Interpretation of Drug Testing Results in Medication Assisted Treatment

By: Paul L. Cary
Independent Forensic Toxicology Consultant
What Does This Result Mean?
Two-Step Testing Approach

■ screening test – designed to separate negative samples from samples that are “presumptively” positive
■ confirmation test – follow-up procedure designed to validate positive test results
■ why can’t you adjudicate based on the screening test results?
■ FALSE POSITIVES
Drug tests & cross reactivity:

- screening tests can and do react to “non-target” compounds
  - amphetamines
  - benzodiazepines
- obtain list of interfering compounds from lab or on-site test vendor
- study results have demonstrated accuracy rates for initial screening tests as low as 70%
- confirm positive results
### Typical Cutoff Levels

**screening & confirmation**

<table>
<thead>
<tr>
<th>Substance</th>
<th>Screening Level</th>
<th>Confirmation Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>amphetamines</td>
<td>500 ng/mL</td>
<td>250 ng/mL</td>
</tr>
<tr>
<td>benzodiazepines</td>
<td>300 ng/mL</td>
<td>variable</td>
</tr>
<tr>
<td>cannabinoids</td>
<td>20 &amp; 50 ng/mL</td>
<td>15 ng/mL</td>
</tr>
<tr>
<td>cocaine (crack)</td>
<td>150 ng/mL</td>
<td>100 ng/mL</td>
</tr>
<tr>
<td>opiates (heroin)</td>
<td>300/2000 ng/mL</td>
<td>variable</td>
</tr>
<tr>
<td>phencyclidine (PCP)</td>
<td>25 ng/mL</td>
<td>25 ng/mL</td>
</tr>
<tr>
<td>alcohol</td>
<td>20 mg/dL</td>
<td>10 mg/dL</td>
</tr>
</tbody>
</table>

* SAMHSA (formerly NIDA) drugs
What is a “cutoff” level?

- Cutoffs are not designed to frustrate CJ professionals.
- A drug concentration, _administratively_ established for a drug test that allows the test to distinguish between negative and positive samples—“threshold.”
- Cutoffs provide important safeguards:
  - Scientific purposes (detection accuracy)
  - Legal protections (evidentiary admissibility)
- Measured in ng/mL = ppb.
Cutoffs and False Positives

As you lower the cutoff level of a drug test, you increase the potential for false positive test results.
How Do Drug Tests Work?
Drug tests & cross reactivity:
Drug tests & cross reactivity:

Immuonoassay screening tests

- opiates antibody

- opiates fit = positive test
- methadone doesn’t fit = negative test
<table>
<thead>
<tr>
<th>Drug Name</th>
<th>Reactivity</th>
</tr>
</thead>
<tbody>
<tr>
<td>morphine</td>
<td>100%</td>
</tr>
<tr>
<td>codeine</td>
<td>200%</td>
</tr>
<tr>
<td>heroin</td>
<td>80%</td>
</tr>
<tr>
<td>hydrocodone</td>
<td>75%</td>
</tr>
<tr>
<td>hydromorphone</td>
<td>45%</td>
</tr>
<tr>
<td>oxycodone</td>
<td>20%</td>
</tr>
</tbody>
</table>
Drug tests & cross reactivity:

(300 ng/mL opiate cutoff test)

150 ng/mL codeine

1500 ng/mL oxycodone
If oxycodone is a major substance of abuse in your jurisdiction, you should consider a separate drug test for oxycodone as part of your initial screening analysis.
Result Interpretation for MAT Drugs
Medication-Assisted Treatment (MAT) is a form of pharmacotherapy and refers to any treatment for a substance use disorder that includes a pharmacologic intervention as part of a comprehensive substance abuse treatment plan with an ultimate goal of participant recovery with full social function.
Medication-Assisted Treatment in Drug Courts
Recommended Strategies
Conclusions

- Scientific evidence overwhelmingly shows that MAT is a critical tool in the treatment of opioid addiction and essential in fighting the opioid epidemic.
- Drug treatment courts can play a key role in ensuring that participants have access to this effective, evidence-based treatment.
MAT Drugs

■ Medications for Alcohol Dependence
  ◆ Naltrexone: (ReVia®, Vivitrol®, Depade®)
  ◆ Disulfiram: (Antabuse®)
  ◆ Acamprosate: (Campral®)

■ Medications for Opioid Dependence
  ◆ Methadone:
  ◆ Buprenorphine: (Suboxone® and Subutex®)
  ◆ Naltrexone: (ReVia®, Vivitrol®, Depade®)
What is Naltrexone?

