Drug Testing in Pain Management and Substance Use Disorder Treatment

Policy Number: 2.04.98  Last Review: 1/2020

Policy
Blue Cross and Blue Shield of Kansas City (Blue KC) will provide coverage for Drug Testing in Pain Management and Substance Use Disorder Treatment when it is determined to be medically necessary because the criteria shown below are met.

When Policy Topic is covered
In outpatient pain management, presumptive (ie, immunoassay) urine drug testing may be considered medically necessary for:

- Baseline screening before initiating treatment or at the time treatment is initiated, when the following conditions are met:
  - An adequate clinical assessment of patient history and risk of substance abuse is performed;
  - Clinicians have knowledge of test interpretation;
  - There is a plan in place regarding how to use test findings clinically
  - Drug testing is ordered by a clinician during an office visit.

- Subsequent monitoring of treatment at a frequency appropriate for the risk level of the individual patient (see Considerations)

In outpatient substance abuse treatment, in-office or point-of-care presumptive (ie, immunoassay) drug testing may be considered medically necessary under the following conditions:

- Baseline screening before initiating treatment or at the time treatment is initiated (ie, induction phase), 1 time per program entry, when the following conditions are met:
  - An adequate clinical assessment of patient history and risk of substance abuse is performed;
  - Clinicians have knowledge of test interpretation;
  - There is a plan in place regarding how to use test findings clinically
  - Drug testing is ordered by a clinician during an office visit.

- Stabilization and Maintenance phase -
Using an appropriate test, matrix and frequency of testing for the risk level of the individual and the substance being used (see Policy Guidelines section)

Documentation in the medical record explains the following (see Policy Guidelines section):
- Rationale for the specific test(s) ordered,
- Patient’s history of substance use,
- How drug testing results will guide medical decision-making

Definitive (ie, confirmatory) drug testing, in outpatient pain management or substance abuse treatment, may be considered medically necessary under the following circumstances:
- When immunoassays for the relevant drug(s) are not commercially available
- In specific situations for which definitive drug levels are required for clinical decision making (see Considerations)

Drug testing in the following settings may be considered medically necessary:
- Emergency rooms
- Ambulatory surgery
- Inpatient Services
- An abrupt change in mental status (to rule out substance intoxication or delirium)
- Drug or alcohol exposure during pregnancy
- To rule out a fetal withdrawal syndrome by testing the mother for drug use.

When Policy Topic is not covered
In outpatient pain management and outpatient substance abuse treatment, drug testing is considered not medically necessary when the above criteria are not met including but not limited to routine presumptive or definitive drug testing or standing orders (eg, testing at every visit, without consideration for specific patient risk factors or without consideration for whether definitive testing is required for clinical decision making) and validity testing when used as a separate evaluation (see Considerations).

Considerations
Notes:

This policy does not apply to testing required by third parties such as but not limited to: testing for a medico-legal purpose such as child custody; testing for pre-employment or random testing for employment; or testing for athletics.

Validity testing includes pH, specific gravity, nitrates, chromates, and creatinine which are performed on the same specimen that is being drug tested. Validity testing is an internal process to affirm that the reported results are accurate and valid.

See the Codes table for details.
Pain Management
The risk level for an individual patient should include a global assessment of risk factors, and monitoring for the presence of aberrant behavior. Standardized risk assessment tools are available, such as the 5-item Opioid Risk Tool (ORT). Another screening instrument is the Screener and Opioid Assessment for Patients in Pain, a 24-item tool (http://painedu.org/soapp.asp?gclid=CPvLjOeFl7oCFY1FMgodzQ4ANA).

Aberrant behavior is defined by one or more of the following:
- multiple lost prescriptions,
- multiple requests for early refill,
- obtained opioids from multiple providers,
- unauthorized dose escalation, and
- apparent intoxication during previous visits.

Opinions vary on the optimal frequency of urine drug screening to monitor patients on opioid therapy for chronic pain. Screening frequency using a risk-based approach, as recommended by the Washington State interagency guideline (Washington State Agency Medical Directors’ Group, 2015) is as follows:
- Low risk by ORT: Once a year
- Moderate risk by ORT: Twice a year
- High risk or opioid dose >120 mg MED/d: 3-4 times a year
- Recent history of aberrant behavior: Each visit

Note that the ORT is a copyrighted instrument (http://www.opioidrisk.com/node/884). The Canadian Guideline for Safe and Effective Use of Opioids for Chronic Non-Cancer Pain does not include specific screening frequencies but states that an individual patient’s risk for opioid misuse and addiction should be considered when deciding when to order a urine drug screen (http://nationalpaincentre.mcmaster.ca/opioid).

