



Case Studies of Aberrant Drug Taking Behaviors in Pain Management

Jeremy A. Adler, MS, PA-C

Jeremy A. Adler, MS, PA-C
Senior Pain Management PA
Pacific Pain Medicine Consultants
Encinitas, CA



Disclosures

- Consultant/Independent Contractor: Collegium, Eaglet, Millennium Labs, Quest Diagnostic
- Honoraria: AZ, Daiichi, Pernix, St. Judd (Abbott)



Learning Objectives

- Describe the application of opioid monitoring tools in clinical practice
- Describe differential diagnosis in evaluating aberrant behaviors
- Identify a strategy for approaching a patient with an aberrant finding



Question 1

Which of the following is FALSE regarding a definitive urine drug test having a methamphetamine level present?

- A. A positive result is consistent with methamphetamine use
- B. A positive result can be consistent with a legitimate prescription medication
- C. A positive result can be consistent with a legitimate over-the-counter medication
- D. A positive result is always definitive for illicit drug use

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Question 2

The primary source of opioids for individuals who misuse them is from:

- A. A patient who misuses their own medications
- B. A patient who is actively “doctor shopping”
- C. A friend or family member
- D. Internet sales

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Question 3

A positive definitive result on a urine toxicology report always indicates that the tested substance is present in the specimen.

TRUE or FALSE



Disclaimer

- All case studies have been de-identified for privacy protection
- Every clinical situation is unique and must be evaluated in totality
- There is often more than one appropriate response to each clinical situation

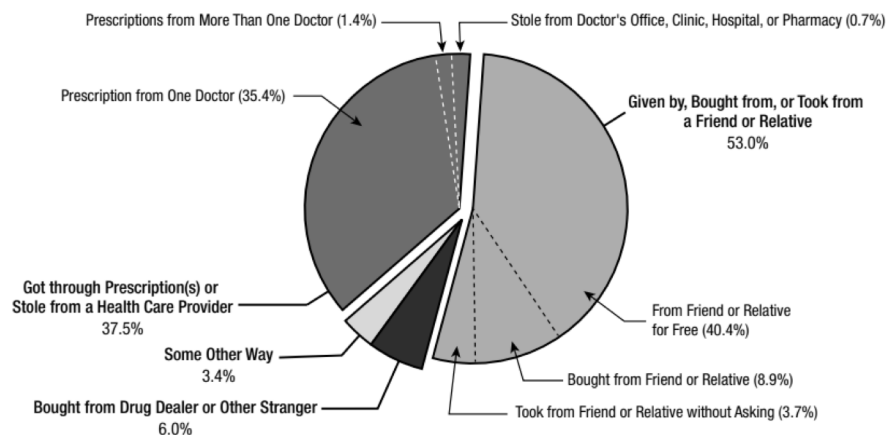


Risk Assessment & Monitoring

- H&P:
 - Establish diagnosis, appropriate workup and treatment
 - Substance Use/Abuse history Drugs/EtOH (DUI, detox)
 - Psychiatric History
 - Family History
 - RECORDS!!!
- Instruments:
 - Opioid Risk Tool
 - SOAPP-R
- PDMP
- Urine Drug Testing
- Consultation – Mental Health and Addiction / Second Opinions
- Adherence to treatment plan over time (imaging/referrals/office visits)



Opioid Source for Misuse (Age >12)



11.5 Million People Aged 12 or Older Who Misused Prescription Pain Relievers in the Past Year



Substance Abuse and Mental Health Services Administration. Key substance use and mental health indicators in the United States: Results from the 2016 national survey on drug use and health (HHS publication no. SMA 17-5044, NSDUH series H-52). 2017. <https://www.samhsa.gov/data/sites/default/files/NSDUH-FRR1-2016/NSDUH-FRR1-2016.pdf>

