

Reimbursement Policy

Prescription Medication and Illicit Drug Testing in the Outpatient Setting

[POLICY DESCRIPTION](#) | [INDICATIONS AND/OR LIMITATIONS OF COVERAGE](#) | [REIMBURSEMENT](#) | [APPLICABLE STATE AND FEDERAL REGULATIONS](#) | [APPLICABLE CPT/HCPCS PROCEDURE CODES](#) | [EVIDENCE-BASED SCIENTIFIC REFERENCES](#)

I. Policy Description

Abuse of both prescription and illicit drugs is extremely common. Drugs of abuse (DOA) may be defined as “a drug, chemical, or plant product that is known to be misused for recreational purposes,” which can include drugs such as pain relievers that have legitimate prescriptions. Drug tests may be performed for a variety of reasons, such as compliance with treatment program or medical regimen. Numerous biological substances, such as blood, hair, or saliva may be tested, but urine is the most commonly tested biological substance in drug tests.¹

This policy addresses clinical toxicology in the outpatient setting and does not address forensic testing or therapeutic drug monitoring (TDM). Forensic drug testing is used for legal proceedings and requires secondary confirmatory testing.² TDM “involves sampling of plasma or serum drug levels to determine optimal drug dosing.”³

II. Indications and/or Limitations of Coverage

Application of coverage criteria is dependent upon an individual’s benefit coverage at the time of the request. Specifications pertaining to Medicare and Medicaid can be found in the “Applicable State and Federal Regulations” section of this policy document.

This policy concerns only coverage criteria and does not describe or define the legal responsibility of providers. Providers should refer to state and federal laws for such guidance.

This policy does not address the use of drug testing in the following circumstances:

- A. *State, federally regulated, and legally mandated drug testing (i.e., court-ordered drug screening, forensic examinations).*
- B. *Non-forensic testing for commercial driver’s licensing or any other job-related testing (i.e., as a prerequisite for employment or as a means for continuation of employment).*

As a component of care rendered in an urgent/emergency situation.

PRESUMPTIVE DRUG SCREENING USING URINE SAMPLES

Reimbursement Policy

- 1) Presumptive drug screening using urine samples (qualitative, semi-quantitative or quantitative) **MEETS COVERAGE CRITERIA** in **any** of the following situations:
 - a) To assess an individual being treated for chronic, non-cancer pain when clinical evaluation of the individual (history/signs/symptoms) suggests the use of non-prescribed medications or illegal substances:
 - i) Prior to initiating chronic opioid pain therapy in chronic non-cancer pain to determine if the individual has been exposed to controlled substances or potentially confounding illicit drugs.
 - ii) To verify an individual's compliance with treatment or identify undisclosed drug abuse as part of routine monitoring for individuals who are receiving treatment for non-cancer chronic pain with prescription opioid pain medication. The random testing interval and drugs selected for testing should be based on the individual's history, condition, and treatment, as documented in the medical record.
 - (a) Monitoring of low risk (as defined by a risk assessment tool) individuals on chronic opioid therapy, up to one time per year after initiation of therapy.
 - (b) Monitoring of moderate risk (as defined by a risk assessment tool) individuals on chronic opioid therapy, up to two times per year after initiation of therapy.
 - (c) Monitoring of high risk (as defined by a risk assessment tool) individuals on chronic opioid therapy, up to four times per year after initiation of therapy.
 - (d) For individuals with aberrant behavior (lost prescriptions, multiple requests for early refills, and opioids from multiple providers, unauthorized dose escalation, apparent intoxication, etc.), testing at the time of visit meets coverage criteria.
 - b) In pregnant individuals at high-risk for substance abuse in whom the suspicion of drug use exists based on the answers to substance abuse screening questions or as indicated by information from the prescription drug monitoring program (PDMP), as documented in the medical record.
 - c) In newborns when there is a history of maternal substance abuse or agitated/altered mental status in the birthing parent.
 - d) In candidates for organ transplant who have a history of substance abuse (to demonstrate abstinence prior to transplant).

Reimbursement Policy

- e) In individuals with a suspicion of or a diagnosis of mental illness (e.g., anxiety disorders, schizophrenia, major depressive disorder, mood disorders, suicidal ideations, substance abuse disorder).
- f) In individuals with attention-deficit hyperactivity and disruptive behavior disorders.
- g) In cancer patients on opioid pain medication.
- h) In individuals with epilepsy.
- i) For the management and compliance monitoring of an individual under treatment for substance abuse or dependence at the following frequency (after baseline at initial evaluation) and must be documented in the patient's medical record:
 - i) For patients with zero to ninety consecutive days of abstinence, random qualitative drug testing at a frequency of one to two per week.
 - ii) For patients with greater than ninety consecutive days of abstinence, random qualitative drug testing at a frequency of one to three per month.
- j) In individuals where substance abuse is in the differential diagnosis of the presenting conditions.

DEFINITIVE DRUG TESTING

- 2) Confirmatory/definitive qualitative or quantitative drug testing (up to seven drug classes) **MEETS COVERAGE CRITERIA** when laboratory-based definitive drug testing is specifically requested, the rationale is documented by the patient's treating physician, and any of the following conditions are met:
 - a) The result of the presumptive drug screen is different than that suggested by the patient's medical history, their clinical presentation, or patient's own statement (e.g., test was negative for prescribed medications, test was positive for prescription drug with abuse potential, which was not prescribed, test was positive for an illegal drug).
 - **Presumptive Optical Testing – Annual Limit not to exceed 24,**
 - **Presumptive Instrument-Based Testing – Annual Limit not to exceed 12**
 - b) For diagnosing and monitoring individuals with substance use disorder or dependence, when accurate and reliable results are necessary for treatment decisions:
 - i) Individuals with zero to thirty consecutive days of abstinence, random definitive drug testing at a frequency not to exceed one test per week.

