presents results from the Detention Study conducted between February and June 2005. A final table compares the urinalysis test results collected for the OPUS Detention Study in the last nine 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 Maryland 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 staff obtained voluntary and anonymous urine specimens from youths detained in eight Maryland DJS detention facilities.
- Only youths who had been admitted to the facility within the past 72 hours and who had not been transferred from another secure facility were included.
- A voluntary and anonymous urine specimen was collected and sent to a laboratory<sup>1</sup> to be screened for seven drugs: amphetamines, cocaine, marijuana, MDMA/MDA (ecstasy), opiates, oxycodone, and phencyclidine (PCP). The amphetamine-positive and opiate-positive urine specimens were confirmed by GC/MS (Gas Chromatography/Mass Spectrometry).<sup>2</sup>
- Candy was offered to respondents as a reward for participating at all facilities, except for the Lower Eastern Shore Children's Center and Western Maryland Children's Center, which chose not to offer candy.

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<sup>1</sup> Friends Medical Laboratory, Inc., Baltimore, Maryland.

<sup>2</sup> This reflects a modification in testing compared to previous years. In 2005, oxycodone and MDMA/MDA were added to the testing and barbiturates, benzodiazepines, LSD, methadone, methaqualone, and propoxyphene were dropped.

### **III. FINDINGS**

#### **Response Rates and Characteristics of Tested Juveniles**

- Ninety-two percent of the 393 youths approached provided a urine specimen (Table 1).
- The percentage of youths who provided a urine specimen for the study varied between facilities, ranging from a low of 78% to a high of 98%.
- The majority of the tested juveniles were male (82%, Table 2).
- Seventy-nine percent of the tested youths were 15 years or older; 11% were 13 or younger (Table 2).
- The most common charge was a personal offense (35%), followed by drug-related (24%), property (21%), and miscellaneous offenses (20%, Table 2).

**Table 1. Response Rates, by Detention Facility**

<b>Facility</b>	<b>Number of Youths Approached</b>	<b>Percentage of Youths who Provided a Specimen</b>
	<u>n</u>	<u>%</u>
<b>Baltimore City</b>	85	85
<b>Carter</b>	48	96
<b>Cheltenham</b>	55	96
<b>Hickey</b>	48	98
<b>Noyes</b>	36	94
<b>Lower Eastern Shore</b>	32	78
<b>Waxter</b>	43	95
<b>Western Maryland</b>	46	98
<b>Total</b>	393	92%

Source: Center for Substance Abuse Research (CESAR), University of Maryland, College Park, Juvenile OPUS Detention Study Report, July 2005.

**Table 2. Demographic Characteristics of Tested Respondents<sup>3</sup>  
(N=363)**

<b>Characteristic</b>	<b>n</b>	<b>%</b>
<u>Gender</u>		
Male	298	82%
<u>Race</u>		
Black	230	65
White	110	31
Other	16	4
<u>Age</u>		
13 or younger	38	11
14	37	10
15	81	22
16	93	26
17 or older	114	31
} 79%		
<u>Charge</u>		
Personal	109	35
Drug-related	73	24
Property	63	21
Miscellaneous	63	20

Note: 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. Property offenses include arson, burglary, breaking and entering, larceny/theft, stolen property, stolen vehicle, fraud, and threat to property. Miscellaneous offenses include truancy, CINS, home detention, run away, possession of alcohol (citation), curfew, tobacco violation, failed placement, school suspension, 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, July 2005.

<sup>3</sup> Gender information was missing for 1 juvenile, race for 7, and charge for 55.

## IV. FINDINGS

### Urinalysis Test Results (Table 3)

- Fifty percent of the youths (51% of males, 47% of females) tested positive for at least one drug, primarily marijuana.
- Fifty-one percent of males and 42% of females tested positive for marijuana.
- Cocaine was detected in 3% of the juveniles tested. Of the 10 juveniles who tested positive for cocaine, 3 were female and 7 were white, 2 were black, and 1 did not report race. They ranged in age from 15- to 18-years-old. Three were charged with property offenses, 4 with miscellaneous offenses, and the remaining were missing charges. Eight also tested positive for marijuana.
- Opiates were detected in 1% of the juveniles tested. Of the 3 juveniles who tested positive for opiates, 1 was female and all were white. They ranged in age from 16- to 18-years-old. One was charged with a property offense, one a personal offense, and one a drug offense. Two also tested positive for marijuana and one of those was also positive for oxycodone.
- Oxycodone was detected in 1% of the juveniles tested. Of the 2 juveniles who tested positive for oxycodone, both were male, 1 black and 1 white, and were ages 17- and 18-years-old. One was charged with a personal offense, the other a drug offense. Both tested positive for multiple drugs including marijuana and opiates.
- PCP was detected in 1% of the juveniles tested. Of the 2 juveniles who tested positive for PCP, 1 was female, both were black, and were ages 15- and 16-years-old. One was charged with a property offense, the other a personal offense. Both also tested positive for marijuana.
- MDMA/MDA was detected in 1 black male, age 15, who was charged with a drug offense. He also tested positive for marijuana.