Clinical Pearl: The four c's

- The Four C's in dealing with lower risk, first time aberrant behaviors
 - Counsel patient in person on appropriate medication use
 - Cut down quantity of prescribed medication
 - Collect a urine sample for toxicology testing
 - Contact state prescription monitoring program (PDMP)

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CASE 1

- 48 y.o. female with chronic and intractable back pain
 - Has scoliosis - with multiple spinal surgical interventions since 1981
 - Fractured spine, following hardware removal
 - Has implanted intrathecal pump with hydromorphone
 - Oral hydromorphone available
 - FAMILY HISTORY: NEGATIVE for substance abuse
 - SOCIAL HISTORY: No history of drug, alcohol or tobacco use
 - ORT: 2
 - PDMP: CONSISTENT
 - UDT: INCONSISTENT



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UDT

- POSITIVE:

HYDROMORPHONE	49,017ng/ml
METHAMPHETAMINE	364 ng/ml
AMPHETAMINE	564 ng/ml

- Patient denies methamphetamine/amphetamine use
- PDMP negative for methamphetamine



DDx?

- Methamphetamine Abuse
- Hydromorphone diverter?
- Lab error or sample mix-up
- Pharmacy mix-up
- Fake urine or urine donor
- Inadvertent exposure?
- ???



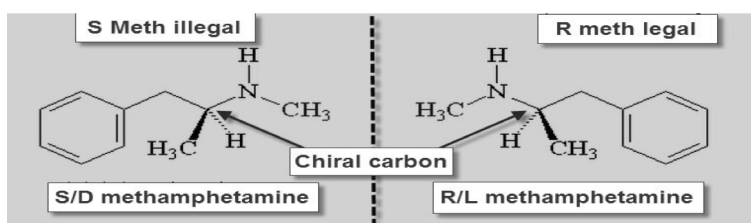
Additional Lab Testing

- Percent D-Isomer 8%
- Patient questioned if using nasal spray and response is “Yes”



Active Ingredients: Levmetamfetamine (50 mg, Nasal Decongestant)

Inactive Ingredients: Bornyl Acetate, Camphor, Lavender Oil, Menthol, Methyl Salicylate



<http://1.bp.blogspot.com/-GqPFUZffbFY/TgQBp5u3BzI/AAAAAAAAAJs4/kLb0vo456EU/s1600/optical+isomers+2.jpg>

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CASE 2

- 45 y.o. female patient with chronic intractable knee pain
- Not candidate for knee replacement
- Takes Hydrocodone
- Prior GI bleed secondary to NSAIDs
- Adopted
- Social History: Marijuana in high school, No DUIs
- UDT: INCONSISTENT

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My Poor Medical Assistant

- Urine sample collected in sterile cup and transferred to cup with Immunoassay testing



- After urine transfer, viscous gel present with strong aroma of Vick's Vapor Rub present

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DDx?

- Terrible kidney disease
- MA had it in for the patient – Specimen tampering
- Patient tampering with specimen
 - Vick's Nasal Spray has l-methamphetamine (widely known to abusers of meth)
 - Not sure about Vick's Vapor Rub?
- Cup came from manufacture defective
- ???

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Oops!

- Likely tampering to hide drug abuse
- Sample **NEGATIVE** for methamphetamine
- **POSTIVE: COCAINE**

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CASE 3: Pharmacy Call - CONCERNED

► Can you spot it?

- ▶ California Valid Security Rx has:
 - ▶ Latent Repetitive VOID pattern
 - ▶ Watermark "CA Security Rx"
 - ▶ Chemical Void
 - ▶ Thermochromic Ink
 - ▶ Opaque writing
 - ▶ Quantity Check off boxes
 - ▶ Unit designation
 - ▶ Single/Multiple drug statement
 - ▶ "Do not Substitute" check box
 - ▶ Form batch number
 - ▶ Pre-printed prescriber information