■ belongs to a class of drugs known as opiate antagonists
■ block the brain’s neurotransmitters
■ displaces opiates from their binding site
■ diminishes physical effects of opiates
■ will naltrexone test positive on an opiate drug test?
Neuron Transmission

Credit Dennis Wei
Neural Surface Membrane

Ligand could be heroin, morphine, oxycodone or a MAT drug
Ligand (MAT drug) Binds to Receptor
Drug tests & cross reactivity:

Immunoassay screening tests

opiates antibody

opiates fit = positive test

methadone doesn’t fit = negative test
Siemens EMIT Assay Cross-Reactivity Data

<table>
<thead>
<tr>
<th>Compound</th>
<th>Cross-Reactivity (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Myoglobin</td>
<td>287</td>
</tr>
<tr>
<td>Naltrexone</td>
<td>1000</td>
</tr>
<tr>
<td>NAPA (N-Acetylprocainamide)</td>
<td>400</td>
</tr>
<tr>
<td>Naproxen</td>
<td>1000</td>
</tr>
</tbody>
</table>

= 1,000,000 ng/mL
Abstract: A clinical evaluation of the naltrexone, a biodegradable sustained-release dosage was carried out in 4 healthy normal males.

Subjects were given an intravenous dose of 10 mg naltrexone and approximately 1 week later a 63-mg dose of naltrexone by subcutaneous administration.

Urine levels for naltrexone were 79-215 ng/mL.
MAT Drugs

■ Medications for Alcohol Dependence
  ◆ Naltrexone: False Positive with Opiate Assay - NO!
  ◆ Disulfiram: (Antabuse®)
  ◆ Acamprosate: (Campral®)

■ Medications for Opioid Dependence
  ◆ Methadone:
  ◆ Buprenorphine: (Suboxone® and Subutex®)
  ◆ Naltrexone: False Positive with Opiate Assay - NO!
Why does naltrexone post a positive opiate result on a UA test?

Posted: 4 Nov 2010 by chet1
Topics: naltrexone, opiate

does naltrexone cause a positive opiate or benzo result on a UA test?

Wnt signaling products
Wnt proteins reporter cell lines Drug screening kits and services

Question is Closed

Responses (1)

5 Nov 2010

Because naltrexone is actually a special narcotic drug that blocks the effects of other narcotic medicines and alcohol. That's why it comes up in a urinary analysis as an opiate.

http://www.drugs.com/mtm/naltrexone.html

Votes: +0
Opiates - Results Interpretation

■ all opiates are narcotic analgesics
  ◆ relieve pain & controlled substances
■ not all narcotic analgesics are opiates
  ◆ meperidine (Demerol®)
  ◆ propoxyphene (Darvon®)
  ◆ methadone
  ◆ pentazocine (Talwin®)
  ◆ fentanyl (Sublimaze®)
  ◆ buprenorphine: (Suboxone®)
  ◆ naltrexone: (ReVia®, Vivitrol®, Depade®)
### Siemens Negative Reactivity Data

<table>
<thead>
<tr>
<th>Compound</th>
<th>Concentration (ng/mL)</th>
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</thead>
<tbody>
<tr>
<td>Azithromycin</td>
<td>1000</td>
</tr>
<tr>
<td>AZT (Zidovudine)</td>
<td>2000</td>
</tr>
<tr>
<td>Benazepril</td>
<td>1000</td>
</tr>
<tr>
<td>Benzyloleconamine</td>
<td>1000</td>
</tr>
<tr>
<td>Buprenorphine</td>
<td>1000</td>
</tr>
<tr>
<td>Bupropion</td>
<td>1000</td>
</tr>
<tr>
<td>Caffeine</td>
<td>1000</td>
</tr>
</tbody>
</table>