Reimbursement Policy

- ii) Individuals with thirty-one to ninety consecutive days of abstinence, random definitive drug testing at a frequency of one to three test(s) per month. No more than three definitive drug tests in one month will be allowed.
- iii) Individuals with greater than ninety consecutive days of abstinence, definitive drug testing at a frequency of one to three test(s) every three months. No more than three definitive drug tests in a three-month period will be allowed.

- **Definitive Testing – Annual Limit not to exceed 12**

- c) For monitoring of individuals on opioid therapy (to ensure adherence to the therapeutic plan, for treatment planning, and for detection of other, non-prescribed opioids).
 - d) A presumptive test does not exist or does not adequately detect the specific drug or metabolite to be tested (e.g., specific drugs within the amphetamine, barbiturate, benzodiazepine, tricyclic antidepressants, and opiate/opioid drug classes, as well as synthetic/analog or “designer” drugs).
 - e) To definitively identify specific drugs in a large family of drugs.
 - f) To identify drugs when a definitive concentration of a drug is needed to guide management.
- 3) When laboratory-based definitive drug testing is requested for larger than seven drug classes panels, confirmatory/definitive qualitative or quantitative drug testing **DOES NOT MEET COVERAGE CRITERIA.**
- 4) Confirmatory/definitive qualitative or quantitative or presumptive (qualitative, semi-quantitative or quantitative) drug testing using proprietary tests (e.g., CareView360) **DOES NOT MEET COVERAGE CRITERIA.**

SPECIMEN VALIDITY TESTING

- 5) Specimen validity testing (e.g., urine specific gravity, urine creatinine, pH, urine oxidant level, genetic identity testing [e.g., NextGen Precision™ Testing]) **DOES NOT MEET COVERAGE CRITERIA.**

GENERAL

- 6) In all other situations not addressed above, presumptive drug screening and definitive drug testing **DO NOT MEET COVERAGE CRITERIA.**

Reimbursement Policy

NOTES:

Documentation Requirements

The patient's medical record must contain documentation that fully supports the medical necessity for drug testing. This documentation includes, but is not limited to, relevant medical history, physical examination, and results of pertinent diagnostic tests or procedures.

III. Reimbursement

1. The following IS reimbursed (see complete Coverage Criteria in Letters A and B, Section III above) for:
 - a. Presumptive drug screening based upon appropriate clinical criteria (qualitative, semi-quantitative or quantitative);
 - b. Definitive drug testing (qualitative or quantitative) for up to seven drug classes when the presumptive drug screening meets one of the following criteria:
 - i. The test was negative for prescribed medications, or
 - ii. Positive for a prescription drug with abuse potential which was not prescribed, or
 - iii. Positive for an illegal drug, or
 - iv. A presumptive test does not exist or does not adequately detect the specific drug or metabolite to be tested
 - c. Blood specimens in patients with anuric Chronic Renal Failure.
2. The following **IS NOT REIMBURSED**:
 - a. Same-day testing of the same drug or metabolites from two different samples (e.g. both a blood and a urine specimen) by either presumptive or definitive analyses
 - b. Blanket orders or routine standing orders for all patients in the physician's practice
3. Only urine or oral fluid specimens will be covered except blood specimen will be covered for patients with anuric Chronic Renal Failure.
4. Confirmatory/definitive testing should be supported by documentation of rationale in the patient's medical record.

Reimbursement Policy

5. More than one presumptive test result per patient per date of service regardless of the number of billing providers **IS NOT REIMBURSED**:
 - a. It is not reasonable or necessary for a provider to perform qualitative point-of-care testing and also order presumptive testing from a reference laboratory on the same specimen.
 - b. It is not reasonable or necessary for a provider to perform presumptive immunoassay testing and also order presumptive immunoassay testing from a reference laboratory with or without reflex testing on the same specimen.

IV. Applicable State and Federal Regulations

DISCLAIMER: If there is a conflict between this Policy and any relevant, applicable government policy for a particular member [e.g., Local Coverage Determinations (LCDs) or National Coverage Determinations (NCDs) for Medicare and/or state coverage for Medicaid], then the government policy will be used to make the determination. For the most up-to-date Medicare policies and coverage, please visit the Medicare search website: <https://www.cms.gov/medicare-coverage-database/search.aspx>. For the most up-to-date Medicaid policies and coverage, visit the applicable state Medicaid website.

Food and Drug Administration (FDA)

Many labs have developed specific tests that they must validate and perform in house. These laboratory-developed tests (LDTs) are regulated by the Centers for Medicare and Medicaid (CMS) as high-complexity tests under the Clinical Laboratory Improvement Amendments of 1988 (CLIA '88). LDTs are not approved or cleared by the U. S. Food and Drug Administration; however, FDA clearance or approval is not currently required for clinical use.