Substance use disorder
The 2017 consensus statement from the American Society of Addiction Medicine provides guidance on appropriate use of drug testing in substance use disorder.

Medical records should support the need for testing for the specific substance(s) of interest by documentation regarding the diagnosis, history and physical examination and/or behavior of the patient. Medical records should also justify the test that is being used and describe how results of testing will guide medical decision-making.

Presumptive Testing

Selecting an appropriate test
A medical and psychosocial assessment should guide the process of choosing a drug test that is individualized based on the patient’s needs, appropriate for the substance(s) targeted and the particular window of time of suspected use.
If a panel that includes testing for several substances is being ordered, justification for the use of a panel instead of individual testing is needed.

**Selecting an appropriate matrix**
Urine, blood, exhaled breath, oral fluid, sweat, and hair are matrices used in drug testing. Urine is the preferred matrix but all matrices have advantages and disadvantages with respect to sensitivity and specificity over different time windows, time to obtain results, different susceptibility to sample tampering and ease of collection.

Matrices other than urine may also be appropriate when urine cannot be collected (eg, patients on dialysis or with shy bladder) or when a sample collection technique is too invasive. Justification of matrix other than urine should be included in the medical record.

**Selecting an appropriate frequency of testing**
Plans may wish to set a threshold for the number of tests that are approved without review with subsequent tests requiring medical review. Patients who have unusually high numbers of tests ordered need medical review to confirm that the tests meet medical necessity.

Appropriate frequency of testing depends on many factors:
- Tests’ detection capabilities and windows of detection
- Patient factors such as severity and chronicity of addiction
- Substance(s) used
- Phase of treatment
  - During the stabilization phase, drug testing may be scheduled more frequently
  - During the maintenance phase, drug testing may be scheduled less frequently

**Presumptive test availability**
There may not be commercially available tests for certain synthetic or semisynthetic opioids. Table PG1 describes limitations on availability of presumptive tests.

**Table PG1, Limitations in Availability of Presumptive Immunoassays**

<table>
<thead>
<tr>
<th>Drug Type</th>
<th>Potential limitations in availability of or sensitivity of presumptive immunoassays for certain drugs in urine</th>
</tr>
</thead>
</table>
| Benzodiazepines      | ·Clonazepam and lorazepam are detected with varying sensitivity by different assays.  
                       | ·Therapeutic doses of benzodiazepines are generally not detected                                         |
| Semisynthetic Opioids| ·Oxycodone and oxymorphine (a metabolite of oxycodone) are                                             |
detected in a few but not most standard opiate immunoassays depending on the antibodies used by the manufacturer. Hydrocodone and hydromorphone (a metabolite of hydrocodone) are also detected in most standard opiate immunoassays.

**Synthetic opiates**
- Meperidine, methadone, buprenorphine, and fentanyl will not be detected in a standard opiate immunoassay and require their own definitive test for detection.

**Natural opioids**
- Morphine and codeine (which is metabolized to morphine) are detected by standard immunoassays for opiates but presumptive testing does not distinguish specific drug present.
- Heroin is unable to be specifically detected by presumptive tests due to rapid metabolism to 6-MAM and subsequently to morphine.

Sources: Based on information included in ASAM 2017 guideline and Washington State interagency guideline (Washington State Agency Medical Directors’ Group, 2015)

**Guidance on DEFINITIVE (Confirmatory) Testing**
Specific situations for definitive drug testing may include, but are not limited to the following:
- Need to detect a specific substance not adequately identified by presumptive methods (see Presumptive Test Availability, above)
- Unexpected positive test inadequately explained by the patient (e.g., a positive result on a presumptive test is inconsistent with the history and physical exam)
- Unexpected negative test (suspected medication diversion)
- Need for quantitative levels to compare with established benchmarks for clinical decision making such as treatment transition or changes in medication therapies.

Table PG2, on interpreting unexpected results of urine drug tests, is adapted from a table developed by the Canadian National Opioid Use Guideline Group that was cited by the American Society of Interventional Pain Physicians in its guideline on prescribing opioids for chronic non-cancer pain.