### Thermo-Fisher Negative Reactivity Data

<table>
<thead>
<tr>
<th>Negative Compounds</th>
<th>Trade Name</th>
<th>Concentration Tested (ng/mL)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bromocriptine mesylate</td>
<td>Ergoset, Parlodel</td>
<td>500,000</td>
</tr>
<tr>
<td>Brompheniramine</td>
<td>Dimetane, Dimelapp, Nasarist, ND-Stat, Oramic II</td>
<td>500,000</td>
</tr>
<tr>
<td>Bupivacaine</td>
<td>Marcaine, Sensorbaine</td>
<td>500,000</td>
</tr>
<tr>
<td><strong>Buprenorphine</strong></td>
<td><strong>Bupronex</strong></td>
<td>100,000</td>
</tr>
<tr>
<td>Bupropion</td>
<td>Wellbutrin, Zyban</td>
<td>100,000</td>
</tr>
</tbody>
</table>
Siemens Negative Reactivity Data

<table>
<thead>
<tr>
<th>Drug</th>
<th>Siemens Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Metaproterenol</td>
<td>1000</td>
</tr>
<tr>
<td>Metformin</td>
<td>1000</td>
</tr>
<tr>
<td>Methadone</td>
<td>100</td>
</tr>
<tr>
<td>d-Methamphetamine</td>
<td>35</td>
</tr>
<tr>
<td>Methaqualone</td>
<td>1500</td>
</tr>
</tbody>
</table>

Thermo-Fisher Negative Reactivity Data

<table>
<thead>
<tr>
<th>Drug</th>
<th>Thermo-Fisher Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Metaproterenol hemisulfate salt</td>
<td>Alupent, Metaprel</td>
</tr>
<tr>
<td>Metaraminol bitartrate</td>
<td>Aramine</td>
</tr>
<tr>
<td>Methadone HCl</td>
<td>Dolophine</td>
</tr>
<tr>
<td>Methamphetamine</td>
<td>Desoxyn</td>
</tr>
<tr>
<td>Methaqualone HCl</td>
<td>Normi-Nox, Pallidan, Somnomed, Quaelude</td>
</tr>
</tbody>
</table>
MAT Drugs

- Medications for Alcohol Dependence
  - Naltrexone: False Positive with Opiate Assay - NO!
  - Disulfiram: (Antabuse®)
  - Acamprosate: (Campral®)

- Medications for Opioid Dependence
  - Methadone: NO! with Opiate Assay
  - Buprenorphine: NO! with Opiate Assay
  - Naltrexone: False Positive with Opiate Assay - NO!
<table>
<thead>
<tr>
<th>#</th>
<th>Searches</th>
<th>Results</th>
<th>Search Type</th>
<th>Actions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Acamprosate.mp.</td>
<td>686</td>
<td>Advanced</td>
<td>Display</td>
</tr>
<tr>
<td>2</td>
<td>Substance Abuse Detection/ or drug testing.mp.</td>
<td>8883</td>
<td>Advanced</td>
<td>Display</td>
</tr>
<tr>
<td>3</td>
<td>1 and 2</td>
<td>1</td>
<td>Advanced</td>
<td>Display</td>
</tr>
</tbody>
</table>

Basic Search | Find Citation | Search Tools | Search Fields | Advanced Search | Multi-Field Search

1 Resource selected | Hide | Change

Ovid MEDLINE(R) and Ovid OLDMEDLINE(R) 1946 to Present with Daily Update

Enter keyword or phrase (* or $ for truncation)

Keyword | Author | Title | Journal

Limits (close)

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- Abstracts
- Local Holdings
- Full Text
- Humans
- Latest Update
- Publication Year