V. Applicable CPT/HCPCS Procedure Codes

CPT	Code Description
80305	Drug test(s), presumptive, any number of drug classes, any number of devices or procedures; capable of being read by direct optical observation only (e.g., utilizing immunoassay [e.g., dipsticks, cups, cards, or cartridges]), includes sample validation when performed, per date of service
80306	Drug test(s), presumptive, any number of drug classes, any number of devices or procedures; read by instrument assisted direct optical observation (e.g., utilizing immunoassay [e.g., dipsticks, cups, cards, or cartridges]), includes sample validation when performed, per date of service

Reimbursement Policy

CPT	Code Description
80307	Drug test(s), presumptive, any number of drug classes, any number of devices or procedures; by instrument chemistry analyzers (eg, utilizing immunoassay [eg, EIA, ELISA, EMIT, FPIA, IA, KIMS, RIA]), chromatography (eg, GC, HPLC), and mass spectrometry either with or without chromatography, (eg, DART, DESI, GC-MS, GC-MS/MS, LC-MS, LC-MS/MS, LDTD, MALDI, TOF) includes sample validation when performed, per date of service
80320–80377	AMA Definitive Drug Class Codes
0007U	Drug test(s), presumptive, with definitive confirmation of positive results, any number of drug classes, urine, includes specimen verification including DNA authentication in comparison to buccal DNA, per date of service Proprietary test: ToxProtect Lab/Manufacturer: Genotox Laboratories LTD
0011U	Prescription drug monitoring, evaluation of drugs present by LC-MS/MS, using oral fluid, reported as a comparison to an estimated steady-state range, per date of service including all drug compounds and metabolites Proprietary test: Cordant CORE™ Lab/Manufacturer: Cordant Health Solutions
0051U	Prescription drug monitoring, evaluation of drugs present by LC-MS/MS, urine, 31 drug panel, reported as quantitative results, detected or not detected, per date of service Proprietary test: UCompliDx Lab/Manufacturer: Elite Medical Laboratory Solutions, LLC (LDT)
0054U	Prescription drug monitoring, 14 or more classes of drugs and substances, definitive tandem mass spectrometry with chromatography, capillary blood, quantitative report with therapeutic and toxic ranges, including steady-state range for the prescribed dose when detected, per date of service Proprietary test: AssuranceRx Micro Serum Lab/Manufacturer: Firstox Laboratories, LLC
0079U	Comparative DNA analysis using multiple selected single-nucleotide polymorphisms (SNPs), urine and buccal DNA, for specimen identity verification Proprietary test: ToxLok™ Lab/Manufacturer: InSource Diagnostics

Reimbursement Policy

CPT	Code Description
0082U	<p>Drug test(s), definitive, 90 or more drugs or substances, definitive chromatography with mass spectrometry, and presumptive, any number of drug classes, by instrument chemistry analyzer (utilizing immunoassay), urine, report of presence or absence of each drug, drug metabolite or substance with description and severity of significant interactions per date of service Proprietary test: NextGen Precision™ Testing Lab/Manufacturer: Precision Diagnostics LBN Precision Toxicology, LLC</p>
0093U	<p>Prescription drug monitoring, evaluation of 65 common drugs by LC-MS/MS, urine, each drug reported detected or not detected Proprietary test: ComplyRX Lab/Manufacturer: Claro Labs</p>
0227U	<p>Drug assay, presumptive, 30 or more drugs or metabolites, urine, liquid chromatography with tandem mass spectrometry (LC-MS/MS) using multiple reaction monitoring (MRM), with drug or metabolite description, includes sample validation Proprietary Test: Comprehensive Screen Lab/Manufacturer: Aspenti Health</p>
0328U	<p>Drug assay, definitive, 120 or more drugs and metabolites, urine, quantitative liquid chromatography with tandem mass spectrometry (LC-MS/MS), includes specimen validity and algorithmic analysis describing drug or metabolite and presence or absence of risks for a significant patient-adverse event, per date of service Proprietary test: CareView360 Lab/Manufacturer: Newstar Medical Laboratories, LLC</p>
0517U	<p>Therapeutic drug monitoring, 80 or more psychoactive drugs or substances, LC-MS/MS, plasma, qualitative and quantitative therapeutic minimally and maximally effective dose of prescribed and non-prescribed medications Proprietary test: PrecisView® CNS, Phenomics Health™ Inc Lab/Manufacturer: Phenomics Health™ Inc</p>
0518U	<p>Therapeutic drug monitoring, 90 or more pain and mental health drugs or substances, LC-MS/MS, plasma, qualitative and quantitative therapeutic minimally effective range of prescribed and non-prescribed medications</p>

Reimbursement Policy

CPT	Code Description
	Proprietary test: SyncView® Pain Lab/Manufacturer: Phenomics Health™ Inc
0519U	Therapeutic drug monitoring, medications specific to pain, depression, and anxiety, LCMS/MS, plasma, 110 or more drugs or substances, qualitative and quantitative therapeutic minimally effective range of prescribed, non-prescribed, and illicit medications in circulation Proprietary test: SyncView® PainPlus Lab/Manufacturer: Phenomics Health™ Inc
0520U	Therapeutic drug monitoring, 200 or more drugs or substances, LCMS/MS, plasma, qualitative and quantitative therapeutic minimally effective range of prescribed and non-prescribed medications Proprietary test: SyncView® Rx Lab/Manufacturer: Phenomics Health™ Inc
G0480	Drug test(s), definitive, utilizing (1) drug identification methods able to identify individual drugs and distinguish between structural isomers (but not necessarily stereoisomers), including, but not limited to GC/MS (any type, single or tandem) and LC/MS (any type, single or tandem and excluding immunoassays (e.g., IA, EIA, ELISA, EMIT, FPIA) and enzymatic methods (e.g., alcohol dehydrogenase)), (2) stable isotope or other universally recognized internal standards in all samples (e.g., to control for matrix effects, interferences and variations in signal strength), and (3) method or drug-specific calibration and matrix-matched quality control material (e.g., to control for instrument variations and mass spectral drift); qualitative or quantitative, all sources, includes specimen validity testing, per day; 1-7 drug class(es), including metabolite(s) if performed
G0481	Drug test(s), definitive, utilizing (1) drug identification methods able to identify individual drugs and distinguish between structural isomers (but not necessarily stereoisomers), including, but not limited to GC/MS (any type, single or tandem) and LC/MS (any type, single or tandem and excluding immunoassays (e.g., IA, EIA, ELISA, EMIT, FPIA) and enzymatic methods (e.g., alcohol dehydrogenase)), (2) stable isotope or other universally recognized internal standards in all samples (e.g., to control for matrix effects, interferences and variations in signal strength),