**Table 3. Urinalysis Test Results, by Gender**

	<b>Males (n=298)</b>	<b>Females (n=64)</b>	<b>Total* (n=363)</b>
<u>Positive For:</u>			
Marijuana	51%	42%	49%
Cocaine	2%	5%	3%
Opiates	1%	2%	1%
Oxycodone	1%	0%	1%
PCP	<1%	2%	1%
MDMA/MDA	<1%	0%	<1%
Amphetamines	0%	0%	0%
Any Drug (of 7)	51%	47%	50%

\* Gender was missing for one juvenile. Data for this juvenile is included only in the total column.

Note: Urine specimens were analyzed for seven drugs: amphetamines, cocaine, marijuana, MDMA/MDA, opiates, oxycodone, and PCP. The amphetamine-positive and opiate-positive urine specimens were confirmed.

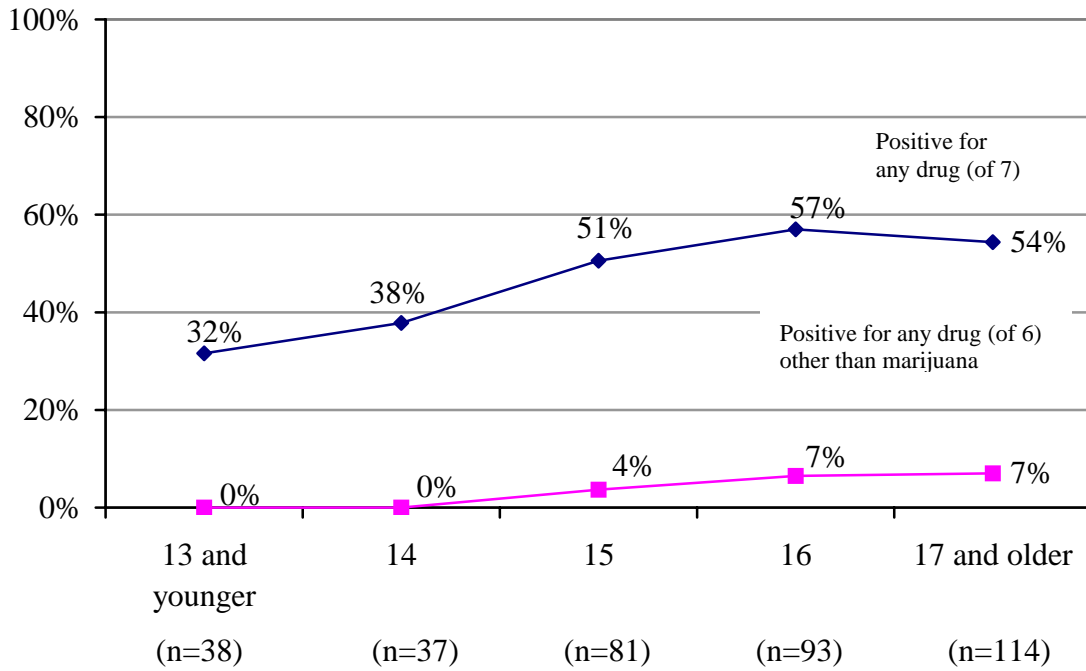
Source: Center for Substance Abuse Research (CESAR), University of Maryland, College Park, Juvenile OPUS Detention Study Report, July 2005.

## V. FINDINGS

### Correlates of Testing Positive for Drugs

- The percentage of youths who tested positive for any drug (of 7)—primarily marijuana—increased with age, up to age 16, and leveled off. Of youths 15 and older, half or more tested positive for any drug. Between 4% and 7% of juveniles 15 and older tested positive for a drug other than marijuana (Figure 1).
- Table 4 shows the majority (75%) of juveniles charged with a drug-related offense tested positive for any drug (of 7).
- Among juveniles with a property offense 51% tested positive for any drug, followed by 48% of those with a miscellaneous offense, and 36% of those with a personal offense (Table 4).
- The percentage of juveniles testing positive for any drug ranged from a low of 32% at the Lower Eastern Shore facility to a high of 68% at the Baltimore City Juvenile Justice Center (Table 5).
- Table 6 compares the urinalysis results of the Detention Studies conducted from 1999 through 2005. Across all study periods, with one exception, 41% to 50% of juveniles tested positive for any drug. As the exception, the results from the 2004 study are not directly comparable to the other study periods. This is because juveniles from Baltimore City, Western Maryland, and the Eastern Shore were underrepresented as the newly opened facilities serving those areas were not included in the 2004 data collection.

**Figure 1. Percent Positive for Any Drug, by Age  
(n= 363 Juvenile Detainees)**



Note: Urine specimens were analyzed for seven drugs: amphetamines, cocaine, marijuana, MDMA/MDA, opiates, oxycodone, and PCP. The amphetamine-positive and opiate-positive urine specimens were confirmed.