Additional Limits | Edit Limits
MAT Drugs

■ Medications for Alcohol Dependence
  ◆ Naltrexone: False Positive with Opiate Assay - NO!
  ◆ Disulfiram: NO! with drug tests reviewed
  ◆ Acamprosate: NO! with drug tests reviewed

■ Medications for Opioid Dependence
  ◆ Methadone: NO! with Opiate Assay
  ◆ Buprenorphine: NO! with Opiate Assay
  ◆ Naltrexone: False Positive with Opiate Assay - NO!
Result Interpretation for Therapeutic/OTC Drugs
Very Difficult Task

- not all drug tests are created equal
  - laboratory-based tests (numerous products)
  - on-site, instant, POC tests (dozens of products)
  - each test has unique selectivity (i.e. ability to distinguish between similar compounds)

- hundreds of therapeutic drugs
- hundreds of OTC medications
Court’s Obligation

- limit use of therapeutic drugs
  - court must be notified
- prohibit the use of OTC medications without prior approval
- prohibit the use of dietary supplements, energy drinks, homeopathic substances, herbal products, sports nutrition powders, anything not regulated by FDA (anything from GNC)
An Interpretational Gift!
Opiate Metabolites

Parent Drug: Codeine
Metabolites: Norcodeine, Morphine,
(hydrocodone potential minor metabolite in high codeine doses)

Parent Drug: Morphine
Metabolites: Normorphine

Parent Drug: Heroin
Metabolites: 6-monoacetyl morphine (6-AM), Normorphine, Morphine

Parent Drug: Oxycodone
Metabolites: Oxymorphone, Noroxycodone, Noroxymorphone
Parent Drug: Hydrocodone
Metabolites: Hydromorphone, Norhydrocodone

Parent: Hydromorphone (may only as parent drug)
Metabolites: undetectable conjugated metabolites
Benzo Metabolites

Parent:  Alprazolam
Metabolites:  alpha-hydroxyalprazolam

Parent:  Lorazepam
Metabolites:  Detected as parent drug; undetectable metabolites

Parent:  Clonazepam
Metabolites:  7-aminoclonazepam

Parent:  Diazepam
Metabolites:  Temazepam, Nordiazepam, Oxazepam
Benzo Metabolites

Parent:  Temazepam
Metabolites:  Oxazepam

Parent:  Chlordiazepoxide
Metabolites:  Norchlordiazepoxide, Nordiazepam, Oxazepam

Parent:  Triazolam
Metabolites: only as parent drug; undetectable metabolites

Parent:  Clorazepate
Metabolites:  Nordiazepam, Oxazepam
# Therapeutic/OTC Drugs

<table>
<thead>
<tr>
<th>Drug/Class</th>
<th>Potential F/P Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>antihistamines/decongestants</td>
<td>amphetamines</td>
</tr>
<tr>
<td>Adderall</td>
<td>amphetamines</td>
</tr>
<tr>
<td></td>
<td>confirm by GC/MS - ensure no methamphetamine</td>
</tr>
<tr>
<td>chlordiazepoxide</td>
<td>benzodiazepine</td>
</tr>
<tr>
<td></td>
<td>confirm by GC/MS - look for other benzos not metabolites of chlordiazepoxide</td>
</tr>
<tr>
<td>dextromethorphan</td>
<td>phencyclidine (PCP)</td>
</tr>
<tr>
<td>l-methamphetamine (OTC nasal inhaler)</td>
<td>amphetamines</td>
</tr>
<tr>
<td>Vick’s</td>
<td></td>
</tr>
<tr>
<td>diet pills (eg, clobenzorex, fenproporex)</td>
<td>amphetamines</td>
</tr>
<tr>
<td>quinolone antibiotics (eg, levofloxacin)</td>
<td>opiates</td>
</tr>
<tr>
<td>antidepressants (Stertraline)</td>
<td>benzodiazepine</td>
</tr>
</tbody>
</table>
How to Drive a Toxicologist Crazy
My client claims he is testing positive for THC because he takes ibuprofen (Advil).
Urine Drug Screening: Practical Guide for Clinicians

