

## Definitive Drug Testing

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### Introduction

Drug testing is helpful as a tool to monitor compliance with prescribed substances, identify use of undisclosed substances, and uncover diversion of prescribed substances. North Dakota Century Code establishes certain requirements for drug testing in the assessment of claim compensability. Workforce Safety & Insurance (WSI) utilizes ODG by MCG to determine the medical necessity of drug testing. North Dakota Administrative Code (N.D.A.C) further references potential non-payment of medical services for failure, neglect, or refusal of a provider to perform drug testing WSI requests.

The purpose of this policy is to identify the circumstances for which WSI requires a provider to conduct definitive drug testing and explain WSI's position on reimbursement of medical services for non-compliance with these requirements.

### Definitions

Presumptive drug screening - Qualitative drug testing, which determines the presence or absence of a drug or drug metabolite in the sample. The test result is non-numerical. Presumptive drug screening includes point-of-contact (POC) immunoassays.

Definitive drug testing - Quantitative drug testing which determines the specific quantity of a drug or drug metabolite present in the sample. The test result is numerical. Definitive drug testing is also known as confirmatory testing.

### Policy

In accordance with ODG by MCG, WSI requires a provider perform definitive testing following presumptive testing for all samples positive for non-prescribed opioids and/or illicit drugs. WSI will review claim and billing information involving presumptive and definitive drug testing on a case-by-case basis to ensure compliance with the definitive testing requirements and, per N.D.A.C, may deny reimbursement for medical services if a provider fails, neglects, or refuses to perform drug testing WSI requests. The denial of reimbursement may include charges associated with a hospital stay, surgery, or any other procedures.

For ODG by MCG recommendations, see [Appendix: Treatment Guidelines - Drug Testing](#).

### References

North Dakota Century Code § 65-01-11

North Dakota Administrative Code § 92-01-02-31(5)(c)

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### Treatment Guidelines - Drug Testing

The following guideline is an excerpt from ODG by MCG's Pain (Chronic); Drug Testing section, accessed 09/25/2020.

#### **Drug testing**

##### **Conditionally Recommended**

Recommended as an option, using a urine drug screen to assess for the use or the presence of illegal drugs.

#### **Evidence Summary**

See Urine Drug Testing (UDT) in patient-centered clinical situations. For more information, see Opioids, criteria for use: (2) Steps to Take Before a Therapeutic Trial of Opioids & (4) On-Going Management; Opioids, screening for dependence vs. addiction; Opioids, screening for risk of addiction (tests); & Opioids, dealing with misuse & addiction (plus aberrant behaviors & abuse).

#### **Urine drug testing (UDT)**

##### **Conditionally Recommended**

Recommended as a tool to monitor compliance with prescribed substances, identify use of undisclosed substances, and uncover diversion of prescribed substances.

#### **ODG Criteria**

##### **Criteria for Use of Urine Drug Testing**

Urine drug tests may be subject to specific drug screening statutes and regulations based on state and local laws, and the requesting clinician should be familiar with these. State regulations may address issues such as chain of custody requirements, patient privacy, and how results may be used or shared with employers. The rules and best practices of the U.S. Department of Transportation should be consulted if there is doubt about the legally defensible framework of most jurisdictions. ([DOT, 2010](#))

1. A point-of-contact (POC) immunoassay test is recommended prior to initiating chronic opioid therapy. This is not recommended in acute care situations (i.e. for treatment of nociceptive pain). There should be documentation of an addiction-screening test using a formal screening survey in the records prior to initiating treatment. If the test is appropriate, confirmatory lab testing is not required. See Opioids, screening tests for risk of addiction & misuse.
2. Frequency of urine drug testing should be based on documented evidence of risk stratification including use of a testing instrument. See Opioids, tools for risk stratification & monitoring. *An explanation of "low risk," "moderate risk," and "high risk" of addiction/aberrant behavior is found under Opioids, tools for risk stratification & monitoring and Opioids, screening tests for risk of addiction & misuse.*
3. Patients at "low risk" of addiction/aberrant behavior should be tested within six months of initiation of therapy and on a yearly basis thereafter. There is no reason to perform confirmatory testing unless the test is inappropriate or there are unexpected results. If required, confirmatory testing should be for the questioned drugs only.
4. Patients at "moderate risk" for addiction/aberrant behavior are recommended for point-of-contact screening 2 to 3 times a year with confirmatory testing for inappropriate or unexplained results. This includes patients undergoing prescribed opioid changes without success, patients with a stable addiction disorder, those patients in unstable and/or dysfunction social situations, and for those patients with comorbid psychiatric pathology.
5. Patients at "high risk" of adverse outcomes may require testing as often as once per month. This category generally includes individuals with active substance abuse disorders.

