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Health Professional Substance Use Monitoring Programs: Minimum Urine Drug Test Panel Elements

A consensus statement from the National Organization of Alternative Programs

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Purpose

The mission of the National Organization of Alternative Programs (NOAP) is to promote public safety through participation of healthcare professionals in monitored rehabilitation and recovery as an alternative to license discipline; emphasizing fitness to practice and retention of competent professionals.

This Consensus Statement consolidates the expert guidance of 2022 NOAP Conference Medical Review Officer (MRO)/Toxicology panel participants and other industry experts to help regulatory substance use monitoring programs determine minimum drug test panel elements.

Background

Random drug testing is a primary component of healthcare professional regulatory monitoring programs. Drug testing acts as a recovery motivator, establishes abstinence and program compliance, helps identify relapse and motivates monitoring/treatment response.

Monitoring programs are abstinence-based, thus requiring the use of comprehensive testing panels that include selected metabolites (e.g., 6-Monoacetylmorphine {6-MAM}) and long detection window testing (e.g., phosphatidylethanol [PeTH]). All positive initial screening tests must be confirmed using appropriate confirmation methods.

Due to the safety sensitive aspects of healthcare professional monitoring and drug testing it is imperative that potential impairment due to the use of mind/mood altering drugs be detected in a timely manner. At the same time there are reasonable and realistic limits to what can and should be included in a minimum healthcare provider drug test panel. Cost, laboratory capacity and resource allocation, the current state of technology, and drug use trends among other variables should be considered when making decisions regarding what drug classes and drugs are routinely tested for.

Cost effective standard healthcare professional drug test panels, along with cutoff thresholds, are commonly offered by laboratories. These panels are generally very comprehensive (20+ drugs) however may include gaps or unnecessary testing.

The National Council of State Boards of Nursing (NCSBN) provided drug testing guidance in its publication *Substance Use Disorder in Nursing: A Resource Manual and Guidelines for Alternative to Discipline and disciplinary Monitoring Programs (2011).* This Consensus Statement updates the NCSBN recommended minimum basic urine panel.

Method

NOAP followed up on its 2022 Annual Education Conference MRO Toxicology Panel presentation by engaging the presenters and interested industry experts in a discussion regarding the minimum elements of a healthcare professional drug testing panel. The expert panel consisted of:

- Joe Jones, PhD, NRCC-TC, Chief Operating Officer United States Drug Testing Laboratories
- Donna Smith, PhD, EdD, Quality Assurance Officer RecoveryTrek
- James Ferguson, DO, DFASAM, MRO, Vault Health
- Barry Lubin, MD, FASAM, MRO, Affinity Online Solutions
- John Furman PhD, MSN, COHN-S, Washington Health Professional Services
- Sheron Russell BSN, RN, Mississippi Nurse Voluntary Program
- Kirk Cizerle, CEO RecoveryTrek
- Shane Moes, Vice President Product Strategy Vault Health
- Shannon Opie, Chief Executive Officer Intervention Project for Nurses

The United States Drug Testing Laboratories (USDTL) Urine Panel Template was chosen as a discussion starting point due to its attention to workplace safety sensitive position testing and industry acceptance.

The panel was engaged through a series of reference reviews and email communications. The NOAP Research Committee reviewed and consolidated all comments into a draft minimum drug test panel. The draft was sent to the panel for final review and acceptance

Project Focus

Urine drug testing continues to be the "gold standard" and is the focus of this Consensus Statement.

The panel recognizes the advantages and utilities of alternate matrix testing (hair, nail, blood, oral fluid…) and strongly encourages their use as part of a comprehensive drug testing program (e.g., hair testing as part of the initial intake evaluation process). A detailed discussion of these methodologies is beyond the scope of this Consensus Statement.

Minimum Drug Test Panel Recommendations

Drug/Drug Class	Confirmation Cutoff	Comment
Amphetamine	250 ng/mL	
Ecstasy (MDA, MDMA)	250 ng/mL	
Methamphetamine	250 ng/mL	D/L isomer analysis on all positives
Barbiturates	200 ng/mL	
Benzodiazepines	200 ng/mL	Benzodiazepine panels are not comprehensive. Speak with your laboratory about its panel makeup
Cocaine	100 ng/mL	Target metabolite benzoylecgonine
Methadone	300 ng/mL	
Meperidine	200 ng/mL	
Opiates panel Including: Codeine, morphine Hydrocodone, hydromorphone 6-MAM (heroin metabolite)	300 ng/mL 300 ng/mL 100 ng/mL 10 ng/mL	
Oxycodone/oxymorphone	100 ng/mL	
Cannabinoids (THC-A)	15 ng/mL	Currently testing for delta-8-tetrahydrocannabinol and synthetic cannabinoids are not recommended as part of a minimum panel
Tramadol	100 ng/mL	
Ethyl Glucuronide (EtG)/ Ethyl Sulfate (EtS)	500 ng/mL 100 ng/mL	Ethanol testing is not necessary if EtG/EtS is routinely tested for
Fentanyl / Nor-fentanyl	0.75 ng/mL	
Carisoprodol	100 ng/mL	

Validity Testing	Action Parameters	
Creatinine	<20 mg/dL or ≥2 mg/dL	
Specific Gravity	≤1.0030 or ≥1.0010	Test for Specific Gravity if creatinine <20 mg/dL
Nitrite	>500 mcg/mL	
PH	<4 or ≥ 11	

Additional Drugs for Consideration		
Drug/Drug Class	**Confirmation Cutoff**	
Phencyclidine	25 ng/mL	
Buprenorphine	5 ng/mL	
Gabapentin/Pregabalin	250 ng/mL	
Methylphenidate	100 ng/mL	
Kratom	5 ng/mL	
Ketamine	50 ng/ml	
Z-drugs (Zaleplon, Zolpidem…)	10 ng/mL	

Discussion

This Consensus Statement lists the drugs and drug classes recommended to be tested for on a routine basis. It also includes recommended confirmation cutoff levels considering the safety sensitive nature of healthcare professional monitoring, and current technology limitations.

Test frequency may be determined by program policies and individual participant circumstances. However, the panel supports a minimum of 24 tests per year with a mix of urine, blood, hair, or other matrices.

Most standard test panels offered by reference laboratories are more comprehensive than what is listed in this Consensus Statement. Due to the wide variety of drugs that healthcare professionals have access to the adage “more is better” applies. If the standard panel you are using does not include all the minimum elements listed, you might speak with your laboratory about adding these.

In addition to the use of standard drug test panels individual program participants should be tested for their “drug(s) of choice” and professional risk drugs (e.g., a nurse anesthesiologist may be tested for propofol).

Health professional monitoring programs have shown to be effective in supporting long-term recovery and protecting the public. Random drug testing is an indispensable tool to these ends. NOAP supports ongoing scientific review and adoption of best practices regarding drug testing and all areas of monitoring.

References

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