KAREN E. MOELLER, PHARM.D, BCPP; KELLY C. LEE, PHARM.D, BCPP; AND JULIE C. KISSACK, PHARM.D, BCPP

Drug testing, commonly used in health care, workplace, and criminal settings, has become widespread during the past decade. Urine drug screens have been the most common method for analysis because of ease of sampling. The simplicity of use and access to rapid results have increased demand for and use of immunoassays; however, these assays are not perfect. False-positive results of immunoassays can lead to serious medical or social consequences if results are not confirmed by secondary analysis, such as gas chromatography-mass spectrometry. The Department of Health and Human Services’ guidelines for the workplace require testing for the following 5 substances: amphetamines, cannabinoids, cocaine, opiates, and phencyclidine. This article discusses potential false-positive results and false-negative results that occur with immunoassays of those substances and with alcohol, benzodiazepines, and tricyclic antidepressants. Other pitfalls, such as adulteration, substitution, and dilution of urine samples, are discussed. Pragmatic concepts summarized in this article should minimize the potential risks of misinterpreting urine drug screens.


Our goal is to provide clinically relevant information that can be used to interpret urine drug screens (UDSs) for commonly abused drugs (i.e., alcohol, amphetamines, benzodiazepines, opioids, marijuana, cocaine, phencyclidine [PCP], and tricyclic antidepressants [TCAs]). Proper evaluation of urine specimens, including detection times, are discussed, as well as false-positive results and potential false-negative results. Interpretation of tests for performance-enhancing drugs is beyond the scope of this article and is not discussed.

METHODS OF DRUG TESTING

Urine, blood, hair, saliva, sweat, and nails (toenails and fingernails) are some biological specimens used to perform laboratory drug testing, and they provide different levels of
<table>
<thead>
<tr>
<th>Substance tested via immunoassay</th>
<th>Potential agents causing false-positive result</th>
<th>Substance tested via immunoassay</th>
<th>Potential agents causing false-positive result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alcohol(^{20})</td>
<td>Short-chain alcohols (eg, isopropyl alcohol)</td>
<td>Cannabinoids(^{1,3,43-48})</td>
<td>Dronabinol</td>
</tr>
<tr>
<td>Amphetamines(^{21-43})</td>
<td>Amantadine</td>
<td></td>
<td>Efavirenz</td>
</tr>
<tr>
<td></td>
<td>Benzphetamine</td>
<td></td>
<td>Hemp-containing foods</td>
</tr>
<tr>
<td></td>
<td>Bupropion</td>
<td></td>
<td>NSAIDs(^{4,38})</td>
</tr>
<tr>
<td></td>
<td>Chlorpromazine</td>
<td></td>
<td>Proton pump inhibitors</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Tolmetin</td>
</tr>
</tbody>
</table>
44. La Porte CJ, Droste JA, Burger DM. False-positive results in urine drug screening in healthy volunteers participating in phase 1 studies with efavirenz and rifampin [letter]. Ther Drug Monit. 2006;28(2):286.

54. Dasgupta A, Wells A, Datta P. False-positive serum tricyclic antidepressant concentrations using fluorescence polarization immunoassay due to the presence of hydroxyzine and cetirizine. Ther Drug Monit. 2007;29(1):134-
Investigation of Interference by Nonsteroidal Anti-Inflammatory Drugs in Urine Tests for Abused Drugs

Douglas E. Rollins,¹ Thomas A. Jennison,² and Graham Jones³

Anecdotal and uncontrolled studies have suggested that nonsteroidal anti-inflammatory drugs produce false-positive results in immunoassay urine tests for some drugs of abuse. This study was performed in 60 volunteers who took ibuprofen as either a single 400-mg dose, or 200 mg three times a day, or 400 mg three times a day, and in 42 patients taking ibuprofen, naproxyn, or fenoprofen in therapeutic regimens for more than 30 days. Of the 510 urines collected from 102 individuals during these dosage regimens, two gave false-positive tests for cannabinoid by enzyme-mediated immunoassay (EMIA), one after 1200 mg of ibuprofen in three divided doses for one day and one in a patient taking naproxyn on a chronic basis; none was falsely positive for falsely positive report.