20A10372

BATCH#MS0900-
3268

DEA# FP 107

THIS DOCUMENT CONTAINS VOID PATTERN, GRAPE SEEDS, AND AN INK-TO-INK DEVELOPER FOR ALPHABETIC AND NUMERIC INFORMATION

JEFF DEAN DOB 03/08/1968 Gender: M

IS 132 PRIM ROSE VISTA Phone No. 760 261 4112
92083

Oxycodone 30mg IR
1094766 W
Paw Seene PAINT
120

1-24
☐ 25-49
☐ 50-74
☐ 75-100
☒ 101-150
☐ 151 and over

Units

Refills ☒ 0
☐ Do Not Refill
☐ Renewal Date

Date 03/29/2011

This prescription is void if more than one (1) controlled substance is written per blank. Prescription is void if the number of drugs is not noted.

This concentration is intended for the use of the dispenser as written in which is addressed and may contain information that is protected and confidential. The disclosure of this information is prohibited. This information is intended for the use of the dispenser as written in which is addressed and may contain information that is protected and confidential. The disclosure of this information is prohibited. This information is intended for the use of the dispenser as written in which is addressed and may contain information that is protected and confidential. The disclosure of this information is prohibited.

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- 49 y.o. male with postlaminectomy syndrome with new onset lower extremity radicular pain
- PMH: Klinefelter's Syndrome
- SOCIAL: Married. No drug or alcohol use
- PSYCH: Chronic Anxiety (Behavioral Therapy)
- Chronic intractable pain managed with methadone 10mg Q8h for the last 3 years
- Patient consistently indicates that pain is manageable, but duration of methadone is 6 hours, not 8 hours
- "No shows" to epidural steroid injection appointment

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Methadone case

- Patient unexpectedly died morning of procedure
- Medical Examiner listed cause of death:
 - Accidental Death: methadone poisoning
 - Associated factors cardiac disease
- Attorney letter from widow with intent to sue for negligence

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DDx?

- Methadone overdose
- Homicide poisoning
- Lab error
- Pharmacy error in dispensed methadone
- Drug interaction

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Peak & Trough Levels

- Patient had complained of short duration of analgesia
- 6 months prior to death, peak and trough methadone levels were collected to determine if blood levels corresponded to pain complaint
- Levels did not change significantly between peak/trough
- Dose did not change over prior year



Methadone Case

- Methadone level measured at death available from Medical Examiner
- Level at death was half the level of peak and lower than trough level
- Upon Review:
 - Medical Examiner amended cause of death to Cardiac Arrest
- No legal case followed



CASE 5: HIV POLYNEUROPATHY

- 59 y.o. male with chronic severe and intractable burning pain in all extremities
- Methadone at stable doses for pain
- Some elevated risk factors for opioid abuse, but has been responsible with prescriptions
- UDT: INCONSISTENT – Negative methadone & EDDP
- Repeat testing 3 times – all negative
- Reports taking methadone
- Denies Diversion
- Opioid therapy discontinued



DDX?

- Drug Diversion
- Medication binging
- Fake or Substituted urine
- Lab error
- Pharmacy error?
- ???



Lab Error

- Medical Director of Lab contacted practice 6 months after testing
- Reports that an element of the testing of methadone was inaccurate leading to false negative results
- Methadone results were recalled as inconclusive and unreliable
- Patient unwilling to re-establish care



CASE 6: Chronic Neck Pain & Headaches

- 51 y.o. female with chronic neck pain and episodic cluster headaches refractory to non-opioid therapy
- Utilized opioids in a consistent and responsible manner
- ORT: 7
- Family History: +EtOH abuse
- PSH: +victim pre-adolescent sexual abuse, +cocaine in college
- PDMP: Consistent
- UDT: Consistent X 4 years then INCONSISTENT



UDT & DDx

- Consistent with opioids, but positive COCAINE METABOLITE
- Denies use

- DDx?
 - Cocaine abuse
 - Lab error
 - Inadvertent exposure
 - Fake or substituted urine

- Additional History: Patient had ENT Surgery 6 weeks prior

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Cocaine POSITIVE UDT

- ENT Surgeon confirmed intranasal cocaine was used intraoperatively
- Lab Toxicologist unable to explain 6 week timeline – suggested maybe cocaine was retained in a “clot which broke free.”