Reimbursement Policy

CPT	Code Description
	and (3) method or drug-specific calibration and matrix-matched quality control material (e.g., to control for instrument variations and mass spectral drift); qualitative or quantitative, all sources, includes specimen validity testing, per day; 8-14 drug class(es), including metabolite(s) if performed
G0482	Drug test(s), definitive, utilizing (1) drug identification methods able to identify individual drugs and distinguish between structural isomers (but not necessarily stereoisomers), including, but not limited to GC/MS (any type, single or tandem) and LC/MS (any type, single or tandem and excluding immunoassays (e.g., IA, EIA, ELISA, EMIT, FPIA) and enzymatic methods (e.g., alcohol dehydrogenase)), (2) stable isotope or other universally recognized internal standards in all samples (e.g., to control for matrix effects, interferences and variations in signal strength), and (3) method or drug-specific calibration and matrix-matched quality control material (e.g., to control for instrument variations and mass spectral drift); qualitative or quantitative, all sources, includes specimen validity testing, per day; 15-21 drug class(es), including metabolite(s) if performed
G0483	Drug test(s), definitive, utilizing (1) drug identification methods able to identify individual drugs and distinguish between structural isomers (but not necessarily stereoisomers), including, but not limited to GC/MS (any type, single or tandem) and LC/MS (any type, single or tandem and excluding immunoassays (e.g., IA, EIA, ELISA, EMIT, FPIA) and enzymatic methods (e.g., alcohol dehydrogenase)), (2) stable isotope or other universally recognized internal standards in all samples (e.g., to control for matrix effects, interferences and variations in signal strength), and (3) method or drug-specific calibration and matrix-matched quality control material (e.g., to control for instrument variations and mass spectral drift); qualitative or quantitative, all sources, includes specimen validity testing, per day; 22 or more drug class(es), including metabolite(s) if performed
G0659	Drug test(s), definitive, utilizing drug identification methods able to identify individual drugs and distinguish between structural isomers (but not necessarily stereoisomers), including but not limited to GC/MS (any type, single or tandem) and LC/MS (any type, single or tandem), excluding immunoassays (e.g., IA, EIA, ELISA, EMIT, FPIA) and enzymatic methods (e.g., alcohol dehydrogenase), performed without method or drug-specific calibration, without matrix-matched quality control material, or without use of stable isotope or other universally recognized internal standard(s) for each drug, drug metabolite or drug class per

Reimbursement Policy

CPT	Code Description
	specimen; qualitative or quantitative, all sources, includes specimen validity testing, per day, any number of drug classes

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Procedure codes appearing in Medical Policy documents are included only as a general reference tool for each policy. They may not be all-inclusive.

VI. Evidence-based Scientific References

- Hoffman R. Testing for drugs of abuse (DOAs). Updated October 7, 2024. <https://www.uptodate.com/contents/testing-for-drugs-of-abuse-doas>
- Jones J. Clinical vs. Forensic: The Differences Cost More Than Just Money. United States Drug Testing Laboratories. <http://www.usdtl.com/media/mediaarticles/clinical-vs-forensic-the-differences-cost-more-than-just-money>
- Eaton K, Lyman G. Dosing of anticancer agents in adults. Updated August 19, 2024. <https://www.uptodate.com/contents/dosing-of-anticancer-agents-in-adults>
- National Center for Drug Abuse Statistics. Drug Abuse Statistics <https://drugabusestatistics.org/>
- Phan HM, Yoshizuka K, Murry DJ, Perry PJ. Drug testing in the workplace. *Pharmacotherapy*. Jul 2012;32(7):649-56. doi:10.1002/j.1875-9114.2011.01089.x
- ASAM. Appropriate Use of Drug Testing in Clinical Addiction Medicine. 2017. <https://sitefinitystorage.blob.core.windows.net/sitefinity-production-blobs/docs/default-source/guidelines/the-asam-appropriate-use-of-drug-testing-in-clinical-addiction-medicine-full-document.pdf>
- Jannetto PJ, Langman LJ. Using Clinical Laboratory Tests to Monitor Drug Therapy in Pain Management Patients. *The Journal of Applied Laboratory Medicine: An AACC Publication*. 2018;2(4):471-472. doi:10.1373/jalm.2017.025304
- Becker W, Starrels J. Prescription drug misuse: Epidemiology, prevention, identification, and management. Updated February 12, 2025. <https://www.uptodate.com/contents/prescription-drug-misuse-epidemiology-prevention-identification-and-management>