**Table PG2. Interpreting Unexpected Urine Drug Tests Results**

<table>
<thead>
<tr>
<th>Unexpected Result</th>
<th>Possible Explanations</th>
<th>Possible Actions for the Physician</th>
</tr>
</thead>
</table>
| Test is negative for prescribed opioid | •False-negative  
•Noncompliance  
•Diversion | •Conduct confirmatory testing, specifying the drug of interest (e.g., oxycodone often missed by immunoassay)  
•Take a detailed history of patient's medication use for the preceding 7 days (e.g., could learn that patient ran out several days |
### Description of Procedure or Service

#### Populations

**Individuals:**
- With chronic pain treated with opioids

**Individuals:**
- With a drug addiction who are in substance use disorder treatment

#### Interventions

**Interventions of interest are:**
- Drug testing

**Interventions of interest are:**
- Drug testing

#### Comparators

**Comparators of interest are:**
- No drug testing

**Comparators of interest are:**
- No drug testing

#### Outcomes

**Relevant outcomes include:**
- Health status measures
- Resource utilization

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- Resource utilization

Patients in pain management programs and substance use disorder treatment may misuse prescribed opioids and/or may use nonprescribed drugs. Thus, these patients are often assessed before treatment and monitored while receiving treatment. Drug testing can be part of this monitoring strategy; it is most often used as part of a multifaceted intervention that includes other components, such as patient contracts.
For individuals who have chronic pain treated with opioids who receive drug testing, there is limited peer-reviewed scientific literature to guide drug testing strategies; however, guidelines indicate that drug testing is standard of care. Guidelines from Centers for Disease Control and Prevention, American Society of Interventional Pain Physicians, American Pain Society and American Academy of Pain Medicine, American College of Occupational and Environmental Medicine, Department of Veterans Affairs and Department of Defense have recommended drug testing and consider the frequency of testing to be at the discretion of the health care provider, based on an assessment of the patient’s risk for misuse or addiction.

For individuals who have a drug addiction who are in substance use disorder treatment who receive drug testing, there is limited peer-reviewed scientific literature to guide drug testing strategies; however, guidelines indicate that drug testing is standard of care. Guidelines from the American Society of Addiction Medicine have recommended drug testing and consider the frequency of testing to be at the discretion of the health care provider, based on an assessment of the patient’s risk and substance(s) used.

**Background**

**Pain Management**

According to a 2012 evidence assessment by the American Society of Interventional Pain Physicians, approximately one-third of chronic pain patients do not use opioids as prescribed or may abuse them. In 2016, the International Narcotics Control Board reported that between 1999 and 2010, the number of deaths related to the use of prescription opioid painkillers increased 5-fold among U. S. women and increased by a factor of 3.6 among U. S. men. Additionally, studies have found that a substantial proportion of chronic pain patients inaccurately report nonadherence to prescribed medications and the use of illicit drugs.

A discussion of the controversies related to opioid therapy for the treatment of chronic non-cancer pain is beyond the scope of this review. For a review of evidence-based guidelines from national and international medical societies that examine the place of opioid-based interventions within the management of selected chronic noncancer pain indications, see the BCBSA Special Report 'Opioids for Management of Chronic Noncancer Pain'.

**Substance use disorder**

Substance use, abuse, and addiction involving numerous prescription and illicit drugs is also a serious social and medical problem. Addiction is a primary, chronic disease of brain reward, motivation, memory, and related circuitry and is manifested by the individual pathologic pursuit of reward and/or relief by substance use and other behaviors.

**Monitoring Strategies**
Various strategies are available to monitor pain management and substance use disorder treatment patients, and multicomponent interventions are often used. Many settings require patients to sign a contract before they are given a prescription for opioids. The contracts generally involve obtaining patients' agreement on behaviors they will engage in during the treatment period (eg, taking medication as prescribed) and not engage in (eg, selling prescribed medication and/or obtaining additional prescriptions from other physicians).

Confirming whether patients follow these behavioral guidelines can be a challenge. Risk-assessment screening instruments, such as the Screener and Opioid Assessment for Patients with Pain, and the Opioid Risk Tool, can aid in the assessment of patients' risk for inappropriate drug use. In addition, the presence of "aberrant behaviors" can be used as a marker for patients who are at high-risk for deviating from treatment protocols. Aberrant behaviors include multiple lost prescriptions, obtaining prescriptions from other practitioners, and displaying evidence of acute intoxication during office visits.

**Testing Matrices**
Another strategy for monitoring patients is testing of biologic specimens for the presence or absence of drugs. Currently, urine is the most commonly used biologic substance. Advantages of urine drug testing (UDT) are that it is readily available and standardized techniques for detecting drugs in urine exist. Other biologic specimens (eg, blood, oral fluids, hair, sweat) can also be tested. All matrices have advantages and disadvantages with respect to sensitivity and specificity over different time windows, time to obtain results, different susceptibility to sample tampering and ease of collection.

**Urine Drug Testing**
There are two primary categories of UDT: immunotherapy and specific drug identification.

**Presumptive (Immunoassay) Testing**
Immunooassay testing (also called presumptive testing or qualitative testing or screening) can be performed in a laboratory or at point-of-service. Immunoassay tests are based on the principle of competitive binding and use antibodies to detect a particular drug or drug metabolite in a urine sample. With competitive binding, a fixed amount of a labeled drug is added to the urine sample, and the drug or metabolite in the sample competes with the labeled drug for binding sites on the antibody. The amount of labeled antigen that binds with the antibody is inversely proportional to the amount of the drug or metabolite in the sample.

