
Urine Drug Screening (UDS) Fact Sheet

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Urine drug screening (UDS) is used to determine whether or not a patient has used a drug in the recent past.

What is the basic UDS?

- Based on immunoassay technology, which uses enzymes, fluorescent particles, or radioisotopes to enhance visual detection of the binding between the antibody and the antigen.
- Most commonly used due to low cost (<\$30) and quick results
- Very sensitive (only miss a few cases) but not very specific (prone to false positives)
- Procedure:
 - A typical multipanel test card has 10 test strips attached to the bottom, one for each drug of interest.
 - Strips are dipped into the urine sample for a few seconds, then allowed to incubate for about 5 minutes.
 - Each strip has a specific antibody on it that will bind to a specific drug compound, or antigen.
 - As the urine is absorbed by the paper and moves up the strip, the antibody will react with the drug (if present).
 - Based on presence or absence of control lines and test lines, results are interpreted as positive or negative for the drug corresponding to its strip.

How does confirmatory (or “reflex”) testing work?

- Based on Gas Chromatography/Mass Spectrometry—it identifies the precise substances present
- Used to verify questionable UDS results
- Expensive (\$200+) and slow (3 days or more)
- Highly sensitive and specific; won’t give false results

What is included in the UDS?

In most facilities, there is a standard “bundle” of substances that the UDS detects. In Massachusetts, for example, a typical UDS ordered at a major hospital will screen for the following 10 substances:

Non-opiates:

- Amphetamines
- Barbiturates
- Benzodiazepines
- Cannabinoids
- Cocaine

Opiates:

- Buprenorphine
- Fentanyl
- Methadone
- Oxycodone
- Opiate screen

These are self explanatory—except for the “opiate screen,” which is a catch-all for a group of opiates that are not included in the 4 specific screens. Typically, the opiate screen is positive in the presence of heroin, morphine, codeine, hydrocodone (Vicodin, Norco, Lortab) and hydromorphone (Dilaudid). A patient might report using street drugs and has a UDS that is negative for everything except the opiate screen. If you want to know exactly which opiates the patient has been using, ask your lab to do confirmatory testing for specific substances.

Which patients should provide a UDS?

- Most patients who present to an emergency room get a UDS as part of the standard medical workup
- Patients with a current or recent substance use disorder (SUD)
- Patients with a remote SUD to whom you are considering prescribing a medication with potential for abuse
- Patients with psychiatric disorders who are not responding to evidence-based treatment—may be a sign of undisclosed drug use
- Patients who are prescribed controlled substances and have been requesting early refills

Potential False Positives

- Opioids: Poppy seeds, fluoroquinolones, dextromethorphan
- Amphetamines: Selegiline, cold medications containing pseudoephedrine
- Barbiturates: Certain migraine medications
- Cocaine: Topical anesthetics

False Negatives

- Uncommon if the UDS includes a catch all “opiate screen”
- May reflect use of a substance outside of the detection window

Drug Detection Time Periods

Drug	Detection Period
Amphetamines	1-2 d
Barbiturates	2-4 d (2-3 wks for phenobarbital)
Benzodiazepines	1-4 d (up to a month for long-acting benzodiazepines like diazepam)
Cannabinoids	3-30 d depending on use
Cocaine	6-8 hours
Opioids	
● Codeine	1-2 d
● Fentanyl	2-26 d
● Heroin, hydromorphone, morphine, oxycodone	2-4 d

<ul style="list-style-type: none">• Methadone	2-3 days
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