- Repeat monthly testing X 3 months CONSISTENT

- 4th Month UDT: POSITIVE COCAINE METABOLITE

- DDx?

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COCAINE ABUSE

- Although patient denies use, admitted husband abusing cocaine
- She was so concerned about his abuse, she restricted his access to cocaine and prepared for him a small portion at a time
- She states her exposure must have been transdermal from getting cocaine on her hands during the preparation

- Patient weaned from opioids and referred to Addiction Medicine

- Patient refused referral

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CASE 7: Groin pain

- 37 y.o. male with chronic right ilioinguinal neuralgia s/p hernia repair
- Intermittent opioid when pain severe
- FH: NEGATIVE
- PSH: NEGATIVE
- PDMP: CONSISTENT
- UDT: CONSISTENT X5
- UDT: INCONSISTENT
 - Oxycodone, Noroxycodone, Oxymorphone POSITIVE
 - FENTANYL: NEGATIVE
 - Norfentanyl: 9.5 ng/ml (Detection 0.5ng/ml)

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DDX?

- Fentanyl use – Counterfeit Pills?
- Heroin mixed with fentanyl
- Lab Error
- Fake or substituted urine
- Pharmacy error
- Drug diversion/exchange
- ???

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Lab Error

- Contacted Lab Toxicologist
- Apparent violation of lab policies and procedures
- “Norfentanyl” most likely a “carryover” from sample tested just prior
- Retained specimen tested negative norfentanyl

- Subsequent UDTs CONSISTENT

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CASE 8: Took it “Exactly” as Prescribed

- 36 y.o. military dependent female
- Right shoulder pain from traumatic dislocation
- Taking Percocet and prescribed up to 2/d max #60
- Out after 10 days, but states she took it “exactly” as prescribed based on the prescription bottle label

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DDx?

- Patient not truthful
- Drug was diverted
- Pharmacy label error
- Written prescription error
- ???

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Label “Percocet 5/325”

- Medical record indicates prescription:
 - “Take 1 tablet twice daily as needed for pain”
- Patient asked to read label verbatim:
 - “Take 1 tablet every 4 to 6 hour as needed for pain”
- Contacted Pharmacist
 - Confirms label was “Take 1 tablet twice daily as needed for pain”
- Patient asked to bring bottle in for inspection

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CASE 8: Out of State

- 35 y.o. female from Virginia c/o severe multi-joint pain secondary to RA
- Lives in Virginia, but parents live in California
- Medication: Fentanyl patch 25 mcg/h Q72h (Patient reports good outcome)
- Fentanyl patches discontinued after INCONSISTENT NEGATIVE UDT
- Pain Severe
- Family brought patient to California for treatment
- No records available

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DDx?

- Diversion
- Abuse
- Lab error
- Fake or substituted urine
- Misuse
- ???

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Record review

- Review of records included UDT
- UDT was Immunoassay Only
- Fentanyl was not tested and UDT otherwise consistent
- Patient stabilized and did not demonstrate aberrant behaviors



CASE 9: Jockey

- 55 y.o. male fell from a horse and had multiple traumatic fractures with chronic pain
- H/O Hydrocodone abuse and marijuana abuse
- Buprenorphine provided for pain control which patient responded to well
- UDT: INCONSISTENT
 - Buprenorphine / norbuprenorphine POSITIVE (Consistent)
 - cTHC POSITIVE
- Patient admits use to THC, but agrees to discontinue and have more frequent UDT testing



Case Continues

- Repeat UDT: INCONSISTENT
 - cTHC: NEGATIVE
 - Buprenorphine / norbuprenorphine: POSITIVE
 - hydrocodone/ / norhydrocodone / hydromorphone: POSITIVE
- Patient denies hydrocodone use



DDx?