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6. If a urine drug test is negative for the prescribed **scheduled drug**, confirmatory testing is strongly recommended for the questioned drug. If negative on confirmatory testing the prescriber should indicate if there is a valid reason for the observed negative test, or if the negative test suggests misuse or non-compliance. Additional monitoring is recommended including pill counts. Recommendations also include measures such as prescribing fewer pills and/or fewer refills. A discussion of clinic policy and parameters in the patient's opioid agreement is recommended. Weaning or termination of opioid prescription should be considered in the absence of a valid explanation. See Opioids, dealing with misuse & addiction.
7. If a urine drug test is positive for a non-prescribed **scheduled drug or illicit drug**, lab confirmation is strongly recommended. In addition, it is recommended to obtain prescription drug monitoring reports. If there is evidence of problems with cross-state border drug soliciting in your area, reports from surrounding states should be obtained if possible. Other options include contacting pharmacies and different providers (depending on the situation). Reiteration of an opioid agreement should occur. Weaning or termination of opioid prescription should be considered in the absence of a valid explanation.
8. Urine drug testing positive for illicit drugs places a patient in a "high risk" category.
9. If unexpected results are found, documentation of the ensuing conversation, including patient's explanation should be made.
10. Documentation should make evident the reason(s) that confirmatory tests are required. This includes information about the actual classes of drugs requested for testing.
11. There should be specific documentation for the necessity of confirmatory testing of drug class panels such as antidepressants, benzodiazepines, acetaminophen and salicylates. Routine confirmatory screening of these classes of drugs is generally reserved for emergency department testing for overdose patients.
12. If UDT is a standard protocol for in-office use, it is recommended that the clinician establish a routine immunoassay panel. Standard drug classes recommended include cocaine metabolite, amphetamines, opiates (morphine, codeine and 6-MAM), opioids (oxycodone and methadone), marijuana (delta-9-THC), barbiturates and benzodiazepines. In settings where there is frequent use of other drugs, particularly semi-synthetic or synthetic opioids, these should be added. Drugs of abuse in your community should also be included.
13. Prescribers may wish to request limit of detection testing (i.e. decreased thresholds) to increase the likelihood of detecting prescribed drugs. This is particularly important for patients on intrathecal drugs as well as for patients on fentanyl patches.
14. A detailed list of all drugs the patient is taking including over-the-counter drugs and herbal preparations must be included in the request accompanying the test. When using confirmatory testing, this allows for the lab to provide accurate assessment. The progress note should also indicate a complete list of drugs with the last time of use of specific drugs evaluated for.
15. Random collection is recommended.
16. If tampering is suspected, check urine temperature, pH and creatinine concentration. It is also recommended to ask for an immediate second sample or witness the collection.
17. Results of testing and interpretation should be documented in the patient's chart to document compliance or deviation. This is especially true if results can lead to alteration or termination of care. Termination of care should never be based solely on the lack of detection of a prescribed medication on a screening assay. Such findings should be confirmed by another method, to diminish the likelihood of a false negative result leading to inappropriate termination of care.

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18. It is recommended that a toxicologist be available to discuss any questions that may occur surrounding tests.
19. Quantitative urine drug testing is not recommended for verifying compliance without evidence of necessity. This is due in part to pharmacokinetic and pharmacodynamic issues including variability in volumes of distribution (muscle density) and interindividual and intraindividual variability in drug metabolism. Any request for quantitative testing requires documentation that qualifies necessity.

#### **Evidence Summary**

The test should be used in conjunction with other clinical information when decisions are to be made to continue, adjust or discontinue treatment. This information includes clinical observation, results of addiction screening, pill counts, and prescription drug monitoring reports. The prescribing clinician should also pay close attention to information provided by family members, other providers and pharmacy personnel. The frequency of urine drug testing may be dictated by state and local laws.