Immunooassay tests vary in the type of compounds they can detect. Some detect specific drugs and may fail to recognize similarly structured drugs within the same class. Other immunoassays identify only classes of drugs and thus results cannot be used to determine which drug a patient is taking. For example, a positive result of an opiate immunoassay can be due to morphine or hydromorphone. The degree
of cross reactivity (ie, an antibody's reactivity with a compound other than the target of the test) varies widely among immunoassays.

Immunoassay findings are generally reported qualitatively as either positive (drug level above a prespecified threshold) or negative (drug level below a prespecified threshold). Raising or lowering the threshold thus changes the proportion of positive tests. A negative test is interpreted as a level below the threshold and does not necessarily mean that the drug or metabolite is absent.

Immunoassays generally have a rapid turnaround time, to within minutes for on-site tests, and one to four hours for laboratory-based tests.4

**Confirmatory (Specific Drug Identification)**

Confirmatory tests are always performed in a laboratory. Gas chromatography/mass spectrometry (GC/MS) and liquid chromatography/mass spectrometry (LC/MS) are considered to be the criterion standard for confirmatory testing. These techniques involve using GC or LC to separate the analytes in a specimen and for MS to identify the specific molecular structures of the drug and its metabolites. The tests are able to quantify the amount of drug or metabolite present in the urine sample. Definitive quantitative tests can be used to confirm the presence of a specific drug identified by a screening test and can identify drugs that cannot be isolated by currently available immunoassays. Results are reported as the specific levels of substances detected in the urine. GC/MS and LC/MS generally require the specification of the drug or drugs to be identified. Alternatively, "broad-spectrum screens" can be conducted. There is a several-day turnaround time for GC/MS and LC/MS testing.5

An issue with both types of UDT is the possibility of sample tampering to mask the presence of illegal drugs. A variety of products and techniques are available to patients and can be as simple as drinking a large amount of water to dilute the sample. There are also commercial dilution and cleaning products, additives, and urine substitutes. Some of these techniques can be detected by visual inspection of the sample (eg, color) or by on-site testing of sample characteristics including urine temperature, creatinine concentration, and specific gravity.

The correct interpretation of UDT results is very important. Knowledge of drug metabolites is essential for accurate interpretation. Accurate interpretation of test results also requires knowledge of the drug manufacturing process. For example, due to manufacturing impurities, a small amount of hydrocodone may be present in urine samples from patients prescribed oxycodone. Thus, it would be acceptable to detect a small amount of hydrocodone if high amounts of oxycodone were also present.

There are various approaches to incorporating UDT into pain management and substance use disorder treatment settings. Most commonly, patients undergo urine drug screening before beginning treatment to verify current drug use. Some clinicians believe that UDT should be routinely used to establish baseline information about substance use, but the optimal frequency and interval of testing
remains uncertain. A universal approach to screening may uncover more inappropriate use and may reduce patients' sense that testing is being performed due to a lack of trust. However, routine universal screening may place an unnecessary burden on the health care system and on the doctor-patient relationship. An alternative approach is selective testing of patients who are judged to be at increased risk for drug misuse.

Existing protocols vary for the use of presumptive vs definitive tests. Some involve conducting routine confirmation of positive presumptive tests with definitive quantitative testing. Others use selective confirmation of positive presumptive tests, such as when an unexpected immunoassay result is not adequately explained by the patient. There is also a mixed approach, with routine confirmation of presumptive tests only for drugs with poor-performing immunoassays.

Full informed consent is a requirement before UDT. Patients should be informed of the specific drug testing protocol before treatment and should provide written agreement with the plan for monitoring. As stated in a joint U.S. Veterans Affairs/Department of Defense guideline, patients' refusal to consent to urine testing should be considered a factor in the overall assessment of patients' ability to adhere to treatment.6

**Oral Fluid Drug Testing**

Oral fluid (liquid samples obtained from the oral cavity) can potentially be used to test for drug use. Oral fluid contains secretions from several different sources, including secretions from the three pairs of major salivary glands (parotid, sublingual, and submandibular), secretions from the minor salivary glands, oronasopharyngeal secretions, and cellular debris. The mixture of fluids obtained varies depending on the collection method used (eg, spitting, suctioning, draining, or collection on some type of absorbent material). Drug concentrations can be affected by the collection method and by the use of saliva stimulation methods. Several collection devices are commercially available in the U.S. and they generally involve collection on an absorbent material, such as foam pads; pads are then placed in a container with a stabilizing buffer solution. Drug concentrations may also depend on how the oral fluid is recovered from the collection device (eg, by centrifugation or by applying pressure). Drug concentrations may not reflect blood levels because of residual amounts of a drug (specifically those ingested or smoked) remaining in the oral cavity after recent use.