Source: Center for Substance Abuse Research (CESAR), University of Maryland, College Park, Juvenile OPUS Detention Study Report, July 2005.

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

<b>Charge (n)</b>	<b>Percentage Positive for Marijuana</b>	<b>Percentage Positive for Any Drug (of 7)</b>
Drug-related (73)	75%	75%
Property (63)	49%	51%
Personal (109)	35%	36%
Miscellaneous (63)	48%	48%
Missing Charge (55)	45%	47%
<b>Total (363)</b>	<b>49%</b>	<b>50%</b>

Note: Urine specimens were analyzed for seven drugs: amphetamines, cocaine, marijuana, MDMA/MDA, opiates, oxycodone, and PCP. The amphetamine-positive and opiate-positive urine specimens were confirmed.

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. Property offenses include arson, burglary, breaking and entering, larceny/theft, stolen property, stolen vehicle, fraud, and threat to property. Miscellaneous offenses include truancy, CINS, home detention, run away, possession of alcohol (citation), curfew, tobacco violation, failed placement, and school suspension, 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, July 2005.

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

<b>Facility (n)</b>	<b>Percentage Positive for Marijuana</b>	<b>Percentage Positive for Any Drug (of 7)</b>
<b>Baltimore City (n=72)</b>	68%	68%
<b>Hickey (n=47)</b>	55%	55%
<b>Waxter (n=41)</b>	44%	49%
<b>Carter (n=46)</b>	48%	48%
<b>Western Maryland (n=45)</b>	47%	47%
<b>Cheltenham (n=53)</b>	43%	43%
<b>Noyes (n=34)</b>	35%	38%
<b>Lower Eastern Shore (n=25)</b>	32%	32%
<b>Total (N=363)</b>	49%	50%

Note: Urine specimens were analyzed for seven drugs: amphetamines, cocaine, marijuana, MDMA/MDA, opiates, oxycodone, and PCP. The amphetamine-positive and opiate-positive urine specimens were confirmed.

Source: Center for Substance Abuse Research (CESAR), University of Maryland, College Park, Juvenile OPUS Detention Study Report, July 2005.

## VI. OPUS DETENTION STUDY OVER NINE TIME PERIODS

**Table 6. Urinalysis Test Results From Nine Data Collection Periods, 1999-2005**

	<b>Feb- May 1999 (n=545)</b>	<b>Jan- May 2000 (n=802)</b>	<b>Sept- Nov 2000<sup>4</sup> (n=555)</b>	<b>Mar- Jun 2001 (n=409)</b>	<b>Sept- Nov 2001 (n=483)</b>	<b>Mar- Jun 2002 (n=426)</b>	<b>Mar- Jun 2003<sup>5</sup> (n=290)</b>	<b>Feb- May 2004<sup>6</sup> (n=196)</b>	<b>Feb- Jun 2005 (n=363)</b>
<u>Positive For:</u>	<u>%</u>	<u>%</u>	<u>%</u>	<u>%</u>	<u>%</u>	<u>%</u>	<u>%</u>	<u>%</u>	<u>%</u>
Marijuana	39	42	43	41	41	45	37	27	49
Cocaine	2	1	3	3	3	5	2	3	3
Opiates	2	1	2	2	1	2	**	3	1
Amphetamines	1	1	4	4	1	1	1	4	**
PCP	**	**	2	2	1	2	2	1	1
Benzodiazepines	1	**	1	1	**	**	**	<1	--
Propoxyphene	**	**	**	1	**	**	**	**	--
MDMA	**	**	**	2	**	**	**	**	<1
Any Drug <sup>7</sup>	42%	43%	48%	46%	43%	47%	41%	32%	50%

\*\* 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.

-- Drugs not tested for in 2005.

Source: Center for Substance Abuse Research (CESAR), University of Maryland, College Park, Juvenile OPUS Detention Study Report, July 2005.

<sup>4</sup> In the data collection period for September-November 2000, only four detention facilities participated in this study: Carter, Cheltenham, Noyes, and Waxter.

<sup>5</sup> Percentages for "Any Drug" 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 because they are unaffected by the insufficient urine for the LSD confirmation.

<sup>6</sup> The data collection for February-May 2004 did not include the newly opened Baltimore City Juvenile Justice Center, Lower Eastern Shore, and Western Maryland facilities and is therefore under-representative of those areas of the state. Total percent positive for amphetamine is based on 193 tested juveniles.

<sup>7</sup> Drugs tested for changed in 2005. Prior to 2005, urine specimens were analyzed for eleven drugs: amphetamines, barbiturates, benzodiazepines, cocaine, LSD, marijuana, methadone, methaqualone, opiates, PCP, and propoxyphene. The amphetamine-positive specimens were confirmed for amphetamines, methamphetamines, and MDMA by GC/MS. LSD-positive urine specimens were confirmed by HPLC. In 2005, specimens were analyzed for seven drugs: amphetamines, cocaine, marijuana, MDMA/MDA, opiates, oxycodone, and PCP, with confirmation by GC/MS for amphetamine and opiate positives.