#### **Main types of UDT:**

Screening Assays: Typically, screening tests are based on immunoassays, which can be either laboratory-based or point-of-collection testing (POC). POC testing is also commonly referred to as “dip-stick” testing. This latter type of testing is performed on-site and usually requires no instrumentation. Substances are reported as present or absent at a predetermined cutoff threshold. Screening assays have the advantages of being more cost effective than confirmatory tests and with POC systems, allow immediate results. These tests cannot identify a specific analyte or distinguish between different drugs of the same class.

#### *Limitations of standard immunoassay screens:*

1. Differing thresholds can be set (with a positive result only occurring if the cutoff is met with resultant false negatives for drugs below the cutoff);
2. Cross-reactivity between substances chemically related or unrelated to the target drug can produce unreliable results.
3. Semi-synthetic opioids (e.g., oxycodone and oxymorphone and occasionally hydrocodone) and synthetic opioids (fentanyl, meperidine, tramadol, methadone, and buprenorphine) are not detected on many commercially-available opiate immunoassay screens;
4. Benzodiazepine detection may also be unreliable using immunoassay techniques, and a standard screen does not test for alprazolam, lorazepam or clonazepam;
5. The standard immunoassay screen has a sensitivity of 90% to 95% and specificity of 85% to 90%;

Confirmatory Testing: Laboratory-based specific drug identification, which includes gas chromatography/mass spectrometry (GC/MS) or liquid chromatography tandem mass spectrometry (LC/MS/MS). These tests allow for identification and quantification of specific drug substances. They are used to confirm the presence of a given drug, and/or to identify drugs that cannot be isolated by screening tests. The tests also allow for identification of drugs that are not identified in the immunoassay screen. These are generally considered confirmatory tests and have a sensitivity and specificity of around 99%. These tests are particularly important when results of a test are contested.

*When to perform confirmation:* When the POC screen is appropriate for the prescribed drugs without evidence of non-prescribed substances, confirmation is generally not required. Confirmation should be sought for

1. all samples testing negative for prescribed drugs,

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2. all samples positive for non-prescribed opioids, and
3. all samples positive for illicit drugs. ([Manchikanti, 2011b](#))

#### Indications for UDT:

##### *At the onset of treatment:*

1. UDT is recommended at the onset of treatment of a new patient who is already receiving a controlled substance or when chronic opioid management is considered. Urine drug testing is not generally recommended in acute treatment settings (i.e. when opioids are required for nociceptive pain).
2. In cases in which the patient asks for a specific drug. This is particularly the case if this drug has high abuse potential, the patient refuses other drug treatment and/or changes in scheduled drugs, or refuses generic drug substitution.
3. If the patient has a positive or “at risk” addiction screen on evaluation. This may also include evidence of a history of comorbid psychiatric disorder such as depression, anxiety, bipolar disorder, and/or personality disorder. See Opioids, screening tests for risk of addiction & misuse.
4. If aberrant behavior or misuse is suspected and/or detected. See Opioids, indicators for addiction & misuse.

##### Ongoing monitoring:

1. If a patient has evidence of a “high risk” of addiction (including evidence of a comorbid psychiatric disorder (such as depression, anxiety, attention-deficit disorder, obsessive-compulsive disorder, bipolar disorder, and/or schizophrenia), has a history of aberrant behavior, personal or family history of substance dependence (addiction), or a personal history of sexual or physical trauma, ongoing urine drug testing is indicated as an adjunct to monitoring along with clinical exams and pill counts. See Opioids, tools for risk stratification & monitoring.
2. If dose increases are not decreasing pain and increasing function, consideration of UDT should be made to aid in evaluating medication compliance and adherence.

**False-positive tests on immunoassay testing:** (This is not an inclusive list.) There are a number of prescribed medications that have been documented to trigger false-positive urine drug testing results. Verification of test results should occur with a different screening test or additional confirmatory test to confirm results to avoid adverse consequences for patients:

1. Multiple substances cross-react with amphetamines (examples include some diet pills, promethazine, and substances found in over-the-counter nasal inhalers such as Vicks inhalers). A standard laboratory GC/MS test will not differentiate the d- isomer (the stimulant) from the l-isomer (typically therapeutic) metabolites of methamphetamine. If amphetamine drug use is disputed a stereospecific chromatography test is recommended.
2. Quinolone antibiotics can be misidentified as opiates;
3. Trazodone use can result in a false-positive test for fentanyl;
4. Venlafaxine use can produce a false positive for PCP.
5. Quetiapine can produce a false-positive test for methadone.
6. Proton-pump inhibitors use may result in a false positive for THC.
7. Sertraline and oxaprozin can cause a false-positive benzodiazepine test.

#### **Metabolism of opioids:**

1. Codeine metabolizes to morphine as well as small quantities of hydrocodone. Morphine does not metabolize to codeine.

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2. Heroin metabolizes to 6-acetyl-morphine (unique to heroin use) and then to morphine.
3. Morphine can metabolize to hydromorphone in small amounts.
4. Hydrocodone metabolizes to hydromorphone in small amounts.
5. Oxycodone metabolizes to oxymorphone.
6. Oxymorphone does not metabolize to oxycodone. NB: all of the “small amounts” referenced here depend on the timing of the test, relative to the exposure to the parent drug. For example, hydromorphone levels from single-dose hydrocodone exposure can actually exceed the hydrocodone levels after 30 hours, due to metabolism of hydrocodone into hydromorphone.

**Metabolism of benzodiazepines:** Many of the drugs in this class are not equally detectable on immunoassay as metabolic pathways differ among the benzodiazepines. Benzodiazepine screen may also be insensitive on GCMS (particularly for lorazepam and clonazepam). Many benzodiazepines are metabolized into drug substances that are also available by prescription. Thus, the detection of oxazepam does not necessarily indicate that the donor took oxazepam, as it can also be present in persons who have ingested diazepam, chlordiazepoxide, clorazepate and temazepam, to name a few.

**Detection time of commonly used drugs:** Values must be interpreted taking into account variables such as individual metabolism and method and frequency of ingestion. Many tables are available for reference. ([Moeller, 2008](#)) ([Gourlay, 2010](#)) ([Heit, 2004](#))

**Testing for ethanol use:** In addition to detecting ethanol in urine following acute exposure, there is a test for more remote exposure, ethyl glucuronide (EtG). This metabolite can persist for up to 80 hours in the urine. Ethanol is found in many products, including some over-the-counter antitussives and many hand sanitizers, so a “false” positive test may occur without alcoholic beverage consumption. An approximate range to use as a “positive” for alcohol beverage use is greater than 1500 ng/mL. The test is not recommended to determine total abstinence.

**Screening Protocol:** There is no hard and fast rule as to observing a urine drug screen but there are multiple recommendations to assure compliance. These include having a clinic or lab associate accompany the patient to the restroom. Additional recommendations include turning off the flow of the sink and adding a coloring agent to the toilet. The patient should be asked to remove outer garments and empty pockets and some recommendations include asking the patient to put on a gown prior to giving the sample. Random screens are recommended as patients may change their behavior when expected to be tested. ([Chou, 2009b](#))

**Cost of Testing:** The current Urine drug testing codes used are 80307 (POC testing), and G0480- G0481- G0482- G0483. (Confirmatory tests). The new G-code is defined as “drug screen, qualitative; single drug class method (e.g. Immunoassay, enzyme assay) each drug class” and excludes chromatography.

**Limitations to UDT:** There is currently no way to tell from a urine drug test the exact amount of drug ingested or taken, when the last dose was taken, or the source of the drug. A recent systematic review of the use of drug treatment agreements and urine drug testing to discourage misuse when opioids are prescribed for chronic noncancer pain, found weak, heterogeneous evidence that these strategies were associated with less misuse. Limited research did find that UDT was a valuable tool to detect use of nonprescribed drugs and confirm adherence to prescribed medications beyond that identified by patient self-report or impression of the treating physician.



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([Katz, 2002](#)) ([Katz, 2003](#)) ([Brahm, 2010](#)) ([Compton, 2007](#)) ([Gourlay, 2010](#)) ([Gourlay 2009](#)) ([Heit, 2010](#)) ([Heit, 2004](#)) ([Jaffee, 2008](#)) ([Moeller, 2008](#)) ([Nafziger, 2009](#)) ([Schneider, 2008](#)) ([Starrels, 2010](#)) ([Chou, 2009b](#)) ([McCarberg, 2011](#)) ([Owen, 2012](#)) ([Christo, 2011](#)) ([Melanson, 2009](#)) ([Peppin, 2012](#)) ([Atluri, 2012](#)) ([Standridge, 2010](#))