Toxicology Testing in Specialized Dockets: The challenge of fentanyl (and all of the rest)

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Learning objectives:

- At the conclusion of this session participants will:
  - Compare and contrast addiction monitoring approaches that re-enforce sobriety with those that maximize identification of relapse
  - Describe the role of toxicology testing in a recovery program
  - Define the difference between fentanyl screening tox testing and fentanyl diagnostic tox testing
Monitoring strategies in addictive disease

Why monitor – relapses common!
- 70% of patients (or more) relapse after their first treatment episode
- 60% of relapses in first 3 months
- 80% of relapses in first 6 months
- Recovery is the rule (eventually)
  - 65-70% of those who survive eventually get sober

How monitor?
- Natural history of addictive disease
  - Self respect / family / friends / money / legal / job / physical
  - When SUD active = problems in these areas ...
  - So monitor them – look for recurrent problems in each area
- New instability in any of these areas indicates high risk for relapse.
Monitoring strategies in addictive disease

How to monitor (for earlier indication of problem)?

- Inadequate adherence with comprehensive TX plan indicates current or impending relapse
- Essential aspects of comprehensive bio-psycho-social-spiritual-family Treatment Program
  - Detox/MAT – counseling – sober living – 12 step – fam Tx
- “Typical” non-adherence: (to monitor for)
  - Drop out of IOP/aftercare/sober housing
  - Inadequate 12 step: >3mtngs/wk with sponsor & home group

How to monitor?

- Get surrogates!!!!
- REQUIRE universal ROI for anyone you feel the need to contact ... AND contact them:
  - DCFS worker
  - OTP (methadone or bup or naltrexone) provider
  - SUD counseling provider, 12 Step sponsor
  - Mental health provider
  - Housing provider etc etc etc
Monitoring strategies in addictive disease

- Tools for monitoring: (OTHER THAN TOXICOLOGY)
  - IOP / aftercare attendance
  - 12 step meetings / sponsor / home group / step work
  - Sober living intact?
  - PMP (OARRS): NO controlled drugs (except bup/meth), no MJ or “medical” MJ
  - Alcohol testing: ETG (Ethyl Glucuronide) ETS (Ethyl Sulfate) in urine for ~5 days, CDT (carbohydrate-deficient transferrin) for up to a month monitoring of heavy drinking

Monitoring strategies in SUD:

**re-enforce recovery v catch relapse**

- Catching Relapse:
  - Pre-employment and Occasional “for cause testing”:
    - Testing after incidents, illness, absence, problem behavior
    - Rarely done, but often “inconsistent”, catches behavior

- Re-enforcement of Recovery:
  - Frequent (2Xwk-1Xmonth), random, integrated with adherence monitoring
  - Case of NE Ohio Public Safety Officers early 1990’s
Toxicology testing:
Screening v Diagnostic

- **Screening** – quick, easy, cheap ... not diagnostic
- **Diagnostic** – expensive & delayed ... but true
- Sensitivity – how many positives test positive
- Specificity – how true the test is (avoids false positives)
- Screening errs on sensitivity (many false positives)
- Diagnostic IDs false positive screens as false
- To avoid confusion call tests *consistent* or *inconsistent* (rather than pos or neg, or “dirty” or “clean”)

Recommended approach in medical practice:

- Use SCREENING tests to review large numbers of pts
  - Quick, easy, cheap, IF *consistent* then trust results
- Use DIAGNOSTIC test as follow-up on *all* screening specimens that are *IN-consistent* to be sure of the result before changing the Treatment Plan (i.e., incarcerating the patient etc)
- Do diagnostic test on SAME specimen that was screened ... not a new one
What are the screening tests (ELISA)

- Screening tests:
  - ELISA (Enzyme Linked Immunosorbent Assay) or the “dip stick” test.
  - Cheap: $6-30, good for sensitivity (find most true positives) weak on specificity (ID’s some false positives)

What are DX Tests GC/MS – TLC

- GC/MS and TLC tests are “send outs”
- One day to a week turn-around
- Expensive ... but not so much if focused on just the “inconsistent” result
- IF the confirmation test is “inconsistent” as well as the screening test – then the result is true
Some ELISA screening tests are better than others

- Like cocaine
- Not like clonazepam (false negative urea issue)
- Not like fentanyl
- Not like amphetamine – sudefedrine issue

Fentanyl ... and why are the tox screens so often wrong?

- Fentanyl: 80-100X morphine, 80X heroin
- 6 analogues: some less some more potent
  - Acetyl 10X stronger than MS, (ELISA +)
  - Carfentanyl 100X fentanyl, 10,000X Morphine (ELISA -)
- Amount in serum or urine is very very small ... so ELISA screen for heroin is “crow bar in a haystack” and fentanyl (or worse carfentanyl) is “needle in a haystack”
Fentanyl ... and why are the tox screens so often wrong?

- VERY potent drugs are present in EVEN SMALLER amounts in serum and urine than most drugs
- Screening test is looking for much smaller amounts
- Therefore screening tests can MISS the drug (false negative)
- Or can be adapted to minimize misses ... which push testing beyond it’s typical limits and results in false positives

Fentanyl and toxicology testing: what to do?

- Use UDS as ONE PART of an over all monitoring strategy, integrated into adherence monitoring
  - Frequent random UDS = re-enforce sobriety, 2Xweek in first 3months, 1Xweek next 3months, then 2Xmo for 6 months, then 1Xmonth after 1yr
  - Use ELISA as screen ... but follow-up all “inconsistent” results with confirmation GC/MS or LC PRIOR to changing treatment plan
Fentanyl and toxicology testing: what to do in Specialized Dockets?

- Get good advice from high quality “Specialized Dockets advisory group”
- Use highest quality treatment provider partners available
- Good ASSESSMENTS produce good TX Plans (DDX etc)
- Tox early and often, as part of FULL adherence with a comprehensive TX Plan
- Do NOT accept controlled drug prescribing (except bup / methadone) ... period!