Reimbursement Policy

9. Pesce A, West C, Egan City K, Strickland J. Interpretation of urine drug testing in pain patients. *Pain medicine (Malden, Mass)*. Jul 2012;13(7):868-85. doi:10.1111/j.1526-4637.2012.01350.x
10. Chua I, Petrides AK, Schiff GD, et al. Provider Misinterpretation, Documentation, and Follow-Up of Definitive Urine Drug Testing Results. *J Gen Intern Med*. Jan 2020;35(1):283-290. doi:10.1007/s11606-019-05514-5
11. Owusu Obeng A, Hamadeh I, Smith M. Review of Opioid Pharmacogenetics and Considerations for Pain Management. *Pharmacotherapy*. Sep 2017;37(9):1105-1121. doi:10.1002/phar.1986
12. Trescot AM, Datta S, Lee M, Hansen H. Opioid pharmacology. *Pain physician*. 2008;11(2 Suppl):S133-53.
<https://www.painphysicianjournal.com/current/pdf?article=OTg3&journal=42>
13. CDC. U.S. Opioid Dispensing Rate Maps. Updated November 7, 2024.
<https://www.cdc.gov/overdose-prevention/data-research/facts-stats/us-dispensing-rate-maps.html>
14. CDC. Drug Overdose Deaths. <https://www.cdc.gov/nchs/hs/topics/drug-overdose-deaths.htm>
15. CDC. Data Resources. Updated October 21, 2024. <https://www.cdc.gov/overdose-prevention/data-research/facts-stats/index.html>
16. Pesce A, Krock K, Ritz D, Cua A, Thomas R, Nickley J. Observations on 6-MAM (6-Monoacetylmorphine) in Urine. *J Clin Toxicol*. 2018;8(393):2161-0495.1000393.
17. Weaver MF. Prescription Sedative Misuse and Abuse. *The Yale journal of biology and medicine*. Sep 2015;88(3):247-56.
18. Jones CM, Mack KA, Paulozzi LJ. Pharmaceutical overdose deaths, United States, 2010. *Jama*. Feb 20 2013;309(7):657-9. doi:10.1001/jama.2013.272
19. Greller H, Gupta A. Benzodiazepine poisoning. Updated January 11, 2024.
<https://www.uptodate.com/contents/benzodiazepine-poisoning>
20. Blank A, Hellstern V, Schuster D, et al. Efavirenz treatment and false-positive results in benzodiazepine screening tests. *Clinical infectious diseases : an official publication of the Infectious Diseases Society of America*. Jun 15 2009;48(12):1787-9. doi:10.1086/599109

Reimbursement Policy

21. Kandel DB, Hu MC, Griesler P, Wall M. Increases from 2002 to 2015 in prescription opioid overdose deaths in combination with other substances. *Drug and alcohol dependence*. Sep 1 2017;178:501-511. doi:10.1016/j.drugalcdep.2017.05.047
22. Eskridge KD, Guthrie SK. Clinical issues associated with urine testing of substances of abuse. *Pharmacotherapy*. 1997;17(3):497-510.
23. Algren DA, Christian MR. Buyer Beware: Pitfalls in Toxicology Laboratory Testing. *Missouri medicine*. 2015;112(3):206-10.
24. ALFA. CLIAwaived, Inc.
https://www.cliawaived.com/web/items/pdf/ALF_03_3152_1_Panel_Drug_Test_Insert~493file1.pdf
25. Wondfo. Drug Tests Strip.
<https://en.wondfo.com/vancheerfile/files/2023/3/20230313023235769.pdf>
26. Moeller KE, Kissack JC, Atayee RS, Lee KC. Clinical Interpretation of Urine Drug Tests: What Clinicians Need to Know About Urine Drug Screens. *Mayo Clinic proceedings*. May 2017;92(5):774-796. doi:10.1016/j.mayocp.2016.12.007
27. Kampman K. Stimulant use disorder: Treatment overview. Updated April 19, 2024.
<https://www.uptodate.com/contents/stimulant-use-disorder-treatment-overview>
28. Microgenics. DRI(r) Amphetamines Assay. Microgenics Corporation.
<http://tools.thermofisher.com/content/sfs/manuals/0138-DRI-Amphetamines-Assay-EN.pdf>
29. Fucci N. False positive results for amphetamine in urine of a patient with diabetes mellitus. *Forensic science international*. Nov 30 2012;223(1-3):e60.
doi:10.1016/j.forsciint.2012.08.010
30. Bertron JL, Seto M, Lindsley CW. DARK Classics in Chemical Neuroscience: Phencyclidine (PCP). *ACS Chem Neurosci*. Oct 17 2018;9(10):2459-2474.
doi:10.1021/acchemneuro.8b00266
31. Microgenics. CEDIA(r) Phencyclidine (PCP) Assay. Microgenics Corporation.
<http://tools.thermofisher.com/content/sfs/manuals/10007400-CEDIA-Phencyclidine-PCP-Assay-EN.pdf>
32. Ly BT, Thornton SL, Buono C, Stone JA, Wu AH. False-positive urine phencyclidine immunoassay screen result caused by interference by tramadol and its metabolites. *Annals of emergency medicine*. Jun 2012;59(6):545-7. doi:10.1016/j.annemergmed.2011.08.013