Analysis techniques must be able to detect drugs present in low concentration and in a small volume of fluid (often <1 mL). Immunoassay techniques are available to detect drugs in oral fluid; they require a small sample volume (»25 μL). Immunoassays tend to be relatively sensitive techniques, but they have low specificity. Confirmation analysis is generally performed using MS-based methods. In recent years, advancements have been made in MS analysis techniques, including the development of multianalyte LC/MS methods.
A practical advantage of oral fluid collection compared with urine collection is that samples can be obtained under the direct supervision and without loss of privacy. It has been used in situations where urine sampling is impractical, such as testing drivers during traffic stops. Oral fluid sampling also has the potential to be useful in pain management or substance use disorder treatment settings, particularly when substitution or tampering with urine drug samples is suspected.

**Hair Testing**

Hair is composed of protein that traps chemicals in the blood at the time the hair develops in the follicle. Hair on the human head grows at approximately 0.5 inches per month. Thus, a 1.5-inch hair sample could be used to detect drug use during the previous 90 days. Potential advantages of hair as a drug testing source include noninvasive collection; ease of collection, storage, and shipping; availability of samples for testing and retesting; and difficulty in tampering. Potential disadvantages include: recent drug use (ie, within the past seven days) cannot be detected; difficulty in detecting very light drug use (eg, a single episode); and drug levels can be affected by environmental exposure. In addition, variation in hair texture as well as cosmetic hair treatments can affect drug incorporation into hair and the accuracy of drug tests on hair samples. As with other types of samples, hair can be initially tested using immunoassay techniques, with confirmation by MS-based methods. Hair testing has been used in a variety of situations where detection of drug use during the previous several months is desired (eg, pre-employment screening, post-drug-treatment verification of relapse).

**Regulatory Status**

The Food and Drug Administration (FDA) regulates drugs of abuse tests that are sold to consumers or health care professionals in the U. S.. The FDA reviews many of these tests before they are sold for use. In its review, the FDA evaluates the design and performance of tests and sample collection systems to help ensure that they produce accurate results. The FDA does not review drugs of abuse tests intended for employment and insurance testing provided they include a statement in their labeling that the device is intended solely for use in employment and insurance testing. The FDA review does not include test systems intended for federal drug testing programs (eg, programs run by the Substance Abuse and Mental Health Services Administration, the Department of Transportation, and the U.S. military.)

The FDA has cleared assays for urine testing of drugs of abuse as well as oral fluid specimen collection devices and assays for analysis of oral fluid for drugs of abuse through the 510(k) regulatory pathways. Several collection devices are commercially available in the U. S., and they generally involve collection on an absorbent material, such as foam pads; pads are then placed in a container with a stabilizing buffer solution. Immunoassays of urine specimens have previously been cleared by the FDA and are used as the predicates for the oral fluid immunoassays.
Clinical laboratories may develop and validate tests in-house and market them as a laboratory service; laboratory-developed tests must meet the general regulatory standards of the Clinical Laboratory Improvement Amendments. Testing with GC/MS and some immunoassays are performed in laboratory settings. Laboratories that offer laboratory-developed tests must be licensed by the Clinical Laboratory Improvement Amendments for high-complexity testing.

**Rationale**

Guidelines with evidence reviews of published peer-reviewed scientific literature suggest that evidence of benefit on health outcomes for drug testing for both patients in chronic pain using opioids and patients with substance use disorder is limited and usually confounded with drug testing as part of a multifaceted intervention of risk mitigation or contingency management. There is also no clear evidence in the literature regarding the most effective frequency of testing. Notwithstanding the lack of evidence, clinical input and guidelines indicate that drug testing is standard of care. Therefore, a rigorous study comparing drug testing to no drug testing and following patients for health outcomes is unlikely to be performed.

Thus a traditional evidence review will not be performed and relevant national and regional clinical practice guidelines were sought to inform the review. The guidelines are reviewed in the Supplementary Information section of the review.

This review was created in February 2014 with a search of the MEDLINE database. The most recent literature review was July 23, 2019.

**Summary of Evidence**

For individuals who have chronic pain treated with opioids who receive drug testing, there is limited peer-reviewed scientific literature to guide drug testing strategies; however, guidelines indicate that drug testing is standard of care. Guidelines from Centers for Disease Control and Prevention, American Society of Interventional Pain Physicians, American Pain Society and American Academy of Pain Medicine, American College of Occupational and Environmental Medicine, Department of Veterans Affairs and Department of Defense have recommended drug testing and consider the frequency of testing to be at the discretion of the health care provider, based on an assessment of the patient’s risk for misuse or addiction.

