From Lab to Law: Understanding Fentanyl Testing in Dependency Cases Training Questions and Answers

Answers Provided by Dr. Collin Schenk

Q. Who sets the cutoff levels and are those cutoff levels consistent across all providers?

A. The manufacturer of rapid drug tests typically set the cutoff level. There can be modest variation between labs. For fentanyl, cut off levels usually range from 1-5 ng/mL depending on the test, which can have significant impact on the frequency that a test results positively in delay clearance. The lab report should clearly state what their cut off level is, although I've seen some instances where it isn't very clear.

Q. Does your hospital always do drug tests on children or parents when the child is exhibiting signs of withdrawal?

A. At this time, at our hospital, all newborns with known or suspected substance exposure in utero have urine and meconium testing done. There are national efforts to shift away from this approach (most notably at Yale and Harvard), and there are advanced discussions at Swedish about changing our internal policy. The impetus for the change nationally and locally is that newborn testing rarely affects medical decision-making or treatment.

Q. With fentanyl being held in fat stores- does the size of the person (more fat vs. less fat) impact the length of time they might test positive? And is this the same for men and women?

A. It's suspected that more fat tissue leads to slower clearance. Sex-based differences in the amount of fat tissue, as well as differences in liver metabolism and other variables, likely lead to slower clearance in women and even more so in pregnancy. However, the data for all of this is not strong enough to make a clear statement about *how much* body composition and sex contribute to clearance, so I would not usually recommend factoring that into an assessment.

Q. Does confirmatory testing require a separate sample or can the same sample from the rapid test be sent for the confirmatory testing?

A. Confirmatory testing should ideally be done on the same sample as the rapid test. If a new sample has to be collected, I would usually recommend repeating the rapid test in addition to the confirmatory test.

Q. Can those low-level positives be from environmental exposure? Or is that only with distant use by the person taking the test?

A. Unfortunately, we don't know the likelihood that various forms of environmental exposure could cause a low-level or high-level positive result. Serial quantitative testing may be helpful in distinguishing one-time environmental exposure (test should become negative within a few days) from chronic, intentional daily exposure (may remain positive at low levels for months).

Q. Since a person can continue to test positive for fentanyl for months after their last use, are oral swabs more effective in determining if recent fentanyl use has occurred?

A. Our team doesn't have clinical experience with oral swabs (OFT), which are typically only used in health care for people who can't provide a urine sample (e.g. end-stage renal disease). I asked a colleague at an opioid treatment program who occasionally uses OFT. He shared that it remains difficult to interpret OFT results with respect to delayed clearance, and that fentanyl/norfentanyl cut-offs can be significantly different for OFT compared to urine. Fentanyl vs norfentanyl ratios may be significantly different in urine than in OFT. To assess recent use (last 72h), checking a quantitative fentanyl in urine should still be the most helpful.

Q. If mom stopped using before or early in pregnancy but has the low blood levels from fat stores during pregnancy can that potentially cause Neonatal Opioid Withdrawal Syndrome (NOWS)?

A. Low levels of fentanyl and norfentanyl from very delayed clearance should not cause NOWS. Norfentanyl is also much more likely than fentanyl to remain positive for months, and norfentanyl is an inactive metabolite, which means it doesn't have any physiological effect on the body (e.g. no intoxication or withdrawal effect).

Q. Can hospital social workers adequately evaluate child safety (when sending the child home) without knowing what opioid the child was exposed to?

A. Typically, they know what opioid the child was exposed to because the parent reports it and/or the parent's urine drug test tells us. In a situation where the parent declines to self-disclose and/or declines to provide their own urine sample, hospitals like Yale and Harvard would usually test the newborn's urine for confirmation of opioid exposure.

Q. Can a father's use of fentanyl affect the health of the fetus/newborn?

A. No, there is no chemical effect of paternal substance use on fetal development or newborn withdrawal.

Q. If a parent is participating in random weekly UA's and is consistently testing positive at low levels, like single or low double digits, is it safe to assume they're not actually using? Would actual use show higher levels or a spike?

A. We would interpret this as most consistent with prior use, not recent use.

Q. Are other hospitals in WA moving towards these changes? There are hospitals in the communities I work in that have a different attitude/support towards substance using parents.

A. We can't speak to the culture or changes happening at non-Swedish hospitals. State public health and non-profit leadership continue to invest heavily in motivating hospitals to adopt standards of care around perinatal substance use.