- Hydrocodone use
- Lab error
- Fake or substituted urine
- Pharmacy error
- ???



Additional History

- Patient referred to Addiction Medicine, but denies addiction and refuses to go
- Additional history: Patient's wife has chronic pain and is patient
 - No addiction history, but prescribed Buprenorphine to keep other opioids out of house
- Patient finally confesses that he had continued with marijuana and substituted his wife's urine for the test. He did not know she was taking hydrocodone (which was not prescribed to her)
- Opioids discontinued for both patients and discharged from practice



CASE 10: Intractable Central Pain

- 62 y.o. male paraplegic secondary to GSW to neck during home robbery
- HIGH RISK:
 - H/O illicit drug use and currently uses marijuana
 - Daughter abuses prescription opioids and heroin in his home
 - Prior medication stolen
 - Prior pain management had scheduled him for IT pump
- Current Medication: Oxycodone 30mg 0.5 tablet TID prn
- Caregiver (home health nurse) dispenses and reports #20 remain from last prescription (over 13 days of medication)
- PDMP indicates he was dispensed enough Oxycodone that he should have about #100 remaining (over 66 days of medication at reported use)
- Records and UDT needed. Patient agrees to abstain from THC



Next day

- Unannounced and unscheduled visit - Out completely of Oxycodone

- Patient denies overuse

- DDx?
 - Overuse
 - Diversion
 - Pharmacy shorted medication count
 - Misplaced medication
 - ???



Complicated Explanation

- Caregiver reports:
 - Nephew used to steal the oxycodone so she took over responsibility of dispensing
 - She filled the prescriptions of oxycodone consistent with PDMP
 - Unknown to patient, she had full bottle in her car

- Caregiver purchases own marijuana:
 - “I picked up my drug dealer and his two homies. I needed to stop at a gas station to make change. The line took 10 minutes. After dropping off my dealer, I realized the oxycodone bottle was gone. I wasn’t able to get it back”

- Caregiver states:
 - “I lied” She did not want to lose her job and had responsibility to oversee medication

- She thought if the patient had the pump implanted, those pills would not be noticed
- The patient did not fire the caregiver, refused to stop marijuana, and did not return



CASE 11: Crohn's Disease

- 38 y.o. male with Crohn's Disease s/p 3 abdominal surgeries
- Chronic abdominal pain
- Just moved from Missouri
- Taking oxycodone
- PSH: NEGATIVE
- FH: NEGATIVE
- PDMP: Empty
- UDT: CONSISTENT
- Medical Records consistent

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Out Early

- Out of medication 2 days early after first prescription
- Counseled and next prescription had Do Not Dispense Date on prescription
- Pharmacist stops by our office after filling Rx
- BTW, this is the only time in career a pharmacist has come to my office

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Pharmacist Concerned

- Apparently, patient's daughter was doing arts/crafts with glue. Patient had set Rx on table and glue stuck it to table. When lifted, the Rx tore.
- None of the medication information was missing
- Pharmacist has been questioning the Rx
- Torn hole in prescription



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Question 1

Which of the following is FALSE regarding a definitive urine drug test having a methamphetamine level present?

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- D. A positive result is always definitive for illicit drug use

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Question 2

The primary source of opioids for individuals misuse them is from:

- A. A patient who misuses their own medications
- B. A patient who is actively “doctor shopping”
- C. A friend or family member
- D. Internet sales



Question 3

A positive definitive result on a urine toxicology report always indicates that the tested substance is present in the specimen.

TRUE or FALSE



Conclusions

- Always consider aberrant behaviors in the totality of the clinical situation
- Establish a differential diagnosis for aberrant behavior
- Know substance abuse risk factors
- Learn about referral resources
- Stand by your medical determination – the benefits of controlled substance management have to outweigh the harms
- It is okay to not prescribe
- DOCUMENT!
- Remember – the patient is the one with the problem, you are there to try and help (I just took my last pill....)



Thank You!