For individuals who have a drug addiction who are in substance use disorder treatment who receive drug testing, there is limited peer-reviewed scientific literature to guide drug testing strategies; however, guidelines indicate that drug testing is standard of care. Guidelines from the American Society of Addiction Medicine have recommended drug testing and consider the frequency of testing to be at the discretion of the health care provider, based on an assessment of the patient’s risk and substance(s) used.
SUPPLEMENTAL INFORMATION

Clinical Input From Physician Specialty Societies and Academic Medical Centers

While the various physician specialty societies and academic medical centers may collaborate with and make recommendations during this process, through the provision of appropriate reviewers, input received does not represent an endorsement or position statement by the physician specialty societies or academic medical centers, unless otherwise noted.

In response to requests, input was received from 5 physician specialty societies and 8 academic medical centers while this policy was under review in 2014. There was near-consensus among reviewers that, in outpatient pain management, presumptive (ie, qualitative) urine drug testing may be considered medically necessary for patients who meet the stated criteria and that the frequency of repeat drug testing should depend on the risk level of the individual. There was also near-consensus among reviewers that, in substance abuse treatment, baseline presumptive drug testing may be considered medically necessary for patients who meet the stated criteria and that targeted weekly qualitative screening for a maximum of four weeks may be considered medically necessary during the stabilization phase. There was mixed input on the frequency of presumptive drug testing that may be considered medically necessary during the maintenance phase of substance abuse treatment. In addition, clinical input was mixed on confirmatory definitive (ie, quantitative) drug testing and particularly on whether definitive drug testing should only be performed on a drug-specific basis.

Practice Guidelines and Position Statements

Pain Management
Nuckols et al (2014) published a systematic review of guidelines that addressed the management of opioid use for chronic pain.8 Reviewers included guidelines from national organizations and specialty societies, as well as guidelines from state agencies and specific health systems. Moreover, reviewers identified nine guidelines with recommendations on urine drug testing (UDT). Recommendations varied widely; two recommended mandatory testing for all patients, another recommended testing only patients at increased risk of a medication use disorder, and two stated that testing patients at low-risk of abuse is not cost-effective. If UDT is used, the recommended frequency of follow-up testing was at least quarterly in one guideline, at least yearly in another, and randomly in two.

Centers for Disease Control and Prevention
The Centers for Disease Control and Prevention (2016) published guidelines on opioids for chronic pain.9 The guidelines included the following recommendation on UDT: "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."

**American Society of Interventional Pain Physicians**
The American Society of Interventional Pain Physicians (2017) issued guidelines for responsible, safe, and effective opioid prescribing for chronic non-cancer pain.\(^\text{10}\). The guidelines included the following recommendations on UDT (see Table 1).

**Table 1. Recommendations on Urine Drug Testing for Chronic Non-Cancer Pain**

<table>
<thead>
<tr>
<th>Recommendation</th>
<th>LOE</th>
<th>SOE</th>
</tr>
</thead>
<tbody>
<tr>
<td>&quot;Comprehensive assessment and documentation is recommended before initiating opioid therapy, with documentation of comprehensive history, general medical condition, psychosocial history, psychiatric status, and substance use history.&quot;</td>
<td>I</td>
<td>Strong</td>
</tr>
<tr>
<td>&quot;Screening for opioid abuse is recommended, as it will potentially identify opioid abusers and reduce opioid abuse.&quot;</td>
<td>II-III</td>
<td>Moderate</td>
</tr>
<tr>
<td>&quot;Presumptive UDT is implemented at initiation of opioid therapy, along with subsequent use as adherence monitoring, using in-office point of service testing, followed by confirmation with chromatography/mass spectrometry for accuracy in select cases, to identify patients who are not compliant or abusing prescription drugs or illicit drugs. UDT may decrease prescription drugs abuse of illicit drug use when patients are in chronic pain management therapy.&quot;</td>
<td>III</td>
<td>Moderate</td>
</tr>
</tbody>
</table>

LOE: level of evidence; SOE: strength of evidence; UDT: urine drug testing.

**American Pain Society and American Academy of Pain Medicine**
The American Pain Society and American Academy of Pain Medicine (2009) jointly published clinical guidelines on the use of opioid therapy in chronic non-cancer pain.\(^\text{11}\). The guidelines did not address UDT or other forms of monitoring adherence.

