

# Urine Drug Testing

Recommendation #10 from the CDC *Guideline for Prescribing Opioids for Chronic Pain* states, “When prescribing opioids for chronic pain, clinicians should use urine drug testing before starting opioid therapy and consider urine drug testing at least annually to assess for prescribed medications as well as other controlled prescription drugs and illicit drugs.”



## When to conduct urine drug testing:

All patients on long-term opioid therapy should have periodic urine drug tests (UDT). Medical experts agree that an annual UDT for all patients should be standard practice<sup>1</sup>. Subsequent UDTs should be determined on an individual patient basis, at the discretion of the clinician. Before ordering a UDT, have a plan for responding to unexpected results.

### tips

#### WHAT TO DISCUSS WITH PATIENTS BEFORE ORDERING AND CONDUCTING A URINE TEST:

- ✓ **Establish provider/patient trust**  
Requiring a UDT does not imply a lack of trust on the part of the provider; it is part of a standardized set of safety measures offered to all patients taking opioids.
- ✓ **Discuss the purpose of UDTs**  
What drugs the test will cover, and the expected results (e.g., presence of prescribed medication and absence of other drugs, including illicit drugs, not reported by the patient).
- ✓ **Go over the potential cost**  
If the UDT is not covered by insurance.
- ✓ **Review dosage**  
Review the time and dose of the opioids most recently consumed by the patient.
- ✓ **Discuss any prescribed or unprescribed drugs**  
Discuss any other prescribed or unprescribed drugs the patient has taken; unprescribed drugs may include marijuana or other illicit drugs.
- ✓ **Ask the patient what UDT results he/she expects**  
To aid in eliciting information on other drugs taken as well as to assess his/her understanding of test result interpretation.
- ✓ **Establish the expectation of random repeat testing**  
Establish the expectation of random repeat testing depending on treatment agreement and monitoring approach.
- ✓ **Review**  
Review actions that may be taken based on the results of the test.

<sup>1</sup> Dowell D, Haegerich TM, Chou R. CDC Guideline for Prescribing Opioids for Chronic Pain — United States, 2016. MMWR 2016.

If unexpected results occur when ordering a UDT, remember that the focus is to improve patient safety. Have a plan in place for communicating results and practice the difficult conversations you may have with your patients.

**tips**

**TALKING WITH PATIENTS ABOUT URINE DRUG TESTING RESULTS:**

- Always keep the focus on the patient’s well-being and safety.
- Do not jump to conclusions about unexpected results; have a candid conversation with the patient about possible explanations.
- Do not dismiss patients from care based on UDT results.
- Consider using the CDC mobile app to practice the types of conversations you may encounter with patients.

**Actions to take post-urine drug testing:**

- Discuss unexpected results with the local laboratory or toxicologist if assistance is needed with interpretation.
- Inform the patient of the test results.
- Take time to discuss unexpected results with the patient and refer to pre-UDT information the patient may have shared with you.
- Review the treatment agreement and focus conversations around patient safety.
- Determine if frequency and intensity of monitoring should be increased and keep the patient informed.



**Types of urine drug tests:**

There are two main types of UDTs— immunoassay drug testing conducted at a laboratory or at the point of care in a provider’s office, and laboratory-based gas or liquid chromatography/mass spectrometry. See the chart below for a description of the main differences in these two types of tests.

IMMUNOASSAY	GAS CHROMATOGRAPHY, MASS SPECTROMETRY
Less expensive, fast, easy to use	More expensive, labor intensive
Most frequently used technique in all settings, including hospital labs	Requires advanced laboratory services.
Used commonly as screening test.	Used primarily to confirm positive immunoassay result.
Engineered antibodies bind to drug metabolites	Measures drugs and drug metabolites directly.
Qualitative testing-- positive or negative	Quantitative testing
Screens for presence of drugs or a panel of drugs: amphetamine, marijuana, PCP, cocaine, natural opiates (morphine/ codeine/thebaine but without differentiation). Heroin is metabolized to morphine and can therefore be detected; a separate screening assay specific to heroin is also available.	Identifies specific drugs and their metabolites
Does not differentiate various natural opiates	Differentiates all opioids
Typically misses semisynthetic (e.g. hydrocodone and oxycodone) and synthetic opioids (e.g. fentanyl and tramadol). Assays specific for these drugs must be requested.	More accurate for semisynthetic and synthetic opioids--methadone, propoxyphene, fentanyl, meperidine, hydrocodone, oxycodone, hydromorphone, oxymorphone, buprenorphine, heroin
Often has high cut- off levels, giving false negative results	Very sensitive, detects low levels of drug, minimizes false negatives
Will show false positives: poppy seeds, quinolone antibiotics, over-the-counter medications	Very specific, less cross-reactivity, minimizes false positives

**Source:** Adapted from “Urine Drug Testing in the Management of Chronic Pain,” at <https://www.drugabuse.gov/sites/default/files/files/UrineDrugTesting.pdf>

▶ **To learn more, visit:** [www.cdc.gov/drugoverdose/prescribing/qi-cc.html](http://www.cdc.gov/drugoverdose/prescribing/qi-cc.html)