Conversely, adulterants (e.g., acids or bases or substances with a high ionic strength) added to a urine specimen may give falsely negative immunoassay results (1). Moreover, the excretion of drugs, drug metabolites, or food substances in the urine could also interfere with immunoassays and cause a false-positive or false-negative result for a urine drug assay. Ibuprofen and other commonly used nonsteroidal anti-inflammatory drugs (NSAIDs) reportedly cause false-positive test results with the EMIA (EMIT™; Syva Co., Palo Alto, CA) for cannabinoids (2–4), false-negative mass-spectrometric confirmation for cannabinoids (5), and false-positive results for barbiturates and benzodiazepines by the FPIA (TDx™; Abbott

¹ 2147 Center Street, Plainfield, NJ 07060
² 7705 South Congress Avenue Round Rock, TX 78681
³ Department of Chemistry, North Carolina A & T State University, Greensboro, NC 27411
1. Article used by the Mayo paper claiming ibuprofen could cause a false positive cannabinoid test is 25 years old.

2. Even though the Rollins paper is 25 years old, it concludes “unlikely”.

3. Assay used to conduct the 25-year old paper has not been available commercially for two decades.

4. Confirmation testing resolves potential “false positive” concerns.

5. Doesn’t prohibit Mayo from publishing a misleading paper.

In conclusion, these data demonstrate that ibuprofen taken as either a single dose or in acute multiple doses or ibuprofen, naproxen, or fenoprofen taken as chronic doses is unlikely to result in a positive immunoassay test for urine cannabinoids, benzodiazepines, or barbiturates. All positive immunoassay results should be considered as presumptively positive. A second chemical test such as GC/MS, performed properly, will markedly reduce the possibility of falsely accusing of substance abuse someone who was taking NSAIDs.

Partial support for this study came from Abbott Laboratories, Diagnostic Division, Abbott Park, IL.
Commonly prescribed medications and potential false-positive urine drug screens

NANCY C. BRAHM, LYNN L. YEAGER, MARK D. FOX, KEVIN C. FARMER, AND TONY A. PALMER

The potential for false-positive urine drug screen (UDS) results for substances of abuse presents a therapeutic selection dilemma for the treating health care professional. While this problem is reported with specific medications, the extent of the problem in a clinic serving indigent patients and the medically underserved has not been evaluated. In particular, the use of medications with the potential for false-positive UDS results may present a significant liability for individuals required to undergo random or periodic UDSs as a component of a recovery or court-ordered monitoring program or as a condition of employment. In addition, false-positive UDS results may affect the clinician–patient relationship by raising issues of trust.

This article identifies commonly prescribed medications associated with reports of false-positive UDSs.

Purpose. The implications of false-positive urine drug screen (UDS) results for patients receiving commonly prescribed medications were evaluated.

Summary. A comprehensive literature review was conducted to identify false-positive UDSs associated with all common prescription medications. The references of each report describing a medication whose use was associated with false-positive UDS results were also reviewed. If a class effect was suspected, additional agents in the category were searched. A total of 25 reports of false-positive UDS results were identified.

Categories of medications included antidepressants, antipsychotics, antihistamines, anxiolytics, and nonprescription agents. Reports of false-positive results were found for the following prescription medications: bupropion, buspirone, clomipramine, clonidine, clonazepam, diphenhydramine, doxylamine, iproniazid, naproxen, promethazine, quetiapine, quinolone (influenza and quinidine), ranitidine, sertraline, thioridazine, trazodone, and vanillamine, tramadol, and benzoic acid.