**American College of Occupational and Environmental Medicine**
The latest guidelines from the ACOEM on the use of opioids for the treatment of acute, subacute, chronic, and postoperative pain were published in 2014.\(^\text{12}\). The following recommendations on UDT were made for subacute (1-3 months) and chronic pain (>3 months) (see Table 2).
Table 2. Recommendations on Opioid Use to Treat Acute, Subacute, Chronic, and Postoperative Pain

<table>
<thead>
<tr>
<th>Recommendation</th>
<th>SOR</th>
<th>CIR</th>
</tr>
</thead>
<tbody>
<tr>
<td>&quot;Baseline and random urine drug screening, qualitative and quantitative, for patients prescribed opioids for the treatment of subacute or chronic pain to evaluate presence or absence of the drug, its metabolites and other substance(s) use. In certain situations, other screenings (eg, hair particularly for information regarding remote use or blood) (for acute toxicity) may be appropriate.&quot;</td>
<td>C</td>
<td>High</td>
</tr>
</tbody>
</table>

Recommendations rating schema: A: strongly recommended; B: moderately recommended; C: recommended.
CIR: confidence in recommendation; SOR: strength of recommendation.

Urine drug screening was not recommended for acute pain (up to four weeks) or for postoperative pain (up to four weeks).

As a companion to the guidelines, the ACOEM developed a combined Opioid Consent Form and Opioid Treatment Contract.13 The form provides explanations of the potential benefits and harms to be expected from opioid treatment, and asks the patient to agree to numerous terms of opioid use, which include submitting to unscheduled urine, blood, saliva, or hair drug testing at the prescriber's request and seeing an addiction specialist if requested.

Screening was recommended for all patients at baseline, and then randomly at least twice and up to four times a year, and at termination. Screening should also be performed if the provider suspects abuse of prescribed medication.

Department of Veterans Affairs and Department of Defense
The Department of Veterans Affairs and Department of Defense (2010) issued clinical practice guidelines for managing opioid therapy for the treatment of chronic pain.6 The recommendations on assessing adherence to prescribed opioids include obtaining a urine drug test (with patient consent) before initiating opioid therapy, and then randomly at a follow-up to confirm appropriate use. Other strategies recommended include clinical assessment and screening aids such as random pill counts, adherence checklists, and standardized instruments such as the Screener and Opioid Assessment for Patients with Pain.

The guidelines included the following specific recommendations on UDT:

"RECOMMENDATIONS
1. Inform patients that drug testing is a routine procedure for all patients starting or on opioid therapy [OT], and is an important tool for monitoring the safety of their treatment.
2. With patient consent, obtain a UDT in all patients prior to initiation of OT.
3. With patient consent, monitor all patients on OT with periodic random UDTs to confirm adherence to the treatment plan. Increase the frequency of UDTs
based on risk level for aberrant drug-related behaviors and following each dose increase.

4. Take into consideration a patient's refusal to take a UDT as part of the ongoing assessment of the patient's ability to adhere to the treatment plan and the level of risk for adverse outcomes.

5. When interpreting UDT results take into account other clinical information (e.g., past SUD [substance use disorder], other risk factors, aberrant drug-related behaviors, and other conditions indicating risk.)

6. Understanding of lab methods for drug testing and reporting are necessary to interpret UDT results (i.e., screen versus confirmatory test, substances tested, cut-off levels for tests). Maintain a close working relationship with the clinical laboratory to answer any questions about the UDT or for confirming the results.

Washington State Agency Medical Directors' Group
The Washington State Agency Medical Directors' Group (2015) updated its interagency guidelines on opioid dosing for chronic non-cancer pain. The guidelines included recommendations on UDT. Recommendations on testing frequency differed depending on the patient risk of opioid addiction and opioid dosage, as listed below:

- Low risk: Once per year
- Moderate risk: Twice per year
- High risk or opioid dose over 120 mg MED/d: 3-4 times per year
- Aberrant behavior: Each visit.

No pain management guidelines were identified that had recommendations on oral fluid or hair testing.

Substance Use Disorder Treatment

American Society of Addiction Medicine
The ASAM has published several documents on drug testing: a public policy statement (2010), a white paper (2013), which provided background on the science and current practices of drug testing, and guidelines (2017) on the effective use of drug testing.7,17.

The ASAM's public policy statement asserts that: "Urine drug testing is a key diagnostic and therapeutic tool that is useful for patient care and in monitoring of the ongoing status of a person who has been treated for addiction. As such, it is a part of medical care, and should not face undue restrictions." The ASAM recommended drug testing where medically appropriate in clinical diagnostic settings and clinical treatment settings. The term "drug testing" in this document was a broad term that included urine or other body fluids or tissues.