Reimbursement Policy

33. Rengarajan A, Mullins ME. How often do false-positive phencyclidine urine screens occur with use of common medications? *Clinical toxicology (Philadelphia, Pa)*. Jul 2013;51(6):493-6. doi:10.3109/15563650.2013.801982
34. Levine BS, Smith ML. Effects of diphenhydramine on immunoassays of phencyclidine in urine. *Clinical chemistry*. 1990;36(6):1258.
35. Brahm NC, Yeager LL, Fox MD, Farmer KC, Palmer TA. Commonly prescribed medications and potential false-positive urine drug screens. *American journal of health-system pharmacy : AJHP : official journal of the American Society of Health-System Pharmacists*. Aug 15 2010;67(16):1344-50. doi:10.2146/ajhp090477
36. FDA. 510(k) Substantial Equivalence Determination Decision Summary Assay Only Template https://www.accessdata.fda.gov/cdrh_docs/reviews/K112395.pdf
37. CDC. Nationwide Trends. Updated June 2015. <https://www.drugabuse.gov/publications/drugfacts/nationwide-trends>
38. Miech RA, Johnston LD, O'Malley PM, Bachman JG, Schulenber JE. Monitoring the Future: National Survey Results on Drug Use, 1975-2014. 2015. https://monitoringthefuture.org/wp-content/uploads/2022/08/mtf-vol1_2014.pdf
39. Altunkaya D, Smith RN. Aberrant radioimmunoassay results for cannabinoids in urine. *Forensic science international*. Oct 1990;47(3):195-205.
40. Rollins DE, Jennison TA, Jones G. Investigation of interference by nonsteroidal anti-inflammatory drugs in urine tests for abused drugs. *Clinical chemistry*. Apr 1990;36(4):602-6.
41. Herrmann ES, Cone EJ, Mitchell JM, et al. Non-smoker exposure to secondhand cannabis smoke II: Effect of room ventilation on the physiological, subjective, and behavioral/cognitive effects. *Drug and alcohol dependence*. Jun 1 2015;151:194-202. doi:10.1016/j.drugalcdep.2015.03.019
42. Cone EJ, Bigelow GE, Herrmann ES, et al. Non-smoker exposure to secondhand cannabis smoke. I. Urine screening and confirmation results. *Journal of analytical toxicology*. Jan-Feb 2015;39(1):1-12. doi:10.1093/jat/bku116
43. Vohra V, Marraffa JM, Wojcik SM, Eggleston W. An assessment of urine THC immunoassay in healthy volunteers receiving an oral proton-pump inhibitor. *Clinical toxicology (Philadelphia, Pa)*. Sep 30 2019:1-3. doi:10.1080/15563650.2019.1662917
44. Drake LR, Scott PJH. DARK Classics in Chemical Neuroscience: Cocaine. *ACS Chem Neurosci*. Oct 17 2018;9(10):2358-2372. doi:10.1021/acchemneuro.8b00117

Reimbursement Policy

45. Nelson L, Odujebe O. Cocaine: Acute intoxication. Updated October 13, 2023. <https://www.uptodate.com/contents/cocaine-acute-intoxication>
46. CDC. Stimulant Overdose. Updated November 7, 2024. <https://www.cdc.gov/overdose-prevention/about/stimulant-overdose.html>
47. FDA. DRI Cocaine Metabolite Assay. https://www.accessdata.fda.gov/cdrh_docs/pdf18/K181499.pdf
48. Michna E, Jamison RN, Pham LD, et al. Urine toxicology screening among chronic pain patients on opioid therapy: frequency and predictability of abnormal findings. *The Clinical journal of pain*. Feb 2007;23(2):173-9. doi:10.1097/AJP.0b013e31802b4f95
49. Knezevic NN, Khan OM, Beiranvand A, Candido KD. Repeated Quantitative Urine Toxicology Analysis May Improve Chronic Pain Patient Compliance with Opioid Therapy. *Pain physician*. 2017;20(2s):S135-s145.
50. Jamison RN, Ross EL, Michna E, Chen LQ, Holcomb C, Wasan AD. Substance misuse treatment for high-risk chronic pain patients on opioid therapy: a randomized trial. *Pain*. Sep 2010;150(3):390-400. doi:10.1016/j.pain.2010.02.033
51. Katz NP, Sherburne S, Beach M, et al. Behavioral monitoring and urine toxicology testing in patients receiving long-term opioid therapy. *Anesthesia and analgesia*. Oct 2003;97(4):1097-102, table of contents.
52. Starrels JL, Becker WC, Alford DP, Kapoor A, Williams AR, Turner BJ. Systematic review: treatment agreements and urine drug testing to reduce opioid misuse in patients with chronic pain. *Annals of internal medicine*. Jun 1 2010;152(11):712-20. doi:10.7326/0003-4819-152-11-201006010-00004
53. Christo PJ, Manchikanti L, Ruan X, et al. Urine drug testing in chronic pain. *Pain physician*. Mar-Apr 2011;14(2):123-43.
54. Owen GT, Burton AW, Schade CM, Passik S. Urine drug testing: current recommendations and best practices. *Pain physician*. 2012;15(3 Suppl):Es119-33. <https://www.texaspain.org/assets/udt-article.pdf>
55. Smith PE, McBride A. Illicit drugs and seizures. *Seizure*. Dec 1999;8(8):441-3. doi:10.1053/seiz.1999.0346
56. Wilfong A. Management of convulsive status epilepticus in children. Updated September 30, 2024. <https://www.uptodate.com/contents/management-of-convulsive-status-epilepticus-in-children>