Index terms: Drug abuse; Drugs, over the counter; Drugs, false positive reactions; Tests, laboratory; Urine screens. Am J Health Syst Pharm. 2010, 67:1344-50
<table>
<thead>
<tr>
<th>Medication</th>
<th>False-Positive Result</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Amphetamine or Methamphetamine</td>
</tr>
<tr>
<td>Antihistamines/decongestants</td>
<td>X</td>
</tr>
<tr>
<td>Brompheniramine</td>
<td></td>
</tr>
<tr>
<td>Diphenhydramine</td>
<td></td>
</tr>
<tr>
<td>Doxylamine</td>
<td></td>
</tr>
<tr>
<td>Phenylpropanolamine</td>
<td></td>
</tr>
<tr>
<td>Nonprescription nasal inhaler</td>
<td></td>
</tr>
<tr>
<td>Antidepressants</td>
<td></td>
</tr>
<tr>
<td>Bupropion</td>
<td></td>
</tr>
<tr>
<td>Clomipramine</td>
<td></td>
</tr>
<tr>
<td>Sertraline</td>
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</tr>
<tr>
<td>Trazodone</td>
<td></td>
</tr>
<tr>
<td>Venlafaxine</td>
<td></td>
</tr>
<tr>
<td>Antibiotics</td>
<td></td>
</tr>
<tr>
<td>Quinolones (selected agents)</td>
<td>X</td>
</tr>
<tr>
<td>Analgesics</td>
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<tr>
<td>Ibuprofen</td>
<td>X</td>
</tr>
<tr>
<td>Naproxen</td>
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<tr>
<td>Antipsychotics</td>
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<tr>
<td>Chlorpromazine</td>
<td>X</td>
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<tr>
<td>Promethazine</td>
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<tr>
<td>Quetiapine</td>
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<tr>
<td>Thoridazine</td>
<td></td>
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<tr>
<td>Other agents</td>
<td></td>
</tr>
<tr>
<td>Dextromethorphan</td>
<td></td>
</tr>
<tr>
<td>Ranitidine</td>
<td></td>
</tr>
<tr>
<td>Verapamil</td>
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References


Confirmation: Best Practice

- gas or liquid chromatography-mass spectrometry - GC/MS or LC/MS/MS
  - drug molecules separated by physical characteristics
  - identified based on chemical “finger-print”
  - considered “gold standard”
- refer to NADCP Adult Drug Court Best Practice Standards - Volume II
No Substitute for Knowledge/Expertise

- unethical to adjudicate based upon misinformation - violation of due process
- develop a relationship with your laboratory
- develop a relationship with your on-site device vendor
- don’t be afraid to “call the company”
- seek expert advice
Prescription Drugs
Challenge with Prescription Drugs

- therapeutic use versus abuse

therapeutic use   various stages of misuse   abuse
Drug testing is an excellent tool for the abstinence monitoring of court clients, however it provides limited information for the differentiation between the appropriate therapeutic use of prescribed medications and the misuse/abuse of those same drugs - regardless of the specimen tested.
Client Signed Releases

- doctors
- dentists
- other healthcare professionals
- pharmacies
I (client name), am a participant in drug court. This program is a court monitored recovery program for addicts. As a result, I am subject to frequent and random drug testing. Therefore, I must report to the court my visit today. As I am in recovery, I would respectfully request that you take this into consideration and offer non-narcotic medications, if possible, when drugs are necessary for my medical treatment.

Physician (Name) ______________________________________
Physician (Signature) _______________________________________

If you have any questions or concerns, please feel free to call the court and talk to my case specialists.
If this patient fails to present this form to the nurse and physician prior to receiving medication or a prescription for medication, please notify the court.

Please list the medications prescribed today:
Other Control Strategies

- search & seizure (client contract)
  - car, home, possessions
- pill counts
- no out-of-state prescriptions
- use of specified pharmacies
- loss of completion credits/time while on certain prescription meds
Drug Testing is a *TOOL*

- drug testing, as an abstinence monitoring strategy, is just one assessment option
- don’t become myopic regarding drug testing results
- consider all of the client behavioral data
- consider the therapeutic ramifications of results & adjudicate to support recovery
email address:

carypl@health.missouri.edu
Please fill out our speaker evaluations at the link below: