MINISTRY MEDICAL GROUP – Managing Pain, Improving Lives

Last week’s pain update focused on managing unexpected positive urine drug test (UDT) results related to illicit drugs. This week, managing unexpected results, both positive and negative, for prescription medications will be covered.

Understanding test results:
Interpretation of immunoassay (IA) results requires an understanding of which drugs are included in the drug test panel, test specific drug cutoff levels, which drugs or drug metabolites will be detected, window of detection, and potential cross-reactivities for specific drugs. Contact the laboratory when looking for specific drugs to make sure the correct test is ordered. Clinicians should have access to a copy of the lab manual for the drug test panel(s) used in their clinic.

Opioid Metabolic Pathways
It is important to understand metabolism of opioids for accurate UDT interpretation. For example, codeine metabolizes to morphine and to a lesser extent hydrocodone, therefore, all three substances may be present in urine.

Responding to unexpected NEGATIVE results:

- Take a thorough medication history including date of last use and quantity of use during the preceding 2-3 days
  - Patients on low dose PRN medication may result negative
  - Did the patient run out of medication early due to increasing the dose or frequency of use? Rule out poorly controlled pain versus substance misuse/abuse.
  - Is the patient not taking the full prescribed dose? Rule out patient hoarding of drug for future use versus diversion?
- Is the testing outside the window of detection for the expected prescribed drug?
- Is the drug testing panel specific to the expected prescribed drug?
- Clinical conditions that could produce negative results:
  - Induced enzyme levels from smoking causing more rapid metabolism/elimination of the drug
  - Shortened GI tract from surgery reducing absorption of the drug
- Did the patient consume excessive fluids causing diluted urine? Check the specific gravity of the sample.
- Has the specimen been adulterated or substituted?
- Consider retesting; consider possibility of diversion or non-use of medication.
- The rate of false negative results with IA is rare; typically confirmatory testing is not needed for negative results. Consider confirmatory testing if the patient adamantly reports taking the medication in question.
Responding to unexpected POSITIVE results:

- Take a thorough medication history, including OTC medications, to assess for potential cross-reactivities; include in the history where medication was obtained to assess for non-prescribed source.
- Review the PDMP to check for other sources of prescribed medication.
- Some opioids are normally metabolized into other opioid substances. The presence of other opioid substances may indicate appropriate use of the prescribed opioid.
- Consider confirmation testing to rule out cross reactivity. See table *Urine Drug Testing – Prescription Medications*.

Treatment planning

- All unexpected results require further evaluation.
- IA positive results should be considered presumptive until confirmed by GC-MS/LC-MS.
- When in doubt, consult with a clinician knowledgeable in UDT interpretation e.g. pain management specialist or a colleague managing higher risk pain patients.
- Follow-up may include counseling, increased frequency of office visits and UDT, limiting quantity with opioid prescription, evaluation for mental health and substances use disorders with referral to Behavioral Health or Addiction Medicine as appropriate, and/or discontinuing the opioid medication.
- Consider referral to a comprehensive pain management specialist in the context of uncontrolled pain that is difficult to manage by the primary care provider, especially if the patient feels the need to seek outside substances to control pain. Patient should be advised that the purpose of the referral is to look at alternative treatment options that may or may not include prescribing of opioid analgesics.

In case you missed it: Recent pain updates have included *Testing Methods for Urine Drug Screening* and *Managing Unexpected UDT Results – Illicit Substances*.

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