Reimbursement Policy

57. McClellan J, Stock S. Practice Parameter for the Assessment and Treatment of Children and Adolescents With Schizophrenia. *Journal of the American Academy of Child & Adolescent Psychiatry*. 2013;52(9):976-990. doi:10.1016/j.jaac.2013.02.008
58. Farkas A, Lipanot K, Sherman K. Routine Laboratory Screening for Acetaminophen and Salicylate Ingestion in Preadmission Psychiatric Patients Is Unnecessary. *Annals of emergency medicine*. Jun 2021;77(6):604-612. doi:10.1016/j.annemergmed.2021.01.027
59. Kell MJ. Utilization of plasma and urine methadone concentrations to optimize treatment in maintenance clinics: I. Measurement techniques for a clinical setting. *Journal of addictive diseases*. 1994;13(1):5-26. doi:10.1300/J069v13n01_02
60. Couto JE, Webster L, Romney MC, Leider HL, Linden A. Use of an algorithm applied to urine drug screening to assess adherence to a hydrocodone regimen. *Journal of clinical pharmacy and therapeutics*. Apr 2011;36(2):200-7. doi:10.1111/j.1365-2710.2010.01236.x
61. Couto JE, Webster L, Romney MC, Leider HL, Linden A. Use of an algorithm applied to urine drug screening to assess adherence to an oxycontin regimen. *Journal of opioid management*. Nov-Dec 2009;5(6):359-64.
62. Nafziger AN, Bertino JS, Jr. Utility and application of urine drug testing in chronic pain management with opioids. *The Clinical journal of pain*. Jan 2009;25(1):73-9. doi:10.1097/AJP.0b013e31817e13cc
63. McEvoy J, Millet RA, Dretchen K, Morris AA, Corwin MJ, Buckley P. Quantitative levels of aripiprazole parent drug and metabolites in urine. *Psychopharmacology*. Dec 2014;231(23):4421-8. doi:10.1007/s00213-014-3781-1
64. Snyder ML, Fantz CR, Melanson S. Immunoassay-Based Drug Tests Are Inadequately Sensitive for Medication Compliance Monitoring in Patients Treated for Chronic Pain. *Pain physician*. 2017;20(2s):Se1-se9.
65. Vopat ML, Messamore WG, Trent JJ, et al. Urine Screening for Opioid and Illicit Drugs in the Total Joint Arthroplasty Population. *Kans J Med*. 2020;13:71-76.
66. Palamar JJ, Le A, Guarino H, Mateu-Gelabert P. A comparison of the utility of urine- and hair testing in detecting self-reported drug use among young adult opioid users. *Drug and alcohol dependence*. Jul 1 2019;200:161-167. doi:10.1016/j.drugalcdep.2019.04.008
67. Böttcher M, Lierheimer S, Peschel A, Beck O. Detection of heroin intake in patients in substitution treatment using oral fluid as specimen for drug testing. *Drug and alcohol dependence*. May 1 2019;198:136-139. doi:10.1016/j.drugalcdep.2019.02.011

Reimbursement Policy

68. Krasowski MD, McMillin GA, Melanson SEF, Dizon A, Magnani B, Snozek CLH. Interpretation and Utility of Drug of Abuse Screening Immunoassays: Insights From Laboratory Drug Testing Proficiency Surveys. *Arch Pathol Lab Med*. Feb 2020;144(2):177-184. doi:10.5858/arpa.2018-0562-CP
69. Argoff CE, Alford DP, Fudin J, et al. Rational Urine Drug Monitoring in Patients Receiving Opioids for Chronic Pain: Consensus Recommendations. *Pain medicine (Malden, Mass)*. Jan 1 2018;19(1):97-117. doi:10.1093/pm/pnx285
70. Dowell D, Ragan KR, Jones CM, Baldwin GT, Chou R. CDC Clinical Practice Guideline for Prescribing Opioids for Pain - United States, 2022. *MMWR Recomm Rep*. Nov 4 2022;71(3):1-95. doi:10.15585/mmwr.rr7103a1
71. Dowell D, Haegerich TM, Chou R. CDC Guideline for Prescribing Opioids for Chronic Pain - United States, 2016. *MMWR Recomm Rep*. Mar 18 2016;65(1):1-49. doi:10.15585/mmwr.rr6501e1
72. CDC. CDC Clinical Practice Guideline for Prescribing Opioids for Pain <https://www.cdc.gov/mmwr/volumes/71/rr/pdfs/rr7103a1-h.pdf>
73. Kale N. Urine Drug Tests: Ordering and Interpreting Results. *American family physician*. 2019;99(1):33-39.
74. AAFP. Clinical Preventive Service Recommendation Opioid Use Disorder (OUD): Screening. AAFP. Accessed 1/26, 2021. <https://www.aafp.org/family-physician/patient-care/clinical-recommendations/all-clinical-recommendations/oud.html>
75. FSMB. Guidelines for the Chronic Use of Opioid Analgesics. Federation of State Medical Boards. https://dchealth.dc.gov/sites/default/files/dc/sites/doh/service_content/attachments/opioid_guidelines_as_adopted_april-2017_final.pdf
76. AAPM. Use of Opioids for the Treatment of Chronic Pain. <https://www.ashp.org/-/media/assets/pharmacy-practice/resource-centers/pain-management-toolkit/docs/use-of-opioids-for-the-treatment-of-chronic-pain.ashx>
77. Chou R, Fanciullo GJ, Fine PG, et al. Clinical Guidelines for the Use of Chronic Opioid Therapy in Chronic Noncancer Pain. *The Journal of Pain*. 2009;10(2):113-130.e22. doi:10.1016/j.jpain.2008.10.008
78. Manchikanti L, Abdi S, Atluri S, et al. American Society of Interventional Pain Physicians (ASIPP) guidelines for responsible opioid prescribing in chronic non-cancer pain: Part 2--guidance. *Pain physician*. 2012;15(3 Suppl):S67-116.

