GUIDE

URINE DRUG TESTING

Ordering and Interpretation

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URINE DRUG TESTING 101

Urine Drug Testing (UDT) can be helpful in the clinical setting but must be used with caution.

Patients should always be informed that a urine drug test is ordered and never performed without a patient's knowledge. Drug testing is not something we do to patients but rather with patients. There is very little research to guide how often urine drug testing should be performed. Consider the following per American Society of Addiction Medicine*:

- Frequency of testing will be determined by a number of factors including patient stability, treatment type, and setting
  - It is recommended that patients in early recovery be tested more often than those further out.
- There is insufficient evidence that more frequent testing leads to decreased substance use
- Clinical consensus favors unannounced drug testing over scheduled testing and random schedules over fixed schedules
- Use non-stigmatizing language when discussing results such as positive or negative instead of clean or dirty
- Results should never be used for punishment or the sole basis for treatment decisions

*https://www.asam.org/quality-care/clinical-guidelines/drug-testing

UDT ROADMAP

1. ASSESS INDIVIDUAL SITUATION
2. DISCUSS WITH PATIENT
3. SELECT A TEST
4. CONSIDER TEST OUTCOMES

1 ASSESS INDIVIDUAL SITUATION

Assessment and Diagnosis

- Helps to confirm the presence of opioids and other substances in the patient's system, which is helpful for diagnosing Opioid Use Disorder (OUD). It provides objective data (keeping in mind false positives and negatives) about a patient's drug use. Because of the unpredictable illicit drug supply, patients may think they are taking a stimulant in a pressed pill that's actually pressed with Fentanyl.
- Detect the use of other substances, such as benzodiazepines, cocaine, or alcohol, which can affect the choice of Medications for Opioid Use Disorder (MOUD), discussion of risks/benefits, and overall treatment plan.
- Assist the provider and patient to confirm what the patient is consuming, and is a conversation starter between provider and patient.
- Contribute to an assessment of a patient's adherence to buprenorphine therapy (based on the presence of buprenorphine in urine).

Treatment Planning

- Inform the selection of the most appropriate MOUD (e.g., methadone, buprenorphine, or naltrexone). It can contribute to the clinical picture of the patient's substance use patterns and help avoid precipitated withdrawal.
- Identify substances that might interact negatively with MOUD medications, ensuring the safety and effectiveness of the treatment.

Monitoring Adherence and Efficacy

- Improve communication between provider and patient, especially when unexpected results happen.
- If a patient has returned to use, do not discharge them from your care but rather attempt to re-engage with the patient. Use this as an opportunity to re-evaluate a patient's care plan, increase the support you offer, explore other opportunities, and determine if a higher level of care may be appropriate.

2 DISCUSS WITH PATIENT

Build Trust and Encourage Open Communication

- Foster open communication between the patient and provider, building trust and encouraging honesty about substance use and destigmatize the drug testing process.
- Minimize patient's anxiety around testing and set patient expectations.
- Consider the following conversation starters:
  - "As part of your treatment, I will request urine drug tests. We will review the results together to help determine how well our treatments are working for you. This testing is never intended to make you feel nervous or ashamed, regardless of the results."
  - "I request urine drug tests on all of my patients taking controlled substances."
  - "If I find something unexpected, we will talk about it and work together to address it."
  - "I will request urine drug tests as part of your treatment just like I would check your hemoglobin A1C or average blood sugar if you had diabetes."

3 SELECT A TEST

When choosing a test for urine drug screening, various options offer different advantages and limitations, ranging from the affordable and rapid Enzyme Linked Immunoassay (EIA) kits to the highly specific but costlier Gas Chromatography/Mass Spectroscopy (GCMS) and Liquid Chromatography/Time of Flight (LC-MS) methods. We recommend learning the basic properties of the tests available in your setting. Here are some basics to consider:

URINE DRUG TESTING

SCREENING TESTS

- **Enzyme Linked Immunoassay testing (EIA)**
- **“Point of Care” Testing**

Rapid results (minutes to hours)

Low specificity

Detects class of structurally related substance

Practical (equipment not expensive and is easily operated)

For most patients with SUD, this is the test of choice, with confirmatory testing only ordered occasionally as indicated (such as results not consistent with history, and confirmation would change management).

CONFIRMATORY TESTS

- **Gas Chromatography/ Mass Spectroscopy (GCMS)**
- **Liquid Chromatography/ Time of Flight (LC-MS)**

Slower results (days)

Higher specificity

Detects specific substance/metabolite

Requires specialized equipment and expertise

Order if clinical management may change based on result (for example, a patient prescribed buprenorphine whose EIA testing shows negative for buprenorphine).

4 CONSIDER TEST OUTCOMES

When interpreting urine drug test results, various factors can complicate the assessment, such as the presence of illicit substances, non-prescribed medications, or the absence of prescribed medications. Each test also has their own potential for false positives or negatives. See chart on Page 7 for details. Consider the below findings and possible interpretations:

Presence of Illicit Substance

- Used by patient
- False positive result related to prescribed or OTC medication exposure

Presence of Non-Prescribed Medication

- Used by patient
- False positive result related to cross-reaction or possible known metabolite (e.g., morphine or codeine may → hydromorphone)

Absence of Prescribed Medication

- Has not taken medication during detection window
- False negative (incorrect use of EIA rather than GCMS or LC-MS testing)
- Cut-off problem (the threshold in workplace testing for reporting a positive is set high to avoid false positives that require a job action)

CONSUMPTION OF THESE SUBSTANCES COULD GIVE FALSE TEST RESULTS.

Enzyme Linked Immunoassay

FALSE POSITIVE	POTENTIAL TEST RESULT	FALSE NEGATIVE
Bupropion, tricyclic antidepressants, phenothiazines, propranolol, labetalol, OTC cold medications, ranitidine, metformin, selegiline, trazodone, aripiprazole, phentermine, Vicks Nasal Spray, zolpidem	Amphetamine or methamphetamine	
Phenytoin	Barbiturates	
Sertraline, zolpidem, possibly NSAIDs	Benzodiazepines	Alprazolam, clonazepam, lorazepam
Pantoprazole, efavirenz. very high dose NSAIDs, promethazine, possibly zolpidem, baby wash products that include dronabinol	Cannabinoids	
Amitriptyline, doxepin, sertraline, fluoxetine, metoclopramide, haloperidol, risperidone, verapamil	LSD	
Quinolones, dextromethorphan, diphenhydramine, doxylamine, rifampin, verapamil, poppy seeds, possibly zolpidem	Opioids	
Dextromethorphan, diphenhydramine, doxylamine, NyQuil, tramadol, venlafaxine, NSAIDs, imipramine	PCP	
Methadone, cyclobenzaprine, Ny-Quil, diphenhydramine, imipmine	Propoxyphene	

Gas Chromatography/ Mass Spectroscopy

Codeine, heroin (for a few hours), poppy seeds (for 48 hours)	Morphine	GCMS may miss it unless glucuronide hydrolyzed.
Vicks nasal spray	Amphetamine	
	Benzodiazepines	Alprazolam, clonazepam, lorazepam
Large amount of morphine	Buprenorphine	
Morphine, codeine, hydrocodone, heroin	Hydromorphone	
Hydrocodone	Oxycodone	
Hydrocodone	Codeine	
Quetiapine, diltiazem and verapamil (rare)	Methadone	
Venlafaxine	Tramadol	

Information contained in this table is provided for educational purposes only and is not an exhaustive list.

QUESTIONS? CONTACT US.

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For More Information:
SAMHSA TIP 63 (pages 2-14 to 2-16) offers more information about testing and interpretations along with treatment implications.

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