DOTS *Bulletin*

A Pilot Study of the
National Drug Early Warning System (NDEWS)
University of Maryland, College Park

Drug Outbreak Testing Service — October 2018 ◊ Issue 8

Methamphetamine and New Psychoactive Substances Detected in Specimens from Pretrial Services Agency for the District of Columbia

Submitting Site: Pretrial Services Agency for the District of Columbia (PSA)

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Background

The Pretrial Services Agency for the District of Columbia (PSA) provides supervision and services to defendants awaiting trial in the Superior Court for the District of Columbia or the United States District Court for the District of Columbia. One of the oldest pretrial agencies in the nation, PSA was the first pretrial program to introduce onsite drug testing of defendants to supplement interview information with an accurate and objective measure of recent drug use. PSA's in-house full-service laboratory tests specimens collected from a varied population of persons under criminal justice supervision and subject to urine testing.

THE DRUG OUTBREAK TESTING SERVICE (DOTS) PILOT STUDY

DOTS tests up to 20 urine specimens for 240 drugs, without cost to the submitting site, to help identify emerging drugs for epidemiologic purposes.

To become a DOTS site or for more information:

ndewsdots@umd.edu

Methods

Twenty-one urine specimens collected between October 21, 2015, and October 19, 2017, were submitted by PSA. Approximately half of the specimens came from parolees/probationers and the remainder from arrestees, supervised defendants, and those engaged in Family Court. Approximately half of the specimens were selected because they tested positive for synthetic cannabinoids and drugs not routinely screened for by PSA, such as synthetic cathinones (bath salts) and fentanyl/fentanyl analogs. PSA wanted to learn more about the specific drugs detected within each of these drug classes, since their screens typically only detects the class of drugs. In addition, some specimens were selected because they screened positive but failed to confirm for 6-acetylmorphine, a metabolite of heroin. See *DOTS Bulletin*, Issue 1, for a detailed description of the DOTS pilot study methodology and limitations (https://go.umd.edu/ndews-dots).

Sample Characteristics

The 21 specimens came from persons between the ages of 22 and 63 years old, with half being older than 35, and 76% were collected in 2017. Seventeen of the specimens were collected from males. Fifteen specimens came from residents of Washington, DC, and five from Maryland residents. Residence was unknown for one specimen.

DOTS Drug Test Results

Marijuana (n=10) and cocaine (8) were detected the most in the submitted specimens (see table on page 2). PCP, a drug with a long history of use in the District[1], was also detected (7) in high numbers. It was surprising, however, to find so many methamphetamine positives (6) in this small sample. PSA typically finds less than 2% of their tested specimens are positive for the amphetamine class of drugs that includes methamphetamine. As would be expected from the way the specimens were selected, approximately half (10) of the specimens tested positive for at least one new psychoactive substance (NPS), including synthetic cannabinoids. While synthetic cannabinoids were only found in 5 specimens, these specimens contained 13 different varieties of synthetic cannabinoid metabolites. Six other NPSs, including the synthetic cathinones butylone and dibutylone, were detected across six specimens. Three specimens tested negative for all drugs. Consistent with what has been found in other DOTS sites, multiple drugs were detected in a majority of the specimens; 57% of the specimens contained four or more substances.

Implications

PSA may want to consider periodic testing for synthetic cathinones due to their detection in this study and expand testing to include newer varieties of synthetic cannabinoid metabolites. PSA currently performs additional GC/MS testing for methamphetamine on all specimens that screen positive for the amphetamine class of drugs, which includes methamphetamine. The large positive numbers of the drug found in this study is most likely due to differences in detection limits between the PSA laboratory and the DOTS laboratory.

[1]Wish, E.D. (1986). PCP and Crime: Just Another Illicit Drug? In D. H. Clouet (Ed.), *NIDA Research Monograph 64: Phencyclidine: An Update* (pp. 174-189).

***DOTS Bulletins* are available at: https://go.umd.edu/ndews-dots**

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Drugs or Drug Metabolites Detected by DOTS Laboratory Urinalyses

(*N* = 21 urine specimens submitted to DOTS by the Pretrial Services Agency for the District of Columbia)

	Common Drugs				Fentanyls				Nonfentanyl Opioids								Pharmaceutical Nonopioid Drugs						Other Drugs							Synthetic Cannabinoids (SC)											
Specimen	THC (marijuana)	Benzoylecgonine (cocaine)	PCP	Methamphetamine	Fentanyl/Norfentanyl	FIBF (*para*-fluoroisobutyryl fentanyl)	*para*-Fluorobutyryl Fentanyl	Methoxyacetyl fentanyl	Morphine	6-Acetylmorphine (heroin)	Codeine	Hydromorphone	Oxymorphone	Noscapine	Methadone/EDDP	Buprenorphine/Norbuprenorphine	Diphenhydramine	Dextromethorphan	Quinine	Haloperidol	Naloxone	Cyclobenzaprine	Bufotenine	Dibutylone	Butylone	Dimethylone	D2PM	W-18	MDMB-FUBINACA (metab M1)	UR-144	5F-PB-22	5F-AMB (metab 7)	AB-CHMINACA (metab 4)	AB-PINACA	MAB-CHMINACA (metab M2)	5F-ADB (metab 7)	AB-CHMINACA (Parent)	AB-FUBINACA (metab 2)	ADB-PINACA	MMB-FUBINACA	PB-22	Total Detected^
1				✓	✓	✓	✓		✓	✓	✓	✓		✓			✓		✓				✓												✓						13
2		✓	✓														✓												✓	✓	✓	✓	✓	✓	✓		✓	✓				12
3	✓	✓			✓			✓	✓		✓	✓	✓		✓		✓		✓				✓																		12
4	✓		✓	✓																									✓	✓		✓	✓	✓	✓				✓			10
5			✓	✓																									✓	✓	✓					✓				✓	✓	8
6	*	✓	✓	✓														✓		✓			✓					✓														7
7	✓				✓				✓	✓					✓	✓					✓																				7
8	✓	✓	✓	✓																			✓																			5
9	✓		✓																					✓	✓	✓																5
10		✓		✓														✓						✓			✓															5
11		✓			✓				✓						✓																											4
12	✓				✓										✓		✓																									4
13	✓	✓																																								2
14	✓		✓																																							2
15	✓																					✓							✓													2
16	✓																					✓																				2
17									✓						✓																											2
18		✓																																							1
19	*																																								0
20																																									0
21																																									0
Total Positive:	10	8	7	6	5	1	1	1	5	2	2	2	1	1	5	1	4	2	2	1	1	1	4	2	1	1	1	1	4	3	2	2	2	2	2	2	1	1	1	1	1	

^The presence of some individual metabolites may be the result of the use of a single drug.

*Specimen could not be tested for THC because of insufficient urine quantity.

Note: Specimens were collected by the Pretrial Services Agency for the District of Columbia between October 2015 and October 2017.

Source: Drug Outbreak Testing Service (DOTS), National Drug Early Warning System (NDEWS) Coordinating Center, Center for Substance Abuse Research, University of Maryland, College Park, Sept. 2018.

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