The ASAM White Paper concluded that "The most important challenge in drug testing today is not the identification of every drug that we are technologically capable of detecting, but to do medically necessary and accurate testing for those drugs that are most likely to impact clinical outcomes." The paper acknowledged
that more specific guidance on drug testing was needed, which led to the development of the 2017 guidelines, described below.

The ASAM (2017) guidance on appropriate drug testing in clinical addiction medicine advises health care providers that before choosing the type of drug test, they should first identify the questions they are seeking to answer and be aware of the benefits and limitations of the various drug tests. Table 3 summarizes the characteristics of urine, oral fluid, and hair drug tests that may inform the decision of what type of drug test to use.

### Table 3. Summary of Drug Testing Characteristics

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Urine</th>
<th>Oral Fluid</th>
<th>Hair</th>
</tr>
</thead>
<tbody>
<tr>
<td>General detection period</td>
<td>Hours to days</td>
<td>Minutes to hours</td>
<td>Weeks to months</td>
</tr>
<tr>
<td>Point-of-care testing</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Primarily detects</td>
<td>Drug metabolite</td>
<td>Parent drug compound</td>
<td>Parent drug compound</td>
</tr>
<tr>
<td>Best use in treatment setting</td>
<td>Intermediate-term detection in ongoing treatment</td>
<td>Short-term detection in ongoing treatment</td>
<td>Long-term monitoring, 3-month history</td>
</tr>
<tr>
<td>Ease of collection</td>
<td>Requires restroom</td>
<td>Easily collected</td>
<td>Easily collected</td>
</tr>
<tr>
<td>Resistance to tampering</td>
<td>Low</td>
<td>High, with some uncertainty</td>
<td>High when chemically untreated</td>
</tr>
<tr>
<td>Retesting same sample</td>
<td>Possible</td>
<td>Difficult</td>
<td>Easy</td>
</tr>
</tbody>
</table>

Adapted from Jarvis et al (2017).[38]

**U.S. Preventive Services Task Force Recommendations**

Not applicable.

**Medicare National Coverage**

There is no national coverage determination. In the absence of a national coverage determination, coverage decisions are left to the discretion of local Medicare carriers.

**REFERENCES**


**Billing Coding/Physician Documentation Information**

**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
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

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

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

0079U  Comparative DNA analysis using multiple selected single-nucleotide polymorphisms (SNPs), urine and buccal DNA, for specimen identity verification

0082U  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

0093U  Prescription drug monitoring, evaluation of 65 common drugs by LC-MS/MS, urine, each drug reported detected or not detected

0116U  Prescription drug monitoring, enzyme immunoassay of 35 or more drugs confirmed with LC-MS/MS, oral fluid, algorithm results reported as a patient-compliance measurement with risk of drug to drug interactions for prescribed medications

0117U  Pain management, analysis of 11 endogenous analytes (methylmalonic acid, xanthurenic acid, homocysteine, pyroglutamic acid, vanilmandelate, 5-hydroxyindoleacetic acid, hydroxymethylglutarate, ethylmalonate, 3-hydroxypropyl mercapturic acid (3-HPMA), quinolinic acid, kynurenic acid), LC-MS/MS, urine, algorithm reported as a pain-index score with likelihood of atypical biochemical function associated with pain

80305  Drug test(s), presumptive, any number of drug classes, any number of devices or procedures (eg, immunoassay); capable of being read by direct optical observation only (eg, dipsticks, cups, cards, 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 (eg, immunoassay); read by instrument assisted direct optical observation (eg, dipsticks, cups, cards, cartridges), includes sample validation when performed, per date of service

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**

Definitive drug testing code range (testing may also be reported with the appropriate code from the Chemistry code range)

**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), 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 specimen; qualitative or quantitative, all sources, includes specimen validity testing, per day, any number of drug classes

**ICD-10 Codes**

- **F11.10-F11.99** Opioid related disorders, code range
- **F14.10-F14.99** Cocaine related disorders, code range
- **F16.10-F16.99** Hallucinogen related disorders, code range
- **F45.42** Pain disorder with related psychological factors
- **G89.21-G89.4** Chronic pain not otherwise specified code range

**Additional Policy Key Words**

N/A

**Policy Implementation/Update Information**

- **3/2017** New policy, Medically necessary under specific conditions.
- **3/2018** Title changes to “Drug Testing in Pain Management and Substance Use Disorder Treatment”. No policy statement changes.
- **3/2019** No policy statement changes.
- **1/1/20** Policy statements updated to include: “Drug testing is ordered by a clinician during an office visit.” Also updated to remove “urine” from drug testing, Clarifications and expanded statement related to the stabilization and maintenance section including documentation required in medical record. Removed investigational statement regarding hair
drug testing and oral fluid drug testing. Medically necessary statement added to include POS and specific indications.

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