Reimbursement Policy

79. Manchikanti L, Kaye AM, Knezevic NN, et al. Responsible, Safe, and Effective Prescription of Opioids for Chronic Non-Cancer Pain: American Society of Interventional Pain Physicians (ASIPP) Guidelines. *Pain physician*. 2017;20(2s):S3-s92.
80. AMDG. Interagency Guideline on Prescribing Opioids for Pain. <http://www.agencymeddirectors.wa.gov/Files/2015AMDGOpioidGuideline.pdf>
81. AMDG. Supplemental Guidance on Prescribing Opioids for Postoperative Pain. <http://agencymeddirectors.wa.gov/Files/FinalSupBreeAMDGPostopPain091318wcover.pdf>
82. DWD. Chronic Opioid Clinical Management Guidelines for Wisconsin Worker's Compensation Patient Care. Department of Workforce Development, State of Wisconsin. <https://dwd.wisconsin.gov/wc/medical/pdf/CHRONIC%20OPIOID%20CLINICAL%20MANAGEMENT%20GUIDELINES%20.pdf>
83. ASAM. Drug Testing: A White Paper of the American Society of Addiction Medicine (ASAM). <https://www.cmm.com.au/files/uploads/resources/20170817102442drug-testing-a-white-paper-by-asam.pdf>
84. Jarvis M, Williams J, Hurford M, et al. Appropriate Use of Drug Testing in Clinical Addiction Medicine. *Journal of addiction medicine*. May/June 2017;11(3):163-173. doi:10.1097/adm.0000000000000323
85. OASAS. Guidance on Toxicology Use in OASAS Certified Programs. Updated October 31, 2023. https://oasas.ny.gov/system/files/documents/2023/11/guidance-toxicology-use-oasas-certified-programs_0.pdf
86. Nuckols TK, Anderson L, Popescu I, et al. Opioid prescribing: a systematic review and critical appraisal of guidelines for chronic pain. *Annals of internal medicine*. Jan 7 2014;160(1):38-47. doi:10.7326/0003-4819-160-1-201401070-00732
87. SAMHSA. Federal Guidelines for Opioid Treatment Programs. <https://store.samhsa.gov/system/files/pep15-fedguideotp.pdf>
88. SAMHSA. Key Substance Use and Mental Health Indicators in the United States: Results from the 2022 National Survey on Drug Use and Health. Updated November 13. <https://www.samhsa.gov/data/sites/default/files/reports/rpt42731/2022-nsduh-nnr.pdf>
89. SAMHSA. Mandatory Guidelines for Federal Workplace Drug Testing Programs—Oral/Fluid https://www.samhsa.gov/sites/default/files/programs_campaigns/division_workplace_programs/final-mg-oral-fluid.pdf

Reimbursement Policy

90. AATOD. Guidelines for Addressing Benzodiazepine Use in Opioid Treatment Programs (OTPs). <https://www.aatod.org/advocacy/policy-statements/guidelines-for-addressing-benzodiazepine-use-in-opioid-treatment-programs-otps-april-6-2017/>
91. HHS. Mandatory Guidelines for Federal Workplace Drug Testing Programs. Federal Register. Updated October 12, 2023. <https://www.federalregister.gov/documents/2023/10/12/2023-21735/mandatory-guidelines-for-federal-workplace-drug-testing-programs>
92. PMFT. Pain Management Best Practices Inter-Agency Task Force Report: Updates, Gaps, Inconsistencies, and Recommendations- Final Report. <https://www.hhs.gov/sites/default/files/pmtf-final-report-2019-05-23.pdf>
93. WFSBP. World Federation of Societies of Biological Psychiatry (WFSBP) Guidelines for Biological Treatment of Schizophrenia Part 3: Update 2015 Management of special circumstances: Depression, Suicidality, substance use disorders and pregnancy and lactation http://www.wfsbp.org/fileadmin/user_upload/Treatment_Guidelines/Hasan_et_al_2015_.pdf
94. NICE. Epilepsies: diagnosis and management. Updated January 30, 2025. <https://www.nice.org.uk/guidance/ng217>
95. AAN. Diagnostic Assessment of The Child With Status Epilepticus. <https://www.aan.com/Guidelines/home/GuidelineDetail/234>
96. DVA, DOD. VA/DoD Clinical Practice Guideline for The Management Of Substance Use Disorders. <https://www.healthquality.va.gov/guidelines/MH/sud/VADoDSUDCPG.pdf>
97. DVA, DOD. VA/DoD Clinical Practice Guideline for Opioid Therapy For Chronic Pain. <https://www.healthquality.va.gov/guidelines/Pain/cot/VADoDOpioidsCPG.pdf>
98. DVA, DOD. VA/DOD Clinical Practice Guideline for The Management Of Pregnancy. https://www.healthquality.va.gov/guidelines/WH/up/VA-DoD-CPG-Pregnancy-Full-CPG_508.pdf
99. Katzman MA, Bleau P, Blier P, et al. Canadian clinical practice guidelines for the management of anxiety, posttraumatic stress and obsessive-compulsive disorders. *BMC psychiatry*. 2014;14 Suppl 1(Suppl 1):S1-S1. doi:10.1186/1471-244X-14-S1-S1
100. APA. The American Psychiatric Association Practice Guidelines for the Psychiatric Evaluation of Adults. <https://psychiatryonline.org/doi/pdf/10.1176/appi.books.9780890426760>
101. WHO. mhGAP Intervention Guide. <https://iris.who.int/bitstream/handle/10665/250239/9789241549790-eng.pdf>

Reimbursement Policy

102. ACOG. Opioid Use and Opioid Use Disorder in Pregnancy. <https://www.acog.org/-/media/Committee-Opinions/Committee-on-Obstetric-Practice/co711.pdf>
103. Wong S, Ordean A, Kahan M. Substance use in pregnancy. *Journal of obstetrics and gynaecology Canada : JOGC = Journal d'obstetrique et gynecologie du Canada : JOGC*. Apr 2011;33(4):367-384. doi:10.1016/s1701-2163(16)34855-1
104. Ordean A, Wong S, Graves L. No. 349-Substance Use in Pregnancy. *Journal of obstetrics and gynaecology Canada : JOGC = Journal d'obstetrique et gynecologie du Canada : JOGC*. Oct 2017;39(10):922-937.e2. doi:10.1016/j.jogc.2017.04.028
105. Grant CN, Bélanger RE. Position Statement: Cannabis and Canada's children and youth. *Pediatric Child Health*. 2023;22(2):98-102.
106. Bélanger SA, Andrews D, Gray C, Korczak D. ADHD in children and youth: Part 1- Etiology, diagnosis, and comorbidity. *Paediatr Child Health*. Nov 2018;23(7):447-453. doi:10.1093/pch/pxy109