



Risk Mitigation Toolkit

Toxicology Testing

Recommendation #10 from the 2022 CDC Guideline for Prescribing Opioids for Pain states, “When prescribing opioids for subacute or chronic pain, clinicians should consider the benefits and risks of toxicology testing to assess for prescribed medications as well as other prescribed and nonprescribed controlled substances.”

When to conduct toxicology testing:

Before starting opioids, when taking over opioid therapy, and periodically (at least annually) during opioid therapy, prescribers should consider the benefits and risks of toxicology testing to assess for prescribed opioids and other prescription and nonprescription substances that increase the risk for overdose when combined with opioids, including nonprescribed and illicit opioids and benzodiazepines. Before ordering toxicology testing, have a plan for responding to unexpected results

Speaking with patients, ordering, and conducting a toxicology test:

- Establish provider/patient trust
 - Requiring a toxicology test is part of a standardized set of safety measures offered to all patients taking opioids.
- Using a validated risk assessment tool, along with ILPMP data and clinically relevant findings, may increase patient safety, and assist in determining if there is a need to increase the frequency of toxicology testing.
 - Validated risk scoring tools may include COMM, BRQ, ORT, SOAPP-R, and others.
 - Risk-based testing may be as frequent as 1-2 times every 6 months for moderate-risk patients, or 1-3 times every 3 months for high-risk patients.
- Discuss the purpose of toxicology testing.
 - 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 costs.
 - Toxicology testing is not always covered by insurance and can be a financial burden for patients.
- Explain expected results and ask in a nonjudgmental manner about the use of prescribed and other nonprescribed substances.
- Ask the patient what 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 depending on the treatment agreement and monitoring approach.
- Review actions that may be taken based on the results of the test.

Prescribers should use unexpected results to improve patient safety, have a plan in place for communicating results, and practice the difficult conversations they may have with their patients.

Speaking to patients about toxicology results:

- Always keep the focus on the patient’s well-being and safety.
- Discuss unexpected results with patients in a nonjudgmental manner, avoiding the use of stigmatizing language.
- Do not dismiss patients from care based on a toxicology test result.

After toxicology testing:

- Discuss unexpected results with the local laboratory or toxicologist if assistance is needed with interpretation.
- Speak with the patient about test results, including any that may be unexpected.
- Refer to the pre-toxicology information the patient may have shared with you.
- Review the treatment agreement and focus conversations around patient safety.
- Determine if the frequency and intensity of monitoring should be increased based on unexpected results and individual needs, and keep the patient informed.
- If toxicology testing is repeatedly negative, prescribers should:
 - Ensure the specific toxicology test utilized is capable of detecting the prescribed medication in question.
 - Verify with the patient that they are not taking a prescribed medication.
 - Discontinue therapy

Prescribers should discuss concerns for patients with a suspected opioid use disorder (OUD) in a nonjudgmental manner, and assess using DSM-5 criteria. If a patient meets the criteria for OUD and the prescriber is unable to provide treatment, arrange for the patient to receive care from a substance use disorder specialist, or a SAMHSA-certified opioid treatment program. The Illinois Helpline is an available resource to assist in care coordination and is available at <https://helplineil.org/> . Prescribers should not dismiss patients from their practice due to OUD.

Types of toxicology tests:

There are two main types — immunoassay drug testing conducted at a laboratory or 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 between 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 results.
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 to 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>