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

Monitoring strategies in addictive disease

- 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

Monitoring strategies in addictive disease

- 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 ~5days, 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")

Toxicology testing: Screening v Diagnostic

- 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 test 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!